



2015

CENTRAL UNIVERSITY OF HARYANA SELF STUDY REPORT



SUBMITTED TO
NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL [NAAC]
BANGALORE



Contents

FROM THE DESK OF THE VICE CHANCELLOR	4
PREFACE	6
EXECUTIVE SUMMARY.....	12
PROFILE OF THE UNIVERSITY.....	28
CRITERION I: CURRICULAR ASPECTS	50
1.1. Curriculum Design And Development	50
1.2. Academic Flexibility.....	57
1.3. Curriculum Enrichment:.....	64
1.4. Feedback System:	67
CRITERION II: TEACHING-LEARNING AND EVALUATION	79
2.1 Student Enrolment And Profile.....	79
2.2 Catering To Student Diversity	109
2.3 Teaching-Learning Process.....	114
2.4 Teaching Quality	120
2.5 Evaluation Process And Reforms	128
2.6 Student Performance And Learning Outcomes	132
CRITERION III: (RESEARCH, CONSULTANCY AND EXTENSION)	136
3.1 Promotion Of Research	136
3.2 Resource Mobilization For Research	139
3.3 Research Facilities:	148
3.5 Consultancy.....	171
3.6 Extension Activities And Institutional Social Responsibility (Isr).....	171
3.7 Collaboration	180
CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES	256
4.1. Physical Facilities.....	256
4.2. Library As A Learning Resource	262

4.3. It Infrastructure	270
4.4. Maintenance Of Campus Facilities	275
CRITERION V: STUDENT SUPPORT AND PROGRESSION.....	278
5.1. Student Mentoring And Support.....	278
5.2. Student Progression	300
5.3. Student Participation And Activities	303
CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT ...	309
6.1 Institutional Vision And Leadership	309
6.2 Strategy Development And Deployment	321
6.3 Faculty Empowerment Strategies.....	329
6.4 Financial Management And Resource Mobilization	331
6.5 Internal Quality Assurance System	334
CRITERION-VII: INNOVATIONS AND BEST PRACTICES.....	338
7.1 Environmental Consciousness.....	338
7.2 Innovations	344
7.3 Best Practices	350



हरियाणा केंद्रीय विश्वविद्यालय
(संसद के अधिनियम सं० 25(2009) के तहत स्थापित)
CENTRAL UNIVERSITY OF HARYANA
(Established vide Act of No. 25 (2009) of Parliament)

प्रो. आर.सी. कुहाड़

कुलपति (एफएनएएस, एफबीआरएसआई)

Prof. R.C. Kuhad

Vice Chancellor (FNAAS, FBRSI)

क्रमांक/No:.....

दिनांक/Date:.....

From the Desk of the Vice Chancellor

University is the temple of modern society, which plays a pivotal role in shaping and enabling the future citizens to ensure greatest good of greatest number. The foundation of any University aspiring to be a global leader is laid on its ability to achieve and sustain academic excellence and its capability to nurture innovative research. These can be implemented by introducing a paradigm shift in the teaching-learning pedagogy through inter and multi-disciplinary approach. In such a situation, classrooms do not act as barriers and boundaries but model instruction zones for disseminating knowledge to large sections of students. The purpose of a University is to create opportunities and avenues for the students. Virtual classrooms and e-learning are the new buzz words for developing a University without boundaries where there is free exchange of ideas and knowledge.

There is need to understand the relationship between education, employment and skill development which is the reason why Central University of Haryana has implemented Choice Based Credit System (CBCS) in all its Post Graduate programmes. Acting as a catalyst to create opportunities and avenues for the students to nurture and hone their talents and encourage fresh and out-of-the-box thinking, University has launched many new initiatives like introduction of B.Voc. programmes under Deen Dayal Upadhyay Kaushal Kendra Scheme; innovation-based activities under Centre for Innovation, Skill and Entrepreneurship Development; and job-oriented training counselling activities under Career Counselling, Training and Placement Cell.

Considering the importance of collaborative practices, University has taken significant steps towards maintaining linkages with the Industry and Corporates. Recently, University has entered into collaboration with National Cooperative Union of India (NCUI), Technology Applications Services (TAS) and Liberty Shoes for academic, research, training and placement activities. University is also in process of forming Technology and Incubation Centres in collaboration with National Skill Development Corporation and National Small Industries Corporation. University is also in the process of submitting proposal for development of Massive Open Online Courses (MOOCs), to offer the teaching-learning community the freedom of anytime-anywhere approach of learning, to Ministry of Human Resource Development. Special thrust is being given to all the departments and Schools to develop state-of-the-art teaching and research facilities especially for performing cutting edge research.

With the economy opening up and special emphasis being laid on Manufacturing and Services sector, the University constantly engages in designing courses, which directly cater to these two sectors and offer an edge to its students. The University constantly endeavors to create synergies between knowledge, life skills and technology to provide lasting solutions for sustained and eco-

जांट-पाली, महेंद्रगढ़ (हरियाणा) – 123029, दूरभाष : 01285-249333, वेबसाइट : www.cuh.ac.in
Jant-Pali, Mahendergarh (Haryana) - 123029, Tel.:01285-249333, Website: www.cuh.ac.in

friendly growth and development of the society through its Academic, Administrative, Outreach and Extension programmes.

Committed to meet the aspirations of the neighbouring society, University has adopted six villages under the scheme of Community Development, Unnat Bharat and Rashtriya Avishkar Abhiyan and University's Centre for Community Development. Unnat Bharat Abhiyan Cell, Science, Rashtriya Avishkar Abhiyan Cell formerly known as Maths and Technology (SMT) Club, NSS and Youth Red Cross (YRC) Units, Legal-Aid Clinic and Women Empowerment Cell are reaching to the community and schools with a bouquet of programmes aiming at gender sensitization; environment, health, hygiene and sanitation awareness; conservation and promotion of folk knowledge 'Lok Vidya'; developing the interest of the school students in Science, Mathematics and Technology; legal awareness and career counselling. The social outreach initiatives are being pursued with the consciousness that the role of a leader is to strengthen the foundation of the institution and conquer and build new territories by inspiring its people to excel individually and collectively, while being sensitive to everyone's needs and aspirations.

University has established a system approach through e-governance, faculty development programs, structured teaching-learning mechanism in the form of Schools and Departments, Information and Communication Technology enabled instruction, modernization of library with special focus on e-resources and e-learning, Innovations, Entrepreneurship and placement initiatives and a continuous evaluation process. Thus, special care is being taken to create an environment where each member of the University community is being given freedom, support and encouragement to explore and find their strengths to individually and collectively build the University and help it achieve new heights of success, overcome new challenges and conquer new territories.

With the engaging and vibrant academic environment in the University, I am hopeful that University fraternity deserves compliments for its ability to convert the obvious challenges being faced by a new University into strength and opportunities.

"Achieving through believing"


(Prof. R. C. Kuhad)

Preface

The Central University of Haryana was established under the Central Universities Act, (No. 25 of 2009). The University is funded and regulated by the University Grants Commission (UGC) and Ministry of Human Resources Development, Government of India. Its territorial jurisdiction extends to the whole State of Haryana.

The permanent campus is located at Jant-Pali villages of district Mahendergarh in South Haryana. Mahendergarh is now a part of the extended National Capital Region (NCR) and is around 150 kilometers away from Delhi. It is well connected to Delhi through railways. The nearest railway station is 13 kilometers away from the Campus. The University is spread in a sprawling campus of over 488 acres of land surrounded by beautiful Aravalis.

The first academic session of the University was launched on January 4, 2010. Since then, every event organized and each initiative launched by the University is done with an aim to realize the Vision and Mission of the University.

The University has 25 Departments which are clubbed under 9 Schools of Study. The Post Graduate programs are offered by all 25 departments, M.Phil. programmes are offered by 5 departments and Ph.D. programmes are offered by 11 departments. The University has implemented Choice Based Credit System (CBCS) at the Post Graduate level which is a first in the country and is a curriculum related reform which has created a national impact in the country.

India will be the youngest nation by 2020 with 29 years as the average age of Indian population. Education can play a key role in harnessing the demographic dividend by preparing skilled, trained and educated youth for which some of the approved schemes of the University such as B.Voc., Community College, *Deen Dayal Upadhyay Kaushal Kendra* and Incubation Centre for Skills (in collaboration with NSIC) will soon be operational in the University. The University has already issued notification for admission to B.Voc. programmes and one-year Postgraduate Diploma Course in Cooperative Management in collaboration with National Cooperative Union of India, New Delhi.

Working towards realization of its Vision and Mission and in order to commit the academic agenda for promoting, producing and disseminating Knowledge; University's team of faculty members leave no stone unturned in providing quality teaching and building exciting environment for multi-disciplinary research.

Various centres, clubs and cells operating in the University work towards evolving a culture of sharing and caring; fostering love for nature; development of feeling of brotherhood, cooperation, teamwork, a sense of social responsibility; building democracy and ensuring inclusive growth. Realizing the mission to serve the neighboring community and sensitizing the society, University has adopted six neighboring villages—Jant, Pali, Dholi, Malra, Bhurjat, Lavan. We are tirelessly working for the holistic development of the surrounding villages.

Within six years of its inception, Central University of Haryana has created a national impact as it attracts the students from all over the country. With the expanding horizon of the University, it is becoming a coveted destination for the students where the academic programmes offered by the University are not confined to a particular stream rather it offers bouquet of choices in Arts, Humanities, Social Sciences; Language and Literature; Basic, Applied and Interdisciplinary Sciences; Commerce and Management; Law and Journalism. Therefore, University is proud to have the students from more than 15 states who represent national diversity.

With dedicated efforts towards creating conducive research climate, University has initiated the process of engaging senior scientists/academicians either on deputation or as Adjunct/Visiting faculty; developing state of art laboratories; procuring the best print and online resources in University library; and expediting the creation of infrastructure for the expansion of academic, research and innovative practices, in phased manner. It is in this background that University fraternity is enthusiastic to showcase the aspirations and achievements of the University as one of the fastest emerging universities that believes in converting all the challenges and difficulties into opportunities with the mantra—“Achieving through Believing”, internalized by young enthusiasts.

University is in the process of consolidating its Mission and Objectives by connecting with the masses through social outreach initiatives launched under Community Development and *Unnat Bharat Abhiyan*, *Rashtriya Avishkar Abhiyan*, *Swachh Bharat Abhiyan* and the mission for conservation and promotion of ‘*Lok Vidya*’. To meet the expectations of the community, stakeholders and the community of learners, University is multiplying its efforts to excel in all the crucial aspects of a fast-growing academic institution.

The Self Study Report (SSR) of the University presented to National Assessment and Accreditation Council (NAAC) amply exhibits that Central University of Haryana (CUH) deserves recognition for its exemplary initiatives in all seven well defined criteria.

Criterion-I “Curricular Aspects”: University is perhaps the first among equals to implement Choice Based Credit System (CBCS) for Post-Graduate programmes that facilitates horizontal and vertical mobility in tune with multi-disciplinary approach to learning.

Criterion-II “Teaching Learning and Evaluation”: The University has reframed all the relevant Ordinances to ensure the rigour in the process of Teaching, Learning and Evaluation.

Criterion-III “Research, Consultancy and Extension”: University has recently entered into linkages/collaboration with Industry/Corporates and prestigious organizations for the promotion of consultancy, extension and research activities at par with international standards.

Criterion-IV “Infrastructure and Learning Resources”: University is providing all necessary facilities for students and faculty and for the development of teaching-learning and research activities. While, Construction work of its three new academic blocks and the residential complex is in advanced stage, for Central Library, Health Centre, Administrative Block, Student’s Activity Centre and Guest Houses are to be taken up very soon.

Criterion-V “Student Support and Progression”: University has already developed a sound mechanism for student support and progression through initiatives like Welfare Schemes, Scholarships and Fellowships, Remedial and Coaching Classes, Courses for Life Skills and Soft Skills and through the special schemes like ‘Earn while you Learn’ and ‘Merit cum Means’.

Criterion VI “Governance, Leadership and Management”: As explicitly elaborated in the SSR the University administration is structured in a way that decisions are taken through participatory approach ensuring accountability at each level of Administration.

Criterion VII “Innovation and Best Practices”: University firmly believes that the sustainable growth of the Institution requires emphasis on innovative practices and to implement the same, Centre for Innovations, Skills, and Entrepreneurship” is constituted which has already established association with Technology Incubation Centre, South Campus, Delhi University, Delhi; Technology Application Services, New Delhi; Liberty Shoes Ltd., Karnal.

NAAC STEERING & SSR PREPARATION COMMITTEE

Prof. Ashish Dahiya Professor & Head Dept. of Tourism & Hotel Management Central University of Haryana	Director
Dr. Sanjiv Kumar Dean Student Welfare Dept. of English Central University of Haryana	Member
Dr. Chanchal Kumar Sharma Assistant Professor Dept. of Political Science Central University of Haryana	Member
Dr. Sunita Tanwar Assistant Professor Dept. of Management Central University of Haryana	Member
Dr. Dinesh Chahal Assistant Professor Dept. of Education Central University of Haryana	Member
Dr. Samiksha Godara Assistant Professor Dept. of Law Central University of Haryana	Member
Dr. Arvind Tejawat Assistant Professor Dept. of Hindi & Indian Languages Central University of Haryana	Member
Dr. Ranjan Aneja Assistant Professor Dept. of Economics Central University of Haryana	Member
Dr. Suman Assistant Professor Dept. of Commerce Central University of Haryana	Member
Ms. Divya Assistant Professor Dept. of Management Central University of Haryana	Member
NAAC Self-Study Preparation Committee	
Dr. Aditya Saxena Associate Professor & Head Dept of Physics Central University of Haryana	Member

Dr. Sanjiv Kumar Dean Student Welfare Dept. of English Central University of Haryana	Member
Mr. Sunit Mukherjee Assistant Professor Dept. of Journalism and Mass Communication Maharishi Dayanand University Rohtak	External Invitee Member
Dr. Ajay Pal Sharma Assistant Professor Dept. of Management Central University of Haryana	Invitee Member
Dr. Ajay Assistant Professor Dept. of Management Central University of Haryana	Member
Ms. Divya Dept. of Management Central University of Haryana	Member
Ms. Aarti Assistant Professor Dept. of Education Central University of Haryana	Member
Dr. Renu Yadav Assistant Professor Dept. of Education Central University of Haryana	Invitee Member
Dr. Mohini Singh Assistant Professor Dept. of Environmental Science Central University of Haryana	Invitee Member
Dr. Abhiranjan Kumar Assistant Professor Dept. of History & Archeology Central University of Haryana	Invitee Member
Mr. Dalip Singh Assistant Professor, Library and Information Science Central University of Haryana	Member
Dr. Avinash Chand Yadav Assistant Professor, Dept. of Physics Central University of Haryana	Invitee Member
Mr. Paramjeet Singh Assistant	Printing & Designing
Mr. Amit Yadav LDC	Printing & Designing
Mr. Rajesh Bansal LDC, Hindi Typist	Printing & Designing

EXECUTIVE SUMMARY



EXECUTIVE SUMMARY

University

The Prime Minister of India, in his address to the nation on August 15, 2007, announced the establishment of one Central University in each of the states that did not have a central University. Subsequently, the Central Universities Act 2009 (No. 25 of 2009) which received Presidential assent on 20th March 2009 provided for the establishment of Central University of Haryana as one of the new Central Universities. The University is funded and regulated by the University Grants Commission (UGC) and Ministry of Human Resources Development, Government of India. Its territorial jurisdiction extends to the whole State of Haryana.

Visitor of the University

His Excellency, Shri Pranab Mukherjee, The President of India, is the Visitor of the Central University of Haryana.

The Chancellor

Prof. M.P. Singh is the Chancellor of Central University of Haryana. He was appointed as Chancellor by the President of India, in his capacity as the Visitor of the University.

Vice Chancellor

Prof. R.C. Kuhad is the Vice Chancellor of Central University of Haryana. He was appointed as Vice Chancellor by His Excellency Shri Pranab Mukherjee, the President of India, in his capacity as the Visitor of the University and he assumed the charge of office of the Vice Chancellor on 16th April 2015.

Permanent Campus of the University

Central University of Haryana is located at Jant-Pali villages of district Mahendergarh in South Haryana. Mahendergarh is now a part of the extended National Capital Region (NCR) and is around 150 kilometres away from Delhi. It is well-connected to Delhi through railways. The nearest railway station is 13 kilometres away from the Campus.



University Logo

‘Achieving through Believing’

University Logo is conceived with a globe at its centre surrounded by holy trinity of three arcs and at the bottom is a shloka taken from 'Neeti Shatkam' written by Bhartihari.

The arc at the bottom depicts an open book and a Veena, symbolising University's commitment to meeting the quest for acquiring knowledge, learning, enlightenment and promoting art and culture.

The arc at the right depicts processes of science, technology and adventure symbolising the University's commitment to developing scientific temper, enquiring approach and creating a culture of creativity and innovation for holistic development.

The arc at the left that depicts nature and symbolises University's commitment to promoting value based education, ethical conduct, inculcating respect for environment, ecology and living in harmony with nature.

The globe at the centre surrounded by the human chain and the pigeon flying above expresses University's belief that commitments represented by the trinity of three arcs shall lead to free spirit, global peace, prosperity and human solidarity-the real spirit of education.

The shloka at the bottom conveys that 'knowledge' is the unrivalled supreme attainment for all.

Vision

To develop enlightened citizenship for a knowledge society for peace and prosperity of individuals, nation and the larger world through promotion of innovation, creative endeavours and scholarly inquiry.

Mission

Mission Statement:

“Making the University as mark of excellence where there is free cross-fertilisation of ideas and knowledge.”

The Mission of the University is as follows:

- To provide learning environment for the growth and development of students and faculty, the University System will contribute to the educational cultural, economic, and social advancement of India by providing quality education through innovative programmes; by pursuing cutting-edge research, scholarly inquiry, and creative endeavors. The University will strive to create a learning ambience with diverse cultural backgrounds and enhance students acquisition of useful knowledge, communicative skills and analytical abilities through innovative teaching and a holistic learning environment.
- To facilitate cutting edge research in traditional disciplines and new/emerging areas at the frontiers of knowledge.
- To focus on relevance and quality in each area/discipline.
- To be a global brand in the education and research sectors.
- To provide international linkages for contextual and cultural learning for both faculty and students.
- To involve various stakeholders including Government, Industry, Community, etc. in providing relevant and quality education and learning environment on campus.
- To constantly review and update the curriculum to include new knowledge and society focus.
- Partnership with national and international institutions.
- Interdisciplinary approach in academic and research areas.
- To create and maintain highest level of integrity, ethics and values on campus and ensure zero tolerance for lack of these core constituents.
- To progressively expand the current academic and research areas into their diversified focus and implementation in phases.
- To encourage creativity and innovation in every discipline.

The vision of the University for the next five years is given in the “Blueprint and Future Roadmap” further ahead in this section only on page number 20.

Objectives of the University

The objectives of the University shall be:

- To disseminate and advance knowledge by providing instructional and research facilities in such branches of learning as it may deem fit;
- To make special provisions for integrated courses in humanities, social sciences, science and technology in its educational programmes;
- To take appropriate measures for promoting innovations in teaching-learning process and interdisciplinary studies and research;
- To educate and train manpower for the development of the country;
- To establish linkages with industries for the promotion of science and technology; and
- To pay special attention to the improvement of the social and economic conditions and welfare of the people, their intellectual, academic and cultural development.

Quality Statement

Determination, enquiry, perseverance, ethical conduct, probity, transparency, accountability and continuous self-evaluation and improvement form the cornerstones of all endeavors' for holistic and inclusive growth and development of society through excellence in academics, research and all other relevant and meaningful pursuits.

Academic Structure

The University has implemented Choice Based Credit System (CBCS) at the Post Graduate level which is a first in the country in terms of curriculum-related reforms towards multidisciplinary approach. The University system comprises Schools, equivalent to a Faculty in traditional University System, which have been defined very broadly and with wider flexibility in University ordinances. Each School is headed by the Dean and the Departments/Centres under the school are headed by the Head/Director. Schools have interdisciplinary and multi-disciplinary approach with focus on both—pure and applied aspects of learning. Dedicated to its vision and mission, University offered various academic programmes in the following Schools of Studies during the Academic Session 2015-16:

- (i) School of Arts, Humanities and Social Sciences
- (ii) School of Chemical Sciences
- (iii) School of Computer Science and Informatics
- (iv) School of Earth, Environment and Space Studies
- (v) School of Journalism, Mass Communication and Media
- (vi) School of Language, Linguistics, Culture and Heritage
- (vii) School of Law, Governance, Public Policy and Management
- (viii) School of Physical and Mathematical Sciences
- (ix) School of Interdisciplinary and Applied Life Sciences

As approved by the statutory bodies there are 25 Departments which are clubbed under 9 Schools of Studies.

Ph.D. programmes are offered by the following departments:

- Biochemistry
- Biotechnology
- Economics
- Education

- English and Foreign Languages
- Hindi and Indian Languages
- Management Studies
- Microbiology
- Nutrition Biology
- Political Science
- Tourism and Hotel Management
- Physics (to be started from the next academic session)

M.Phil. programmes are offered by the following departments:

- Economics
- Education
- English and Foreign Languages
- Hindi and Indian Languages
- Political Science.

All the 25 departments are offering postgraduate (PG) programmes.

University has notified admissions to One-year Postgraduate Diploma Course in Cooperative Management in collaboration with National Cooperative Union of India, New Delhi.

Besides, University has got UGC approval to run programmes under B.Voc, Community College and *Deen Dayal Upadhyay Kaushal Kendra* Scheme:

As the courses under B.Voc and Community College have been subsumed under *Deen Dayal Upadhyaya Kaushal Kendra*, University proposes to start following three programmes:

- B.Voc in Retail & Logistics Management
- B.Voc in Biomedical Science
- B.Voc in Industrial Waste Management

Admission Procedure

Deserving and talented students and scholars from all over India and the world, as per the policies of the Government of India, are welcome to take admission in PG, M.Phil and Ph.D programmes. Reservation and relaxations in admission is provided to the students as per the Government of India provisions.

Central University of Haryana participates in Central Universities Common Entrance Test (CUCET) through which it attracts the students of diversified cultures, backgrounds and ethnicity of the Country. Admissions are done purely on the basis of merit through counselling in the University premises. All students willing to take admission in the University are necessarily required to appear in the CUCET (Central University Common Entrance Test) examination conducted every year in the month of June. The information about CUCET is provided well in advance through University website and local/national newspapers. The subject-wise merit list of CUCET is displayed on University website for awareness of all students. The admission committee formulated at University level conducts counselling sessions strictly as per the merit list of CUCET.

University offered admission in five new programmes including Master of Science (Microbiology), Master of Science (Biochemistry), Master of Science (Nutrition Biology), Master of Science (Biotechnology), and Master of Hotel Management & Catering Technology from the current academic session 2015-2016 on the basis of merit, applying the reservation policy.

Since inception of the University, the intake of the students has increased manifold with the increase of number of programmes. This has also attracted the talent from all over the country and the University has students from a number of states ranging from Jammu and Kashmir to Kerala and North-Eastern States too. Due to strict, fair and transparent admission policy the quality of students has increased to the desired level.

Examination and Evaluation

Detailed annual academic calendar is prepared by the University before the commencement of the classes and it is uploaded on the University website. Ordinances themselves define the credit requirements of credits, sessional tests/assignments and evaluation process.

Students are directed in advance about the sessional evaluation comprising sessional test I and II, presentations and assignments. Sessional test I is held during the sixth week of the semester for the syllabi covered till then. Sessional II is held during the twelfth week. End-semester examination covering the entire syllabus is conducted by the examination branch as clearly specified in the Ordinance. As per Post Graduate Choice Based Credit System Ordinance, the evaluation system is based on the 10 point grading system.

Some of the Recent Reforms in Examination System:

- Recently Ordinances have been modified in accordance with the CBCS and as an additional feature towards examination reforms, the students are allowed for re-checking of their end-

semester examination answer sheets with a nominal fee.

- Besides, University has made it mandatory for the students to fulfil the condition of 75% attendance through the revised Ordinance for Postgraduate Programmes.
- The students are also shown their internal assessment answer sheets to ensure the transparency and satisfaction of the students.
- In case a student is unable to complete the course in due time then he/she may exercise the clause of availing 'zero semester'.

Recent Reforms in Ph.D. Evaluation Process:

- After getting admission to Ph.D. programme the scholar has to mandatorily undergo six months course work before registration
- The full procedure laid down by the UGC is followed in the case of Ph.D. Evaluation process. A panel of eight names of Examiners is invited from the department and as per the University system the thesis is being sent to three external examiners appointed by the Vice Chancellor
- Scholar is required to publish at least two research papers in refereed journals before submission of thesis for evaluation
- Compulsory plagiarism check before submission of thesis for evaluation
- Open house Viva-Voce examination

Teaching quality and improvement

All the departments take the help of Information and Communication Technology (ICT) facilities to enrich the teaching-learning process. Computers and LCD projectors have been made available to facilitate the ICT-enabled teaching-learning pedagogy in all the departments. Various online learning resources, e-resources and Open Educational Resources (OER) are made available to the faculty through the library. As the campus is fully Wi-Fi, hence the students are even given online assignments. The laboratories of Science departments are being equipped with the latest equipment for better teaching, learning and research activities. Proper use of ICT is being done to make the teaching learning process more vibrant and dynamic.

University has the practice of encouraging the faculty members to recharge themselves through orientation programmes, refresher courses, visiting assignments, etc. The University has the culture to motivate the faculty to participate in National and International seminars and conferences from time to time and there is provision of study leave, academic leave, duty leave, etc. for attending such events/occasions.

Resesarch Activity of the University

Working towards realization of its Vision and Mission and in order to accomplish the academic agenda for promoting, producing and disseminating knowledge, quality research, the University, apart from the running courses with multi-disciplinary approach, has adopted engaging teaching-learning pedagogy and provides exciting environment for research. University publishes an interdisciplinary journal – “Journal of Central University of Haryana – An International Multidisciplinary Refereed Research Journal” which invites the scholarly inputs from all disciplines and publishes it under one name. Faculty members are also encouraged to carry out group project works involving interdisciplinary research. Out of 77 faculty members, near about 35.52% of the faculty have been invited as resource persons in Workshops/Seminars/Conferences organized by external professional agencies and 86% of the faculty have participated and presented papers in academic events organized by external professional bodies.

Central University of Haryana is constantly attempting to provide the best of infrastructure to scholars and faculty members so that best research practices can be followed. Some of the efforts by the University in this regard are as given below:

- Scholars of various departments are provided with separate spacious rooms with facilities of computers.
- University is part of the UGC-INFLIBNET network of Government of India enabling its members to get online access to top class and wide range of National and International journals in various fields.
- University is also subscribing to various journals in its library. These journals are openly available to students along with proper reading space.
- University has also recently purchased a 10 user license of SPSS to facilitate the usage of the said software package to encourage research. The computers in e-library of the University are installed with SPSS package which are available for usage by all the students and faculty members of University.
- University is providing uninterrupted power supply and 24 X 7 internet connectivity to its scholars. The campus of Central University of Haryana is fully Wi-Fi.
- University has also made provision of having a software for plagiarism check to facilitate quality and original research work. The software is accessible to all members of University.

- University is also encouraging the DST Inspire teachers to join the University so that research work can be improved. University is currently providing all the infrastructure including residential facility to DST Inspire fellows on campus.
- University is also providing all the infrastructure support along with residential facility to post-doctoral fellowship students. Currently, two post-doctoral fellowships are utilizing the infrastructure of University to advance the research capabilities.

Extra-Curricular Activities and Community Services of the University

Central University of Haryana has made all out efforts towards ensuring this vision. It has tried to realize this dream by building partnership with community, with neighborhood educational institutions, and with all stakeholders. Some of the cells and clubs of the University address the issue of inclusive education. For example, Cell for Differently-Abled, Women Empowerment Cell, SC/ST Grievances Cell, Internal Complaint Committee for Prevention, Prohibition and Redressal of Sexual Harassment, and most importantly, Equal Opportunity Cell. Hence, the University is fully dedicated to make the learning environment more democratic and inclusive. Realizing the mission to serve the neighboring community, University has adopted six neighboring villages—Jant, Pali, Dholi, Malra, Bhurjat and Lavan. The University is working steadfastly for the holistic development of the surrounding localities. To bring quality education to the doorstep of the villagers, free remedial classes are organized by the research scholars in the University Campus for the school-going students of the villages. The University provides necessary educational resources (including consultation, counseling and special sessions) to the students of the adopted villages. Some of the major social outreach initiatives taken by various cells and clubs such as Centre for Community Development, *Unnat Bharat Abhiyan* Cell, Women Empowerment Cell, Legal Aid Clinic etc. include—Legal awareness survey, Legal literacy and AADHAR Card camp in the University for the villagers; gender sensitization programmes in the adopted villages by the Women Empowerment Cell of the University; Tree plantation drives in and outside the villages; sensitization programmes on health, hygiene, sanitation, ecological and environment issues and cleanliness drives. University is committed to implement the ambitious campaigns like *Swachh Bharat Abhiyan*, *Rashtriya Aviskar Abhiyan* and *Unnat Bharat Abhiyan* through its cells, clubs, centres and teaching departments.

Governance of the University

The governance of the Central University of Haryana is based on the principles of equality and inclusiveness which focuses on the consensus oriented approach of all the various stakeholders.

Transparency and Accountability are the two central pillars of governance for which University adopts e-governance for information delivery and other services to the stakeholders. University focuses on Green channels which facilitates paperless administration.

The University has developed various mechanisms for the leadership to interact with its stakeholders, for example, meetings of University Court , Executive Council, Academic Council, Finance Committee, Students' Council; interaction with the Visitor in the Annual conference of Vice Chancellors at Rashrapati Bhawan; meetings convened by UGC/MHRD at regular intervals; interaction with the community through various programmes being initiated under Community Development and *Unnat Bharat* campaign; interface with academia through extension lectures by renowned academicians from different disciplines; conducting workshops/dialogue with the involvement of scientists, experts, resource persons from industry, corporate and Innovation Foundation of India. University leadership keenly participates in the activities of Industry Interface Cell, Alumni Association, Teachers-Parents Meet, Grievance Redressal Cell, NSS/YRC, and Centre for Community Development, *Unnat Bharat Abhiyan* Cell, and Group for the Promotion of Arts, Culture and Heritage, Women Empowerment Cell, Legal Aid Clinic and Centre for Innovation, Skills and Entrepreneurship to interact with the participants from different spheres.

Blueprint and Future Road map

To put the institution on a high growth trajectory for achieving excellence in academics, research and innovations, University leadership has charted out the holistic roadmap to be pursued in the coming years.

I. Some of the thrust areas that University proposes to focus on priority basis include—

- Identifying the prospective areas requiring immediate attention for creating vibrant academic and research environment and to review all the ongoing projects in the institution. Priority will be given for NAAC accreditation of the University.
- Making the website a repository of all the available information, facilities, resources and opportunities that the University offers so that the stakeholders of the University are not deterred by any barriers of geographical location while accessing the relevant information. Open educational resources (OERs), Massive Open Online Courses (MOOCs) and resources available under 'Creative Commons' license will be linked to provide vast pool of useful and supplementary material to the students. MOOCs will offer the students anytime-anywhere learning environment, which is becoming increasingly popular as one of the most effective tools for knowledge sharing and dissemination.
- Establishing credible open forums for interaction with the teaching, learning and the non-teaching community to understand their needs, demands and aspirations to see the desired change.

- Establishment of University Development Corpus Fund to create a corpus for funding, supporting and sustaining academic and research initiatives of various in-house Centres and Institutes, faculty members, research scholars and students. The corpus will involve generation of funds from but not restricted to:
 - Industry
 - Alumni Endowments
 - Overhead grant from Extramural Research grants
 - Consultancy
 - Patents and technology transfer
 - Grant from International bodies under their social and academic initiatives
- Special initiatives and programs for differently-abled and disadvantaged students to realize the vision of inclusive quality education. All efforts shall be made to make the campus differently-abled and disadvantaged-friendly as per the requirements and guidelines of Government of India (GOI). A duly constituted special cell shall initiate affirmative action and monitoring of progress of all such programs towards equal opportunity to all the students even for exploring the possibilities to create and generate employment opportunities. Grants and aid will also be provided to deserving students for enhancing their employability skills. University also proposes to establish sports facilities for the differently abled students to further ensure their all round development.
- Equal Opportunity Cell will ensure that all sections of the students are provided appropriate support; and special initiatives will be undertaken for bringing students of the backward and underprivileged sections at par with others to offer them a level playing field for competition.
- University proposes to launch Technical Vocational Courses to empower the students with technical skills.

II. Empowering and strengthening existing University System:

- **E-Governance:** To bring the entire functioning of the University under the ambit of e-Governance, the University shall expedite the digitization process. The entire University will be linked through internet so that all the schools, departments and centres will be on a common network.
- **Transforming education system for creating exciting opportunities- Choice Based Credit System (CBCS)**
 - Shift in focus from teacher-centric to student-centric education.
 - Allows students to choose innovative curriculum through inter-disciplinary, intra-disciplinary courses, skill oriented papers, vocational education and encourages more flexibility for students.
 - Makes education broad-based and at par with global standards
 - Ease of mobility for students
- **Faculty Development Programmes:** Creating opportunities for the faculty to get oriented to latest innovative pedagogies, research methodology and professional skills by providing training through induction courses/workshops and seminars at regular intervals.

- **School/Department Development Program:** Enriching state of the art Labs with more equipment and securing funds from various GOI schemes for creating department-centric research facilities and developing Learning Resource Centres.
- **New learning and teaching pedagogy initiatives:** University proposes to create the facilities for developing e-learning material and also to facilitate the starting of MOOCs (Massive Open Online Courses).
- **Modernization of Library:** Library is the temple of wisdom and knowledge in a University. Apart from acquiring new and existing titles and increasing the subscription of journals, one of the priority areas will be to constantly upgrade and enhance the library connectivity to the national grid so that access to all the e-journals and e-books that are subscribed through INFLIBNET and its affiliated Universities and institutes are also available to the University students. Further, University library and Department/School libraries will be linked through the University intranet so that there is seamless flow of knowledge.
- **Placement Opportunities:** The Career Counselling, Training and Placement Cell will be refurbished to bring maximum number of students under its ambit. Registration and profiling of all students in the placement cell will be made mandatory so that each student gets the opportunity to apply for jobs.
- **Instituting Research Awards:** University proposes to institute many awards for recharging and motivating the faculty like—Best Research Paper Award, Best Teacher Award, Best Department Award in terms of maintenance and cleanliness, etc.
- **Strengthening of Examination System:**
 - Online registration for exams
 - Online issue of admission card
 - Online submission of question papers
 - Decentralization of Post Graduate examination by empowering University Teaching Departments.
- Consolidation of existing departments by providing faculty and minimum required infrastructure
- Introduction of new programs in Life Sciences, Physical Sciences, Mathematical Sciences, Performing and Fine Arts, Language and Linguistics and Pharmaceutical Sciences
- Introducing the Certificate and Diploma courses through the schemes like B.Voc, Community College, *Deen Dayal Upadhyaya Kaushal Kendra* and Skills Incubation Centre.
- Priority will be given for establishing different centers under the Inter and Multi-Disciplinary format providing infrastructure and opportunity to develop and hone existing and new areas of research and innovation. These centers will act as catalysts for increasing the quality and quantity of research publication and to develop relevant and sustainable technology and obtain its patents (IPR).

- **Center for Academic Auditing:** This center will be responsible for evaluation of all academic, research and associated activities of different Departments and Centers of the University. It will also be tasked with setting up of future benchmarks for the University.
- **Technology Stock Exchange:** This center will be established with objectives like creating value for ongoing and new research or to transform research in terms of revenue. An ecosystem will be developed to provide common platform for researchers, industrialists, evaluator and IPR specialists for facilitating the improvement of incubated technologies and their transfer to industries.
- **Centre for Policy and Modeling:** This center will focus in creating value in the following areas:
 - Policy for self-sustenance at macro and micro level of governance
 - Carbon footprint and Green initiatives Policy
 - Unified e-Content formulation, implementation and outreach Policy
 - Policy for reforms in Socio-Economic delivery mechanism
 - Modeling for Climate change and Weather prediction: Causes and Impact
 - Modeling for Crop prediction and associated studies
 - Modeling Studies: Use of modeling as a tool for providing real-time solutions in diverse areas ranging from drug delivery, medical profiling and genetic code generation studies, controlling traffic flows, analyzing and predicting stock market trends, etc.
- **Centre for Secondary Agriculture and Energy Harvesting:**
 - i. Aimed at adding value to crop residue, Center on Bioenergy and Biomaterials is proposed for developing technologies for production of alternate fuels and biomaterials.
 - ii. Energy harvesting is a new and rapidly developing concept, which strives to generate energy from everyday processes for powering low energy everyday requirements. The basic concept is to harness unproductive energy from various processes and convert it into electricity like rubbing, pressure, air friction, tidal energy, rotatory motion, body heat etc.
- **Center for Innovation, Skills, Entrepreneurship and Employment:** This center will be made into a dynamic hub to provide all solutions related to students employment. To encourage innovative thinking, incubate ideas, changing mindset and increase the employability of the students, there will be regular interactions between the academia and the industry under the aegis of this center. Special emphasis will be laid for developing soft skills of the students like communication, team building, leadership and domain skills. Tie-ups will be made with both public and private partners to provide vocational and entrepreneurial training to the students for setting up their own Micro, Small, Medium Enterprises (MSME's) apart from regularly organizing placement drives. Courses to be offered under the scheme of *Deen Dayal Upadhyay Kaushal Kendra* and Incubation Centre for Skills (in collaboration with NSIC) shall be instrumental in achieving these objectives. In the ever-changing realm of education there is an increasing need to start vocational courses which directly cater to skills and vocations which do not form part of standard undergraduate and postgraduate courses.
- **Instrumentation and Analytical Techniques:** Instrumentation is a rapidly growing field in India. There is huge potential in this field as India gears up to provide quality and cost effective alternatives to expensive imported instrumentation that is currently available in

the market. Analytical Techniques and their applications cover a wide spectrum of disciplines ranging from Life Sciences, Physical Sciences and Material Sciences providing cutting edge solutions particularly in research areas.

- **Courses on Diagnostics:** Diagnostic techniques require the user/learner to have a broad based knowledge, which is inter-disciplinary and multi-disciplinary in nature. The courses on diagnostics will seek to bridge the gap between the knowledge and skills required and those available in the existing courses by offering a course dealing with all the aspects of Diagnostics.
- **New courses for Media Studies, Technical Writing and Editing:** The realm of Media Studies is ever expanding as new and innovative forms of engagement with the public take shape. Existing Media studies courses in audio, visual, electronic and print media and multimedia are mostly conducted by private institutes at prohibitive costs. These courses will try to provide such knowledge and skills at affordable cost and also aim to explore relatively niche fields of technical writing, editing and multimedia in Science and Technology.
- **Centre for Culture and Heritage:** University proposes to introduce the Centre for Culture and Heritage to facilitate the studies and researches in the field of Culture Studies, Indigenous Studies and studies on Indigenous Arts, Culture and Heritage. Besides, this centre will be dedicated to preserving folk arts, music and literature.

III. Self-sustaining and Miscellaneous Initiatives:

- ***Developing Crucibles of Learning and Development:*** Motivating staff and students to develop models, experiments, technologies to catalyze local/regional/national growth and development in association with local industry/trade/handicrafts/vocations.
- ***Solid Waste Management:*** Initiatives for solid waste management will be undertaken so that the University becomes a zero-waste University. Options will be explored for utilizing the waste to create energy and other productive materials.
- ***E-Waste management:*** E-waste is increasingly becoming an environmental disaster and processes will be put in place to recycle and effectively dispose the e-waste that is generated by the University.
- ***Energy generation:*** Setting up of solar street lamps, solar panels on University building's rooftops and designing of new buildings on the concept of zero-energy/green buildings.
- ***Water harvesting:*** A feasibility study will be conducted to implement water harvesting so that University is able to meet at-least part equipment of water from its own sources.
- ***Sports Academy:*** Since the University has ample land available with it, hence part of that land will be utilized in setting up a sports academy for creating world-class infrastructure for students. This facility will also be leased out/ memberships provided so that the academy also earns revenue for the University. Moreover, special emphasis will be given to establishing sports facility for disabled persons.
- ***Organic Farming:*** Keeping in mind the vast expanse of land available with the University, an organic farm has been set up and the produce may be sold at the local/regional markets

to earn some revenue for the University. Moreover, it could be used for training the students and for demonstration purpose for the local population.

- **Solar Power Plant:** University proposes to establish solar power generation plant as a sustainable means to generate eco-friendly and cost-effective energy.

IV. Possible challenges and proposed steps to overcome the roadblocks:

- For setting up of University Development Corpus Fund, the Acts and Statutes of University will have to be studied carefully to avoid any deviations.
The office of the Registrar, Finance Officer and Legal Advisor will be tasked to formulate the policies, guidelines and rules and regulations in accordance with the Acts and Statutes of the University and the rules for financial transaction of Government of India.
- Identification of areas of affirmative action will be a challenge, as this would involve collecting information from all components of the University with all possible suggestions for such areas.
Setting up of an empowered committee to execute this entire plan, roadblocks are being removed at the earliest.
- Providing appropriate directions to the departments/centers regarding research funding and funding agencies.
The University leadership will use its long-standing experience in handling various research projects granted from different funding agencies under different Departments of the Government of India to ensure that funding is made available to these centers. Further, the Vice Chancellor will make efforts to bring experts and people of eminence in their respective fields to head/advise the existing Departments and new Departments and Centers for providing proper direction and futuristic development of University.
- Sometimes, the handicap with public Universities is that though they have the best talent but due to lack of proper advertising and publicity they do not attract best candidates with sound academic profiles.
- Some funds will be set aside for proper visibility and special funds will be created for imparting vocational and entrepreneurial training at a nominal cost. Sponsorships will be sought for conducting placement drives smoothly.
- On infrastructural front, University has started the construction work of the second phase and the work on academic blocks, staff quarters and administrative block is in full swing. Development of Central Library, Students Activity Centre and Guest Houses are to be taken up on priority basis

PART-I INSTITUTIONAL DATA



PROFILE OF THE UNIVERSITY

1. Name and Address of the University:

Name	CENTRAL UNIVERSITY OF HARYANA
Address	JANT-PALI VILLAGES
City	MAHENDRAGARH
PIN	123029
State	HARYANA
Website	www.cuh.ac.in

2. For Communication:

Designation	Name	Telephone with STD Code	Mobile	Fax	E-mail
Vice Chancellor	Prof. R.C. Kuhad	01285-249333	9871509870	01285-249402	vc@cuh.ac.in
Registrar	Sh. Ram Dutt	01285-249401	8222001888	01285-249402	registrar@cuh.ac.in
Steering Committee/IQAC Coordinator	Prof. Ashish Dahiya		8222985555		ashish@cuh.ac.in

3. Status of the University:

State University:	
State Private University:	
Central University	√
University under Section 3 of UGC (Deemed University)	
Institution of National Importance	
Any other (please specify):	

4. Type of University:

Unitary	√
Affiliating	

5. Source of Funding:

Central Government	√
--------------------	---

6. Date of Establishment of the University:

a. University was established on 20/03/2009 vide Central Universities Act 2009 (No. 25 of 2009)

b. Prior to the establishment of the University, was it a/an

i. PG Centre Yes No

ii. Affiliated College Yes No

iii. Constituent College Yes No

iv. Autonomous College Yes No

v. Any Other (Please Specify) N.A.

If yes, give the date of establishment: N.A.

7. Date of Recognition as a University by UGC or any other National Agency:

Sr. No.	Under Section	Date	Month	Year	Remarks
i.	2f of UGC*	20	03	2009	Vide ref. no. F.65-6/2012 (CU) dated 14 th Oct. 2014, UGC has clarified that the Central Universities established under Central Universities Act 2009 need not apply separately for recognition u/s 2 (f) and 12 (B) of UGC. (Copy annexed)
ii.	12B of UGC *	20	03	2009	
iii.	3 of UGC #				
iv.	Any other \$ (specify)				

* Enclose certificate of recognition: **(Enclosed as Appendix-I)**

Enclose notification of MHRD and UGC for all courses/programmes/campus/campuses: **(Enclosed as Appendix-II)**

\$ Enclose certificate of recognition by any other national agency/agencies, if any.

8. Has the University been Recognized:

a. By UGC as a University with Potential for Excellence?

Yes No

If yes, date of recognition: N.A.

b. For its performance by any other governmental agency?

Yes No

If yes, Name of the agency: N.A.

Date of recognition: N.A.

9. Does the University have off-campus centres?

Yes No

10. Does the University have off-shore campuses?

Yes No

11. Location of the Campus and Area:

Campus	Location	Campus area in Acres	Built up area in sq. Mts.
Main Campus Area	Jant-Pali Villages, Mahendragarh, (Rural)	488	14 Acres
Other Campuses in the country	Transit Campus at DLF, Phase-3, Gurgaon (Urban)	Transit Campus runs from Govt. Primary School building provided by Haryana Urban Development Authority, Haryana for temporary use only.	
Campuses abroad	N.A.	N.A.	N.A.

(* Urban, Semi-Urban, Rural, Tribal, Hilly Area, Any other (please specify))

If the University has more than one campus, it may submit a consolidated self-study report reflecting the activities of all the campuses.

12. Provide information on the following: In case of Multi-campus University, please provide Campus-wise Information.

I. Permanent Campus:

a. Auditorium/seminar complex with infrastructural facilities:

b. Sports facilities

- Playground
- Swimming pool
- Gymnasium
- Any other (please specify)

c. Hostel

i. Boys Hostel:

- Number of Hostels: 01
- Number of Inmates: **198**

Boys Hostel has got following facilities:

- Mess
- Gymnasium
- Reading Room
- Guest Rooms
- Recreation Room
- Wi-Fi facility
- Laundry
- Solar Geysers
- Health Centre with full time nursing and Doctor on call facility, etc.

ii. Girls hostel

- Number of Hostels: 01
- Number of Inmates: 200

Girls Hostel has got following facilities:

- Mess
- Gymnasium
- Reading Room
- Guest Rooms,
- Recreation Room
- Wi-Fi facility
- Laundry
- Solar Geysers
- Health Centre with full time nursing and Doctor on call facility, etc.

iii. Working Women's Hostel: NIL

- Number of Hostels
- Number of Inmates
- Facilities

iv. Residential Facilities for Faculty and Non-teaching:

v. Cafeteria:

vi. Health Centre: Nature of facilities available – inpatient, outpatient, ambulance, emergency care facility, etc.

The University health centre has full time nursing and doctor on call facilities with basic infrastructure available for providing medical aid. Transportation is provided on need basis.

vii. Facilities like banking, post office, book shops, etc.

The Banking Facility is provided by Punjab National Bank while other upcoming facilities include Post office, stationery shop, grocery store, Xerox/printing shop etc. Presently, Xerox and printing facility is provided by University Library on nominal charges—50/- paisa per copy.

viii. Transport facilities to cater to the needs of the students and staff:

ix. Facilities for persons with disabilities:

There are ramps, provision of electric wheelchair and special rooms for persons with disabilities.

x. Animal house: No

xi. Incinerator for laboratories: Yes

xii. Power house:

xiii. Waste management facility

13. Number of Institutions Affiliated to the University: N.A.

University is unitary in nature and, therefore, there are no colleges affiliated to the University.

14. Does the University Act provide for conferment of autonomy (as recognized by the UGC) to its affiliated institutions? If yes, give the number of autonomous colleges under the jurisdiction of the University?: N.A.

15. Furnish the following Information:

<i>Particulars</i>	<i>Number</i>	<i>Number of Students</i>
<i>a. University Departments (List of the departments is as given under)</i>	<i>25</i>	
<i>Undergraduate</i>	<i>NIL</i>	
<i>Post graduate</i>	<i>25 PG Programmes</i>	<i>901</i>
<i>Research centres on the campus</i>	<i>11 Departments are running M.Phil/Ph.D Research Programmes</i>	<i>179</i>
<i>b. Constituent colleges</i>	<i>NA</i>	<i>NA</i>
<i>c. Affiliated colleges</i>	<i>NA</i>	<i>NA</i>
<i>d. Colleges under 2(f)</i>	<i>NA</i>	<i>NA</i>
<i>e. Colleges under 2(f) and 12B</i>	<i>NA</i>	<i>NA</i>
<i>f. NAAC accredited colleges</i>	<i>NA</i>	<i>NA</i>

<i>g. Colleges with Potential for Excellence (UGC)</i>	NA	NA
<i>h. Autonomous colleges</i>	NA	NA
<i>i. Colleges with Postgraduate Departments</i>	NA	NA
<i>j. Colleges with Research Departments</i>	NA	NA
<i>k. University recognized Research Institutes/Centres</i>	NA	NA

List of University Departments as on 20th Oct. 2015:

As approved by Statutory Bodies, the following Departments are functional in the Central University of Haryana during the session 2015-16:

- | | |
|---|---|
| 1. Department of Chemistry | 12. Department of Law |
| 2. Department of Commerce | 13. Department of Library and Information Science |
| 3. Department of Computer Sciences and Information Technology | 14. Department of Management Studies |
| 4. Department of Economics | 15. Department of Mathematics |
| 5. Department of Education | 16. Department of Physics |
| 6. Department of English and Foreign Languages | 17. Department of Political Science |
| 7. Department of Environmental Sciences | 18. Department of Psychology |
| 8. Department of Geography | 19. Department of Sociology |
| 9. Department of Hindi and Indian Languages | 20. Department of Statistics |
| 10. Department of History and Archeology | 21. Department of Microbiology |
| 11. Department of Journalism, Media and Mass Communication | 22. Department of Biochemistry |
| | 23. Department of Nutrition Biology |
| | 24. Department of Biotechnology |
| | 25. Department of Tourism & Hotel Management |

16. Does the University conform to the specification of Degrees as enlisted by the UGC?

Yes No

If the University uses any other nomenclatures, please specify. N.A.

17. Academic programmes offered by the University departments at present, under the following categories: (Enclose the list of academic programmes offered)

Programmes	Number
UG	00
PG	25
Integrated Masters	00
M.Phil. (English, Hindi, Education, Pol. Science & Economics)	05

Ph.D. (English, Hindi, Education, Political Science, Economics, Management Studies, Microbiology, Biochemistry, Nutrition Biology, Biotechnology, Tourism & Hotel Management)	11
Integrated Ph.D. (Discontinued)	00
Certificate	00
Diploma	00
PG Diploma	01
Any other (please specify)	00
Total	42

List of academic programmes offered:

Post-Graduate Programmes (through CUCET)

- a) Master of Arts (Economics)
- b) Master of Arts (Education)
- c) Master of Arts (English)
- d) Master of Arts (Hindi)
- e) Master of Arts (History)
- f) Master of Arts (Political Science)
- g) Master of Arts (Psychology)
- h) Master of Arts (Sociology)
- i) Master of Business Administration (MBA)
- j) Master of Commerce (M.Com)
- k) Master of Computer Applications (M.C.A.)
- l) Master of Journalism and Mass Communication (MJMC)
- m) Master of Law (LL.M)
- n) Master of Library & Information Science
- o) Master of Science (Environment Science)
- p) Master of Science (Geography)
- q) Master of Science (Chemistry)
- r) Master of Science (Physics)
- s) Master of Science (Maths)
- t) Master of Science in Statistics (M.Sc. Statistics)

Post-Graduate Programmes (Admission on the basis of marks in qualifying examination and not through CUCET)

- a) Master of Science (Microbiology)
- b) Master of Science (Biochemistry)
- c) Master of Science (Nutrition Biology)
- d) Master of Science (Biotechnology)
- e) Master of Hotel Management & Catering Technology (MHMCT)

P.G. Diploma Course: University has issued the notification for admission to PG Diploma Course in Cooperative Management, a One-Year Programme in collaboration with National Cooperative Union of India.

Research Programmes (RP)—Admission on the basis of CUCET and interview/presentation):

M.Phil. Programmes: Economics, Education, English, Hindi, Political Science

Ph.D. Programmes: Economics, Education, English, Hindi, Management, Pol. Science, Microbiology, Biochemistry, Nutrition Biology, Biotechnology, Tourism & Hotel Management.

Ph.D. Programmes (Admission on the basis of M.Phil./NET/JRF etc. and interview/presentation, not through CUCET): Following departments offer admission to Ph.D. programmes on the basis of M.Phil./NET/JRF etc. and interview/presentation, not through CUCET:

Microbiology, Biochemistry, Nutrition Biology, Biotechnology, Tourism & Hotel Management.

University authorities have approved the proposal to introduce Ph.D. in Physics from the next academic session.

18. **Number of working days during the last academic year.** 181

19. **Number of teaching days during the past four academic years.**

Session	2011-12	2012-13	2013-14	2014-15
Teaching Days	189	182	180	181

(‘Teaching days’ means days on which classes were engaged. Examination days are not to be included.)

20. **Does the University have a department of Teacher Education?** No

A proposal for setting up the department is submitted to UGC and in most likelihood, University will start B.Ed and M.Ed programmes from the next academic session.

21. **Does the University have a teaching department of Physical Education?:** No

i. Is the department opting for assessment and accreditation separately?

22. **In the case of Private and Deemed Universities, please indicate whether professional programmes are being offered?** N.A.

23. **Has the University been reviewed by any Regulatory Authority? If so, furnish a copy of the report and action taken there upon:** N.A.

24. Number of positions in the University:

Positions	Teaching faculty			Non-Teaching Staff	Technical Staff
	Professor	Associate Professor	Assistant Professor		
Sanctioned by the UGC / University /State Government	25	50	100	104	---
<i>Recruited</i>				29	
<i>Yet to Recruit</i>				75	
Number of persons working on contract	01	01	39	26	

25. Qualifications of the Teaching Staff

Highest Qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent Teachers							
D.Sc./D.Litt.	-	-	-	-	-	-	-
Ph.D.	-	-	02	01	12	07	22
M.Phil.	-	-	01	-	06	06	13
PG	-	-	02	01	15	12	30
Temporary teachers							
Ph.D.	01	-	01	-	23	10	-
M.Phil.	-	-	-	-	10	02	-
PG	01	-	01	-	25	04	-
Part-time teachers/Deputation							
Ph.D.	02	-	01	-	01	-	-
M.Phil.	-	-	-	-	01	-	-
PG	02	-	01	-	01	-	-

26. Emeritus, Adjunct and Visiting Professors:

Central University of Haryana has recently carved out the rules for empanelment of adjunct professors (Ordinance no. 10) to facilitate research and learning in University. University proposes to increase the faculty strength of departments in form of adjunct professors in near future.

	Emeritus	Adjunct	Visiting
Number	00	00	00

27. **Chairs instituted by the University:** NIL

	Chairs
School/ Department	University proposes to start Dr. APJ Abdul Kalam Chair in near future.

28. **Students enrolled in the University Departments during the Current Academic Year, with the following details:**

Students	UG		PG		Integrated Masters		M. Phil.		Ph.D.		Integrated Ph.D.		D.Litt./ D.Sc.		Certifi cate		Diploma		PG Diploma	
	*M	*F	*M	*F	*M	*F	*M	*F	*M	*F	*M	*F	*M	*F	*M	*F	*M	*F	*M	*F
From the state where the University is located			124	114			12	09	25	39										
From other states of India			97	36			10	01	13	07										
NRI students																				
Foreign students																				
Total			221	150			31	10	38	46										

**M - Male *F – Female*

29. **‘Unit cost’ of education (Calculated on the basis of student strength of session 2014-15= 613 students)**

(Unit cost = total annual recurring expenditure (actual) divided by total number of students enrolled)

- a. Including the salary component = One Lakh Ninety Thousand and Six Hundred Rupees
- b. Excluding the salary component = Ninety Six Thousand and Three Hundred

30. **Academic Staff College:** N.A.

University has submitted the proposal for the establishment of UGC-Human Resource Development Centre (HRDC) to University Grants Commission.

- Year of establishment:
- Number of programmes conducted (with duration)
- UGC Orientation Course

- UGC Refresher Course
- University's own programmes

31. Does the University offer Distance Education Programmes (DEP)?

Yes No

If yes, indicate the number of programmes offered.

Are they recognized by the Distance Education Council?

32. Does the University have a provision for external registration of students?

Yes, University has implemented Choice Based Credit System that provides horizontal and vertical mobility subject to equivalence of the courses, syllabi etc. by the Equivalence Committee of the University.

If yes, how many students avail of this provision annually?

So far, no student has availed the provision of external registration.

33. Is the University applying for Accreditation or Re-Assessment? If Accreditation, name the cycle.

Accreditation : Cycle 1 Cycle 2 Cycle 3 Cycle 4

Re-Assessment:

34. Date of accreditation* (applicable for Cycle 2, Cycle 3, Cycle 4 and re-assessment only)
N.A.

35. Does the University provide the list of accredited institutions under its jurisdiction on its website? Provide details of the number of accredited affiliated / constituent / autonomous colleges under the University. N.A.

36. Date of establishment of Internal Quality Assurance Cell (IQAC) and dates of submission of Annual Quality Assurance Reports (AQAR).

IQAC: Internal Quality Assurance Cell of the University was constituted vide Notification No. CUH/2015/Estt.-1/473 dated 20-08-2015.

AQAR: IQAC shall submit Annual Quality Assurance Report (AQAR) within the specified time.

37. Any other relevant data, the University would like to include (not exceeding one page).

SECRET

उच्च शिक्षा विभाग, भारत सरकार
 HIGHER EDUCATION DEPARTMENT, GOVT. OF INDIA



UNIVERSITY GRANTS COMMISSION
 155, AURORE PALACE ROAD,
 NEW DELHI - 110002

UNIVERSITY GRANTS COMMISSION
 155, AURORE PALACE ROAD,
 NEW DELHI - 110002

All communications should be addressed to the Secretary by designation and full name.

No.F.65-6/2012 (CU)

14th October, 2014

The Director
 National Assessment and Accreditation Council
 P. O. Box No. 1075, Nagarbhavi
 Bangalore - 560072, Karnataka, India

14 OCT 2014

Sub: Clarification on requirement of 12B Certificate for applying the NAAC accreditation.

Sir,

As you are aware, UGC (Mandatory Assessment and Accreditation of Higher Educational Institutions) Regulation, 2012, which under Clause 7.1 specifies that financial assistance by the UGC to Institutions of Higher Education shall be given only to those institutions which have undergone assessment and accreditation process stipulated under the Regulations. The matter was considered by the Commission in its 496th meeting held on 29th November, 2013 in which the Commission, after deliberating the matter decided that in the interest of survival and day-to-day functioning of Universities/Institutions dependent on UGC, funds may continue to be disbursed to such Universities/Institutions under the existing schemes. However, all such Universities/Institutions referred to in Regulation 4 of the aforesaid Regulations and received financial assistance from the UGC must apply to the recognized Accreditation Agency latest by 1st June, 2014; failure to do so may lead to discontinuation of financial assistance by the UGC to such Universities/Institutions from 1st April, 2015 onwards.

UGC is receiving requests from Central Universities for 12B Certificate for applying the NAAC accreditation. In this regard, it is to inform that as the Central Universities are created by the Act of Parliament, there is no separate process for inclusion of Central Universities under 12B. Central Universities are 100% funded by Govt. of India. Therefore, it is clarified that there is no need to furnish the copy of 12B Certificate for applying the NAAC accreditation by the Central Universities.

Yours faithfully,

(Signature)
 (Sushma Rathore)
 Under Secretary

Copy to: Vice Chancellor, H.N.B. Garhwal University, Srinagar, Garhwal-246 174, Uttarakhand in reference to letter No.VC/2014/356 dated 01.10.2014.

(Signature)
 (Sushma Rathore)
 Under Secretary



ole

डॉ. (मिती) रेणु बत्रा
Dr. (Mrs.) Renu Batra

संयुक्त सचिव
Joint Secretary



दूरभाष PHONE कार्यालय OFF : 23238876

फैक्स FAX : 011-23232297

E-mail : renu@ugc.ac.in

विश्वविद्यालय अनुदान आयोग

बहादुर शाह ज़फर मार्ग,

नई दिल्ली-110 002 भारत

UNIVERSITY GRANTS COMMISSION

BAHADUR SHAH ZAFAR MARG

NEW DELHI-110 002 (INDIA)

D.O.No.F.24-36/2009(CU)

25th June, 2009

26 JUN 2009

Dear Prof. Sharma,

This has reference to discussion held in the meeting of Vice Chancellors of Central Universities on 27th – 28th May, 2009 regarding introduction of courses from this academic session. Based on the discussion held in the said meeting, I am directed to convey the approval of following academic programmes and teaching & non-teaching positions :-

I. Academic Programmes :

Sl. No.	Name of the Academic Programme
1	M.Phil./Ph.D. Programme in Economics
2	M.Phil./Ph.D. Programme in Political Science
3	M.Phil./Ph.D. Programme in English

II. Teaching Position : 18

Sl. No.	Name of the Academic Programme	Teaching Positions			
		Prof.	Assoc. Prof.	Asstt. Prof.	Total
1	M.Phil./Ph.D. Programme in Economics	1	2	3	6
2	M.Phil./Ph.D. Programme in Political Science	1	2	3	6
3	M.Phil./Ph.D. Programme in English	1	2	3	6
	Total	3	6	9	18

III. Non-Teaching Position : 25

Sl. No.	Name of the Post	Pay Band with Grade Pay		No. of posts	Remarks
		Pay Band	Grade Pay		
1	Registrar	37400-67000	10000	01	✓
2	Finance Officer	37400-67000	10000	01	✓
3	Controller of Examinations	37400-67000	10000	01	✓
4	Deputy Registrar	15600-39100	7600	01	✓
5	Assistant Registrar	15600-39100	5400	01	✓
6	Section Officer	9300-34800	4200	02	✓
7	Assistant	9300-34800	4200	02	✓

V. Talreja PR

डा. (श्रीमती) रेणु बत्रा
Dr. (Mrs.) Renu Batra

संयुक्त सचिव
Joint Secretary



दूरभाष PHONE कार्यालय OFF 23238876

फैक्स FAX 011-23232297

E-mail : renu@ugc.ac.in

विश्वविद्यालय अनुदान आयोग

बहादुर शाह ज़फर मार्ग,

नई दिल्ली-110 002 भारत

UNIVERSITY GRANTS COMMISSION

BAHADUR SHAH ZAFAR MARG

NEW DELHI-110 002 (INDIA)

D.O.No F.24-36/2009(CU)

Dear Prof. Sharma,

25th June, 2009
26 JUN 2009

This has reference to discussion held in the meeting of Vice Chancellors of Central Universities on 27th - 28th May, 2009 regarding introduction of courses from this academic session. Based on the discussion held in the said meeting, I am directed to convey the approval of following academic programmes and teaching & non-teaching positions :-

I. Academic Programmes :

Sl. No.	Name of the Academic Programme
1	M.Phil./Ph.D. Programme in Economics
2	M.Phil./Ph.D. Programme in Political Science
3	M.Phil./Ph.D. Programme in English

II. Teaching Position : 18

Sl. No.	Name of the Academic Programme	Teaching Positions			
		Prof.	Assoc. Prof.	Asstt. Prof.	Total
1	M.Phil./Ph.D. Programme in Economics	1	2	3	6
2	M.Phil./Ph.D. Programme in Political Science	1	2	3	6
3	M.Phil./Ph.D. Programme in English	1	2	3	6
	Total	3	6	9	18

III. Non-Teaching Position : 25

Sl. No.	Name of the Post	Pay Band with Grade Pay		No. of posts	Remarks
		Pay Band	Grade Pay		
1	Registrar	37400-67000	10000	01	
2	Finance Officer	37400-67000	10000	01	
3	Controller of Examinations	37400-67000	10000	01	
4	Deputy Registrar	15600-39100	7600	01	
5	Assistant Registrar	15600-39100	5400	01	
6	Section Officer	9300-34800	4200	02	
7	Assistant	9300-34800	4200	02	

V. Talreja RB

Sl. No.	Name of the Post	Pay Band with Grade Pay		No. of posts	Remarks
		Pay Band	Grade Pay		
8.	UDC	5200-20200	2400	02	
9.	LDC	5200-20200	1900	02	
10.	Private Secretary to V.C.	9300-34800	4200	01	
11.	Personal Assistant	9300-34800	4200	01	
12.	Assistant Librarian	15600-39100	6000 (AGP)	01	
13.	Jr. Prof. Assistant	5200-20200	2800	01	
14.	Library Attendant	5200-20200	1800	02	
15.	Driver	5200-20200	1900	02	
16.	Other Staff for cleaning office, gardening, security, mess etc.			04	on contractual basis
	Total			25	

The abovementioned approval is subject to the following :-

- (i) The approval of UGC for introduction of programmes of study is in principle. Once the executive/administrative bodies i.e. Board of Studies, Academic Council, Executive Council etc as provided in the Act/Bill are constituted, the approval of the academic courses may be placed before these bodies for ratification.
- (ii) The XI Plan reforms agenda for higher & technical education which include admissions, semester system, curriculum reform, promotion of science education and research, examination system, fee structure, assessment, accreditation, ratings, teachers' competence/motivation, autonomy/ transparency / accountability in institutions etc. may be implemented while establishing and running the proposed activities.
- (iii) A built-in system/component for repair and maintenance of equipment in the Science Departments to obviate under utilization/ unutilisation of the laboratory facilities due to absence of provision and facilities for repairs and maintenance.
- (iv) Construction activities taken up should be according to CPWD rates. A Project Steering Committee should be formed to ensure that the quality of construction is as per the norms. Clear timelines need to be specified in advance and adhered to, to avoid time and cost over-runs. Transparent processes should be followed for procurement of equipment, as per guidelines.
- (v) The Courses may be started at the temporary campus as indicated in the Site Selection Committee Report.
- (vi) UGC XI Plan General Development Guidelines in respect of construction work needs to be followed.
- (vii) Services like cleanliness, security, hostel/guest house/Mess, Transport, Horticulture etc. may be outsourced through the registered agencies in their districts/states. Further, rules as per the Government of India are to be followed in this regard.
- (viii) Sanctioned posts are to be filled up in phase manner.

V. Taraja *BB*

University may follow strictly the Government of India/UGC's guidelines regarding implementation of the reservation policy [both vertical (for SCs, STs & OBCs) and horizontal (for persons with disability etc.)] in teaching / non-teaching posts and also in admissions.

As per procedure laid down by the Commission as intimated by UGC to all Central Universities vide UGC letter No.F.17-1/2002(CU) dated 28th April, 2005 (copy enclosed) the building grants are required to be duly scrutinized by the Building & Works Committee of the University with technical experts on it. Then the proposals in the format given in the Annexure are to be placed for approval in the respective Finance Committees having representative of the UGC and the Ministry of HRD on it. Whereas, it is not feasible to obtain prior approval of Finance Committee, the same may be reported to the Finance Committee in its next meeting for ratification.

With regard to budget allocation for other heads etc. same would be conveyed on receipt of separate budget for new Central Universities from MHRD. In the meantime, you are requested to utilize the grant available with you to meet out the day to day urgent requirements and sent the utilization certificate as per GFR 19-A (copy enclosed) alongwith the statement of expenditure (item-wise).

With regards,

Yours sincerely,

R. Balu
(Renu Batra)

Prof. Mool Chand Sharma
Vice Chancellor
Central University of Haryana
Govt. College, Sector-14,
Mehrauli Road, Gurgaon

V. Talreja

(श्रीमती) रेणु बत्रा
Dr. (Mrs.) Renu Batra

संयुक्त सचिव
Joint Secretary



दूरभाष PHONE कार्यालय OFF : 23238876

फैक्स FAX : 011-23232297

E-mail : renu@ugc.ac.in

विश्वविद्यालय अनुदान आयोग

बहादुर शाह ज़फर मार्ग,

नई दिल्ली-110 002 भारत

UNIVERSITY GRANTS COMMISSION

BAHADUR SHAH ZAFAR MARG

NEW DELHI-110 002 (INDIA)

April 2010

F.No.57-2/09(CU)

Prof. Mool Chand Sharma
Vice Chancellor
Central University of Haryana
Temp. Office : Govt. B.Ed. College Building
Narnaul, Distt. Mahendra garh
(Haryana).

Subject : Approval for Action Plan 2010-2011 – regarding.

Sir,

With reference to your proposal submitted vide letter no.CUH/UC/2010/99 dated 29th January 2010 and the discussions held with you in UGC on 26th February, 2010, I am directed to convey the approval for following academic programmes and teaching positions for the year 2010-2011 :-

S.No	Details of academic programme	No. of sanctioned teaching posts			
		Asstt. Prof.	Assoc. Prof.	Prof.	Total
1.	M.B.A.	03	02	01	06
2.	LLM	03	02	01	06
3.	MA(Economics)	03	02	01	06
4.	MA(Education)	03	02	01	06
Total					24

1. The above administrative approval given by the UGC is only in principle. However, the programmes may be introduced by the University only after obtaining the appropriate approvals of the concerned statutory bodies of the University.
2. The University may strictly comply with the Government of India's / UGC' guidelines regarding implementation of the reservation policy (both vertical (for SCs/STs/OBCs) and horizontal (for persons with disability etc.) in teaching / non-teaching posts and also in admissions.

Contd..2/

3. Approval for the non-teaching posts will be conveyed in due course of time.
4. The University may ensure optimum teacher-student ratio for running the approved academic programmes.
5. The nomenclature of the academic courses / degree programmes should be in accordance with the degrees specified by the UGC.
6. The UGC website www.ugc.ac.in may be browsed regularly and all Regulations / instructions/ procedures relating to various academic / administrative issues may be followed.

The Annual Allocation for the financial year 2010-2011 would be conveyed to the University shortly. The University may meet the expenditure from out of the balance amount available with them and send the Utilization Certificates in GFR 19-A format along-with item-wise statements of expenditure on quarterly basis to ensure steady flow of funds.

Yours faithfully,

R. Palw
(Renu Batra)
Joint Secretary



हरियाणा केन्द्रीय विश्वविद्यालय
(महेन्द्रगढ़)

CENTRAL UNIVERSITY OF HARYANA
(Mahendergarh)

(संसद अधिनियम 25 (2009) के तहत स्थापित)
(Established vide Act No. 25 (2009) of Parliament)

गांव - जाट-पाली, पोस्ट - पाली, जिला - महेन्द्रगढ़ - 123 029 (हरियाणा) फोन: 01285-240090
Villages - Jant - Pali, Post - Pali, Distt.- Mahendergarh -123029 (Haryana) Ph.: 01285-240090

CUH/2015/44N/532

दिनांक / Dated: 23/7/15

The Secretary
University Grants Commission
Bahadur Shah Zafar Marg
New Delhi-110 002

Sub : Approval of Teaching posts for XII Plan period for Central Universities – Central University of Haryana.

Dear Sir,

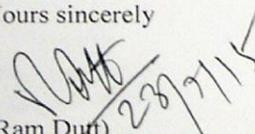
Please refer to your letter No. F.1-1/2013 (CU) dated 5th February 2014. (Copy enclosed).

This is to inform you that the competent authority of this University (Academic Council and Executive Council) have decided to start the following five Departments in this University in addition to the 20 Departments already sanctioned under the 11th Plan for the Academic Session 2015-16.

1. Department of Biotechnology
2. Department of Biochemistry
3. Department of Microbiology
4. Department of Nutrition Biology
5. Department of Tourism and Hotel Management

Thanking you,

Yours sincerely


(Ram Dutt)
Registrar

अस्थायी कैम्पस/ट्रांजिट ऑफिस: 3113, मकान नं. टी.-25/8 के सामने, डीएलएफ-III, गुडगाँव-122010, हरियाणा, टेलिफोन: 0124-2350283, 250284
Temporary Camp/Transit Office: 3113, DLF Phase III, Opp. H. No. T-25/8, Gurgaon - 122 010 Tel: 0124-2350283, 2350284

वेबसाइट (Website): www.cuharyana.org



हरियाणा केन्द्रीय विश्वविद्यालय (महेन्द्रगढ़)

CENTRAL UNIVERSITY OF HARYANA (Mahendergarh)

(संसद अधिनियम 25 (2009) के तहत स्थापित)
(Established vide Act No. 25 (2009) of Parliament)

गांव - जाट-पाली, पोस्ट - पाली, जिला - महेन्द्रगढ़ - 123 029 (हरियाणा) फोन: 01285-240090
Villages - Jant - Pali, Post - Pali, Distt.- Mahendergarh -123029 (Haryana) Ph.: 01285-240090
वेबसाइट (Website): www.cuharyana.

No. CUH/2015/Estt. sec/468

दिनांक / Dated: 17/8/15.....

To

Secretary,
University Grants Commission,
Bahadur Shah Zafar Marg,
New Delhi-110002.

Subject: Sanction of non-teaching staff for the newly established Central University of Haryana.

Dear Sir,

As per the criteria approved by the University Grants Commission (UGC), the Central University of Haryana (CUH) has not yet received the sanction of the UGC for creation of the following positions:

1. Estate Officer (1 post) in the Pay Band-II with Grade Pay Rs. 4600/-
2. Under-mentioned posts in each of the following departments:

S.No.	Name of the Department	Details of posts required
1	Department of Chemistry	1. Sr. Tech. Assistant (one) Pay Band 9300-34800 Grade Pay 4200
2	Department of Physics	
3	Department of Mathematics	
4	Department of Environmental Sciences	2. Technical Assistant (one) Pay Band 5200-20200 Grade Pay 2800
5	Department of Bio-Technology	
6	Department of Micro-Biology	
7	Department of Nutrition Biology	3. Laboratory Assistant (two) Pay Band 5200-20200 Grade Pay 2000
8	Department of Bio-Chemistry	
9	Department of Computer Science	
10	Department of Geography	4. Laboratory Attendant (two) Pay Band 5200-20200 Grade Pay 1800
11	Department of Journalism and Mass Communication	
12	Department of Psychology	
13	Department of Tourism & Hotel Management	

3. Following posts in the Department of History & Archaeology
 - i) Sr. Tech. Assistant (one) Pay Band 9300-34800 Grade Pay 4200
 - ii) Technical Assistant (one) Pay Band 5200-20200 Grade Pay 2800
 - iii) Museum Attendant (two) Pay Band 5200-20200 Grade Pay 1800

You are requested to kindly accord your approval for creation of the above posts in the CUH so that the academic and other activities of the University run smoothly.

Thanking you,

Yours faithfully,

(Ram Dutt)
Registrar

डॉ. अर्चना ठाकुर

व

Dr. Archana Thakur
Deputy Secretary



SPEED POST

विश्वविद्यालय अनुदान आयोग

बहादुर शाह ज़फर मार्ग,
नई दिल्ली-110 002, भारत

UNIVERSITY GRANTS COMMISSION

BAHADUR SHAH ZAFAR MARG,
NEW DELHI-110 002 (INDIA)

दूरभाष PHONE : (011) 23236977

टेलीफैक्स TELEFAX : (011) 23236977

E-mail : archana.ugc@nic.in

No.F.1-1/2013 (CU)

5th February, 2014

5 FEB 2014

The Vice-Chancellor
Central University of Haryana
Jant-Pali Villages
Mahendergarh
Haryana - 123029

Sub: Approval of Teaching posts for XII Plan period for Central Universities – Central University of Haryana.

Sir,

With reference to your office letter No.CUH/2014/Estt. Sec/529 dated 01.01.2014, the undersigned is directed to convey the approval of UGC to start 5 (Five) departments during the XII Plan in addition to 20 (Twenty) departments already sanctioned during XI Plan. Accordingly, 35 teaching positions has been approved (1 Professor, 2 Associate Professor and 4 Assistant Professor) for each department.

The new departments may be identified by the University with the approval of the statutory bodies i.e. Executive Council / Academic Council, under intimation to the UGC.

Yours faithfully,

(Archana Thakur)
Deputy Secretary

Diary 328
CUHWCS
Date 10-2-2014

Diary No. 364 P.U. in EC
Dated: 14.2.14
Registrar Office
Keyrj.

CRITERION I

CURRICULAR ASPECTS

CRITERION I: CURRICULAR ASPECTS

1.1. Curriculum Design and Development

Central University of Haryana got established under the Central Universities Act 2009. The University is funded and regulated by the University Grants Commission (UGC) and Ministry of Human Resource Development, Government of India. The territorial jurisdiction extends to the whole state of Haryana.

1.1.1. How is the institutional vision and mission reflected in the academic programmes of the University?

The Vision and Mission Statement of the University are as follows:

Vision

To develop enlightened citizenship for a knowledge based society for peace and prosperity of individuals, nation and the larger world through promotion of innovation, creative endeavours and scholarly inquiry.

Mission

- To provide learning environment for the growth and development of students and faculty, the University System will contribute to the educational cultural, economic, and social advancement of India by providing quality education through innovative programmes; by pursuing cutting edge research, scholarly inquiry, and creative endeavours. The University shall strive to create a learning ambience with diverse cultural backgrounds and enhance student's acquisition of useful knowledge, communication skills, and analytical abilities through innovative teaching and a holistic learning environment.
- To facilitate cutting- edge research in traditional disciplines and new/emerging areas at the frontiers of knowledge;
- To focus on relevance and quality in each area/discipline;
- To be a global brand in the education and research sectors;
- To provide international linkages for contextual and cultural learning for both faculty and students;
- To involve various stakeholders including Government, Industry, Community, etc. in providing relevant and quality education and learning environment on campus;
- To constantly review and update the curriculum to include new knowledge and society focus;
- To establish partnership with national and international institutions;
- To encourage and accomplish interdisciplinary approach in teaching and research areas;
- To create and maintain the highest level of integrity, ethics and values on campus and ensure zero tolerance for lack of these core constituents;
- To progressively expand the current academic and research areas into diversified focus areas and to ensure implementation in phases; and
- To encourage creativity and innovation in every discipline;

The broad vision of the Central University of Haryana for developing enlightened citizenship to maintain peace and prosperity in the society is reflected in the introduction of Social Science programmes at the time of inception. In the initial years, the University started courses in Literature, Political Science, Economics and other Social Science programmes and this was done keeping in view the importance of Social Sciences as an era in which it is neglected at the

cost of Science, Technology, Engineering and Medicine (STEM) programmes. This step taken by the University is an applaudable step as the Social Sciences play a vital role in social, political and economic development of the nation.

On the lines of the mission to be a global brand in the education and research sectors, the University has prepared a road map for the future which includes application of Choice Based Credit System (CBCS) to transform education system for creating exciting opportunities; starting **Centre for Academic Auditing** for evaluation of all academic, research and associated activities of different Departments and Centres of the University; starting **Technology Stock Exchange** to transform research in terms of revenue are in being proposed. **Centre for Secondary Agriculture and Energy Harvesting, Centre for Social Outreach and Management; Centre for Innovation, Skill Entrepreneurship and Employment**, which is working in the form of separate cells, such as The Opportunity Creation and Placement Cell, Skill Development & Capacity Building Cell and Innovation Club, strived hard for the vision of encouraging innovative thinking, incubation of ideas and increasing the employability of students and will work towards this in future.

The other innovative steps include establishing of **Instrumentation and Analytical Techniques** which will work towards providing solutions in research areas of Sciences, **Courses on Diagnostics** to promote interdisciplinary and multidisciplinary knowledge and bridge the gap between knowledge and skills in the existing courses and **Centre for Culture and Heritage** shall be dedicated to preserve folk arts, music and literatures.

Various cells and clubs functioning in the University also contribute in achieving the mission of being the global brand in the education and research sectors. The Intellectual Property Right Cell, Youth Red Cross, Centre for Community Development, Unnat Bharat Abhiyan Cell, Group for Promotion of Art, Culture and Heritage, Centre for Innovation, Skills and Entrepreneurship, Internal Quality Assurance Cell and Quality Management Cell for Skills & Proficiency Building and Opportunity Creation are actively pursuing the desired objectives to enable the University to realise the Vision and Mission.

Besides serving the role of creating global brand, the cells also seek to attain other aspects of the vision. In order to create peace and harmony in the society and to serve the ultimate cause of education, a few centres have been created, such as the Group for Promotion of Art, Culture and Heritage, Women Empowerment Cell, etc., which through their social outreach programmes connect education to the society. These centres work towards promoting inclusive growth of the society.

The University has focussed on inter and multidisciplinary research. The aim of inter and multidisciplinary research, creativity and innovation in all disciplines is strengthened by focussing on conducting research on areas involving multi dimensions such as social, political, legal, economic, environmental and psychological by all disciplines. Efforts have been made in this direction such as conducting national seminar and workshop on Women Empowerment in 2013. The spirit of multidisciplinary research was promoted in the seminar by encouraging the students and faculty members to present research papers which requires understanding of various disciplines.

The vision of interdisciplinary approach is further being fulfilled by making it mandatory for the students to earn six credits from other departments. Starting from academic session 2015-16, the vision of Interdisciplinary approach is being further strengthened by adopting CBCS. Under the CBCS, Generic Elective Courses are being offered to the students of other departments and the students have to earn a minimum of six credits from these courses.

The Central University of Haryana is a pioneer in the field of implementing CBCS among all the new Central Universities. It launched CBCS at the post-graduation level without realising any model curriculum offered by the UGC. The University, since its inception, has adopted the interdisciplinary approach in its curriculum as it was compulsory for the students to earn 6 credits from other departments. This is an innovative approach of the University in its curriculum development.

From the academic session 2015-16, the University has started B.Voc. programmes under the scheme of '*Deen Dayal Upadhyay Kaushal Kendra*' to prepare skilled youth after 10+2 level who can contribute to the national development. Many departments are offering courses for personal and professional enrichment which includes courses on communication skills, retail, personal selling and salesmanship which are being offered by departments of Management Studies, Tourism and Hotel Management,,and English. The Career Counselling, Training and Placement Cell also conducts classes for personality development of students as well as for the inculcation of value and soft skill development such as spoken English, public speaking, orientation for students and teachers.

The University is successfully offering Post Graduate degree in 25 programmes under nine schools and eleven departments are offering doctoral research programmes. The University is offering three courses under the scheme of B.Voc.which operates under the '*Deen Dayal Upadhyay Kaushal Kendra*'.

1.1.2. Does the University follow a systematic process in the design and development of the curriculum? If yes, give details of the process (need assessment, feedback, etc.).

Yes, the University has adopted a systematic process for the design and development of the curriculum. The curriculum of each department has been designed by using the Delphi Technique in which experts from the different academic institutions, research bodies and faculty of various disciplines interact. The University has Board of Studies and School Board for each Department in which the curriculum is formulated, revised and updated keeping in view the latest developments and trends in the discipline on a regular basis. Subsequently, it is approved by the University Regulatory and Statutory Bodies i.e. Academic Council and Executive Council.

1.1.3. How are the following aspects ensured through curriculum design and development?

- **Employability**
- **Innovation**
- **Research**

Students' Employability is embedded in the curriculum, the generic skills interdigitate with the disciplinary content and skills, which leads to employability related learning. In addition to this, the Placement Cell offers the classes of personality development (focuses on the hard and soft skills) to orient the students towards enhancing their communication skills. Besides, different courses in various departments are formulated to train the students for usage of the latest research softwares, and to hone their skills in qualitative as well as quantitative research. University also provides Coaching classes for the students who are preparing for the UGC/CSIR-NET, SET and other public sector exams.

To encourage innovative thinking, incubate ideas, changing mind-set and increase the employability of the students, there is regular interactions between the academia and the industry. Self-study courses have also been offered by the various Departments which are

optional and non-credit in nature. These courses may take the form of a Dissertation/ Project work/ Practical training/ Field work/ Internship/ Seminar, etc. Hence, by amalgamation of theoretical, laboratory and field works, programme provides ample opportunities and training to students to realize their potential and to develop skills among them as per the needs of the changing society. By this way, curriculum helps to enhance employability of the students There are various Courses, offered under the scheme of B.Voc., Community College, '*Deen Dayal Upadhyay Kaushal Kendra*' and Incubation Centre for Skills (in collaboration with the NSIC), which will be instrumental in achieving these objective of innovation. The University is working on a proposal for innovative pedagogies of learning, like Open Educational Resources (OERs), Massive Open Online Courses (MOOCs) and resources available under 'Creative Commons' license will be linked to provide vast pool of useful and supplementary material to the students, drawing from diverse disciplinarian backgrounds, as well as skill-oriented, with emphasis on hands-on learning and 'learn- as- you do'.

With respect to research, our present curriculum is based on the CBCS where the mandatory research dissertation is itself tuned in the curricula. The curriculum for the pre-Ph.D. students has been developed to acquaint the students with the various tools and methodologies. The multidisciplinary research which is the life of the University and fulfils the growing and changing needs of the society. In addition to this, the research output of the faculty members and research scholars reflects inter and multi-disciplinary nature of research which would be promoted and encouraged in the times to come also.

1.1.4. To what extent does the University use the guidelines of the regulatory bodies for developing and/or restructuring the curricula? Has the University been instrumental in leading any curricular reform which has created a national impact?

The University follows the regulation of UGC regulation and guidelines for developing /restructuring the curricula. The Central University of Haryana is the only Central University which offers the following courses:

1. M.Sc. (Nutrition Biology)
2. MHMC (Master of Hotel Management & Catering Technology)

Further the University has implemented the CBCS at the Post Graduate level which is probably the first in the country. It is a curriculum related reform which is expected to create a national impact.

1.1.5. Does the University interact with industry, research bodies and the civil society in the curriculum revision process? If so, how has the University benefitted through interactions with the stakeholders?

Yes, the University interacts with the industry, research bodies and civil society in the curriculum revision process. Particulars of Interaction/guidance received from experts are given in Table 1

Table 1: Particulars of Interaction/guidance received from experts who were consulted

S.no	Department	Name of Institution/University from where experts were consulted
1.	Economics	<ol style="list-style-type: none">1. Jamia Millia Islamia, Delhi2. Kurushetra University, Kurushetra3. Maharshi Dayanand University, Rohtak4. Tilka Manjhi Bhagalpur University, Bhagalpur
2.	Education	<ol style="list-style-type: none">1. Indira Gandhi National Open University, New Delhi2. Maharshi Dayanand University, Rohtak3. NCERT, New Delhi4. Jamia Millia Islamia, New Delhi
3.	History & Archeology	<ol style="list-style-type: none">1. University of Delhi, Delhi
4.	Political Science	<ol style="list-style-type: none">1. Indian Institute of Public Administration, New Delhi2. Jawaharlal Nehru University, New Delhi3. University of Rajasthan, Jaipur4. Banaras Hindu University , Varanasi5. Jiwaji University, Gwalior6. Kumaun University, Nainital7. Pondicherry University, Puducherry8. Kurukshetra University, Kurukshetra9. University of Delhi, Delhi
5.	Psychology	<ol style="list-style-type: none">1. University of Delhi, Delhi
6.	Sociology	<ol style="list-style-type: none">1. Maharshi Dayanand University, Rohtak
7.	Chemistry	<ol style="list-style-type: none">1. National Institute of Technology, Kurushetra.2. University of Delhi, Delhi

		3. Guru Jambheshwar University of Science and Technology, Hisar.
8.	Computer Science	1. Maharshi Dayanand University, Rohtak 2. Panjab University, Chandigarh. 3. Jawaharlal Nehru University, New Delhi
9.	Library & Information Science	1. Maharshi Dayanand University, Rohtak
10.	Environmental Science	1. University of Delhi, Delhi 2. Guru Jambheshwar University of Science and Technology, Hisar.
11.	Geography	1. University of Delhi 2. Indira Gandhi National Open University, New Delhi 3. Jawaharlal Nehru University, New Delhi 4. IGU, Meerpur, Rewari
12.	English and Foreign Languages	1. University of Delhi, Delhi 2. University of Rajasthan, Jaipur 3. Maharshi Dayanand University, Rohtak 4. Dr. Harisingh Gour Vishwavidyalaya, Sagar, Madhya Pradesh 5. Jai Narayan Vyas University, Jodhpur 6. Guru Gobind Singh Indraprastha University, Delhi 7. Gurukula Kangri Vishwavidyalaya, Haridwar 8. Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan
13.	Hindi and Indian Languages	1. Jamia Millia Islamia, New Delhi 2. University of Delhi, Delhi

		<ol style="list-style-type: none"> 3. Maharshi Dayanand University, Rohtak 4. University of Rajasthan, Jaipur 5. Central University of South Bihar. 6. Tilka Manjhi Bhagalpur University, Bhagalpur
14.	Commerce	<ol style="list-style-type: none"> 1. University of Delhi, Delhi 2. Guru Jambheshwar University of Science and Technology, Hissar
15.	Law	<ol style="list-style-type: none"> 1. Lucknow University, Lucknow 2. Punjabi University, Patiala 3. Modi University, Laxmangarh, Rajasthan
16.	Management Studies	<ol style="list-style-type: none"> 1. Indian Institute of Foreign Trade, New Delhi 2. Management Development Institute, Gurgaon 3. University of Delhi, Delhi 4. Department of Financial Studies, University of Delhi. 5. Punjab University, Chandigarh
17.	Mathematics	<ol style="list-style-type: none"> 1. University of Delhi, Delhi 2. Delhi Technological University, Delhi
18.	Physics	<ol style="list-style-type: none"> 1. Kurushetra University, Kurushetra
19.	Statistics	<ol style="list-style-type: none"> 1. Aligarh Muslim University, Aligarh, Uttar Pradesh 2. Maharishi Dayanand University, Rohtak 3. University of Delhi, Delhi
20.	Microbiology	<ol style="list-style-type: none"> 1. University of Delhi, Delhi 2. Maharshi Dayanand University, Rohtak 3. University of Hyderabad

21.	Bio-Chemistry	<ol style="list-style-type: none"> 1. IIT, Delhi 2. Kurukshetra University, Kurukshetra 3. Maharishi Dayanand University, Rohtak 4. Central University of Hyderabad, Hyderabad
22.	Biotechnology	<ol style="list-style-type: none"> 1. University of Delhi, Delhi 2. Guru Jambheshwar University of Science and Technology, Hissar
23.	Tourism and Hotel Management	<ol style="list-style-type: none"> 1. National Council of Hotel Management & Catering Technology 2. Indian Tourism Development Corporation, Ministry of Tourism, Govt. of India 3. Cornell University 4. Kurukshetra University, Kurukshetra 5. Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan 6. Maharshi Dayanand University, Rohtak

1.1.6. Give details of how the University facilitates the introduction of new programmes of studies in its affiliated colleges:

The University has no affiliated college.

1.1.7. Does the University encourage its colleges to provide additional skill oriented programmes relevant to regional needs? Cite instances (not applicable for unitary universities).

Not Applicable

1.2. Academic Flexibility

1.2.1. Furnish the inventory for the following:

*** Programmes taught on campus**

There are 9 School of Studies with 25 Departments and all are offering post-graduation programmes.

M.Phil. programmes are offered by the following Departments:

1. Economics

2. Education
3. English and Foreign Languages
4. Hindi and Indian Languages
5. Political Science

Ph.D. programmes are offered by the following departments:

- | | |
|------------------|----------------------------------|
| 1. Biochemistry. | 7. Management Studies. |
| 2. Biotechnology | 8. Microbiology. |
| 3. Economics. | 9. Nutrition Biology. |
| 4. Education. | 10. Political Science. |
| 5. English | 11. Tourism and Hotel Management |
| 6. Hindi. | |

The list of programmes offered by various Schools and Departments of the University is given in Table 2.

Table 2: List of programmes offered by the University

Sr. No.		Department	Programme
1	School of Arts, Humanities & Social Sciences	Economics	M.A. (Economics)
			M.Phil. (Economics)
			Ph.D. (Economics)
		Education	M.A.(Education)
			M.Phil. (Education)
			Ph.D. (Education)
		History & Archeology	M. A. (History)
		Political Science	M.A. (Political Science)
			M.Phil. (Political Science)
			Ph.D. (Political Science)
Psychology	M.A. (Psychology)		
Sociology	M.A. (Sociology)		
2	School of Chemical Science	Chemistry	M.Sc. (Chemistry)
3	School of Computer Science & Informatics	Computer Science	MCA
		Library & Information Science	M. Lib.I.Sc.

4	School of Earth, Environment & Space Studies	Environment Studies	M.Sc. (Environment Science)
		Geography	M.Sc. (Geography)
5	School of Journalism, Mass Communication & Media	Journalism, Media & Mass Communication	M.A. (Journalism & Mass Communication)
6	School of Language, Linguistics, Culture & Heritage	English and Foreign Languages	M.A. (English)
			M.Phil. (English)
			Ph. D (English)
		Tourism and Hotel Management	MHMCT (Master of Hotel Management & Catering Technology)
			Ph.D (Tourism and Hotel Management)
		Hindi & Indian Languages	M.A. (Hindi)
			M.Phil. (Hindi)
			Ph. D. (Hindi)
7	School of Law, Governance, Public Policy & Management	Commerce	M.Com.
		Law	LL.M.
		Management Studies	M.B.A.
			Ph.D. (Management)
8	School of Physical and Mathematical Science	Mathematics	M.Sc. (Mathematics)
		Physics	M.Sc. (Physics)
		Statistics	M.Sc. (Statistics)
9.	School of Interdisciplinary and applied Life sciences	Microbiology	M.Sc. (Microbiology)
			Ph.D. (Microbiology)
		Biochemistry	M.Sc. (Biochemistry)
			Ph.D. (Biochemistry)
		Nutrition Biology	M.Sc. (Nutrition Biology)
			Ph.D. (Nutrition Biology)
		Bio Technology	M.Sc. (Biotechnology)
			Ph.D Biotechnology

The University authorities have approved the proposal to introduce Ph.D. programme in Physics from the next Academic Session (2016-17).

The University has started the admission process for One-year Post-graduate Diploma Course in Cooperative Management, in collaboration with the National Cooperative Union of India, New Delhi.

Besides, the University has got approval from the UGC to run programmes under B.Voc, Community College, and the '*Deen Dayal Upadhyaya Kaushal Kendra Scheme*':

As the courses under the B.Voc and the Community College have been subsumed under the *Deen Dayal Upadhyaya Kaushal Kendra*, the University proposes to start following three programmes:

- B.Voc in Retail & Logistics Management
- B.Voc in Biomedical Science
- B.Voc in Industrial Waste Management

Overseas programmes offered on campus

Presently, University doesn't offer any overseas programmes on the campus.

Programmes Available For Colleges To Choose

Not Applicable.

Give details on the following provisions with reference to academic flexibility:

• Core / Elective options

All the programmes of study offers core courses and elective courses. Core courses are compulsory for the students while the elective courses are optional. The students can choose the elective courses offered by their own department (Discipline centric elective courses) as well as offered by other departments (Generic Elective Courses).

See Annexure 1.

• Enrichment courses/Skill Enhancement Courses:

Under the CBCS all the Departments compulsorily offer skill-enhancement courses. Few departments offer courses over and above the minimum stipulated credit requirements, such as personality development classes offered by management department and certain cells too. The particulars of Enrichment and Skill-Enhancement courses offered by various departments are as follows:

1. The Communication Skills course is offered by Departments of Management Studies, English & Foreign Languages and History and Archaeology
2. The courses on Personality Development for Hospitality & Service Sector, Managing Hotels Effectively: Lessons from Managers, Hospitality Information Systems and E-Commerce, Foreign Language (**French**) offered by the Department of Tourism and Hotel Management
3. Assignment-based seminars, practical courses, viz., Computer-Aided Statistical Diagrams and Data Processing, Interpretation of Topographical Sheets and Morphometric Analysis, Field Work and Report Writing, Interpretation of Aerial Photographs & Satellite Images and Thematic Mapping offered by the Department of Geography to enhance geographical skill and knowledge through laboratory and fields works

4. The Department of Hindi and Indian Languages offers the elementary course in Hindi Language for students belonging to non-Hindi speaking states/region.

• **Courses offered in modular form:**

The courses under the schemes of B.Voc. Community College, *Deen Dayal Upadhyay Kaushal Kendra* and Incubation Centre for Skills (in collaboration with NSIC) are all modular courses as they provided the flexibility of entry and exit. These courses offer Diploma at the completion of one year, Advanced Diploma at the completion of two years, and Degree at completion of three years.

• **Credit accumulation and transfer facility:**

The students have the option to avail vertical and horizontal mobility and are free to study courses of their choice, learn at their own pace, undergo additional courses, acquire more than the required minimum to credits, and to adopt an interdisciplinary approach to learning.

1. A student can take the courses of other universities subject to equivalence of the core/elective courses and availability of seats, adopting due administrative process and formal consent of the University/universities. The University has constituted an Equivalence Committee for this purpose.
2. The student availing inter-University mobility/migration shall remain the bonafide student of the University where he/she initially got admission and in case the candidate earns credit from a different University, the credits earned shall be transferred to his/her parent University.
3. It is the responsibility of the student to assess the feasibility of vertical mobility (across universities), as it doesn't entitle a student to exemption or relaxation from any of the requisites (sessional, attendance, assignments, end semester examinations, programme duration, etc.) for the completion of the programme.
4. Mobility option should not be interpreted as inter-University migration.
5. Mobility across the disciplines is also subject to availability of desired elective course, faculty, infrastructure and number of students (as fixed by the University/department from time to time) opting for that elective course.
6. The mobility shall be permissible from Regular Mode to Regular Mode only and does not provide for the mobility for Open/Distance/Online to regular mode.

1.2.2. Does the University have an explicit policy and strategy for attracting international students?

No, the policy is being formulated and is yet to be put in place.

1.2.3. Have any courses been developed targeting international students? If so, how successful have they been? If 'no', explain the impediments.

The University proposes to start International Students Centre to formulate policy for international students and co-ordinate courses for them. However, no courses have been developed for the international students as of now.

1.2.4. Does the University facilitate dual degree and twinning programmes? If yes, give details.

The University does not offer any dual degree or twinning programme. However, some departments are offering dual specialisation such as MBA programme from Department of

Management Studies offer dual specialisation in different areas of choice. The development of dual degree and Twinning programmes is in the process.

1.2.5. Does the University offer self-financing programmes? If yes, list them and indicate if policies regarding admission, fee structure, teacher qualification and salary are at par with the aided programmes?

The University does not offer any self-financing programme.

1.2.6. Does the University provide the flexibility of bringing together the conventional face-to-face mode and the distance mode of education and allow students to choose and combine the courses they are interested in? If 'Yes', give operational details.

As of now, the University does not offer any distance learning programme but in future the University may plan to have such courses. However, the University is in the process of submitting proposals for development of Massive Open Online Courses (MOOCs) in certain disciplines.

1.2.7. Has the University adopted the Choice-Based Credit System (CBCS)? If yes, for how many programmes? What efforts have been made by the University to encourage the introduction of CBCS in its affiliated colleges?

The University has adopted the Choice-Based Credit System (CBCS) in all its programmes. With the on-set of new academic session 2015-16, all departments have offered programmes to the new students following CBCS.

The University does not have any affiliated colleges.

1.2.8. What percentage of programmes offered by the University follow:

Annual system

Semester system -100%

Trimester system

The University follows semester system in all the programmes offered by it.

1.2.9. How does the University promote inter disciplinary programmes? Name a few programmes and comment on their outcome.

The University has adopted CBCS. The CBCS provides choice for students to select from the prescribed courses (Core, elective or soft-skill courses). Under the CBCS, all the programmes are offering Generic Elective Courses to the students of other departments, thus encouraging inter disciplinary approach. Table 3 shows content of disciplines integrated in various course:

Table 3: Content of Disciplines integrated in the Course

S.no.	Department	Other Disciplines integrated in the Courses of various Departments
1.	Economics	Statistics, Management ,Commerce
2.	Education	Statistics and Psychology
3.	Political Science	Economics, Sociology, History, Geography
4.	Psychology	Nutrition Biology, Chemistry, Biochemistry, Statistics, Education, Management, Sociology, Physics.
5.	Sociology	Anthropology, Developmental Studies, Political Science, Economics, Philosophy, Education, Environmental Science, Journalism and Mass Communications, Psychology, History, Demographic Studies
6.	Chemistry	Mathematics, Environmental Science, Physics, Biochemistry, Biotechnology, Geography
7.	Library & Information Science	Arts, Humanities and Social Sciences
8.	English and Foreign Languages	Sociology, History and Archaeology, Psychology, Philosophy, Journalism and Mass Communication, Hindi, Tourism and Hotel Management
9.	Hindi and Indian Languages	Journalism and Mass Communications, Psychology, English, Political science, Cinema Studies
10.	Commerce	Economics, Statistics, Mathematics , Phycology, Law
11.	Law	Political Science, Management, Commerce, Environmental Science, Computer Science
12.	Management Studies	Commerce, Law, Economics, Psychology, Statistics
13.	Physics	Computer Science, Mathematics
14.	Statistics	Mathematics and Operational Research
15.	Microbiology	Microbial Biotechnology, Plant Microbe Interactions
16.	Bio-Chemistry	Microbiology, Immunology, Molecular Biology, Bioinformatics, Plant Biochemistry, Nutritional Biochemistry, Human Psychology, Genetic Engineering and Biotechnology Advances in Genomics and Proteomics
17.	Tourism and Hotel Management	Food Production, F and B Service, Accommodation Operations, Communication, Computer Applications, Personality Development, Hospitality Research, Management, The Great Indian Cuisine, Foreign Language

1.3. Curriculum Enrichment:

1.3.1. How often is the curriculum of the University reviewed and upgraded for making it socially relevant and/or job oriented / knowledge intensive and meeting the emerging needs of students and other stakeholders?

The curriculum of the University is frequently reviewed and approved by the School Board and Board of Studies concerned in accordance with the latest trends, industry requirements, needs and aspirations of the students and latest research developments. The curriculum design is based on the multidisciplinary approach which leads to holistic development of the students and leads to the inclusive growth of the society. In addition to this, the University curriculum is based on the CBCS (Choice-based Credit System) which is in tune with the Multidisciplinary approach. Feedback taken from the different stakeholders is incorporated into the curriculum. The curriculum of different courses adopts different perspective for knowledge gathering, notable amongst them being the dissertation of the Final semester (as per the model of CBCS).

1.3.2. During the last five years, how many new programmes at UG and PG levels were introduced? Give details?

- Interdisciplinary
- Programmes in emerging areas.

Session	Programmes of Study	Level of Programmes	Total number of Programmes
2009-10	Ph.D. in English Ph.D. in Economics Ph.D. in Political Science	Doctoral Programmes	3
	M.Phil. in Economics M.Phil. in English M.Phil. in Political Science	Research Programmes	3
2010-11	Ph.D. in Hindi	Doctoral Programmes	1
	M.A. in Education MBA LLM	PG	3
2011-12	Ph.D. in Hindi Ph.D. in Management Studies	Doctoral Programmes	2
	M.Com	PG	

			1
	M.Phil. in Hindi	Research Programmes	1
2013-14	MCA M.Sc. in Chemistry M.Sc. in Physics M.Sc. in Statistics	PG	4
2014-15	M.A. in History M.A. in Political Science M.A. in Psychology M.A. in Sociology Master of Librery & Information Science M.Sc. in Environment Science M.Sc. in Geography M.A. in Journalism and Mass Communication M.A. in English M.A. in Hindi	PG	10
2015-16	Ph.D. in Microbiology Ph.D. in Biochemistry Ph.D. in Nutrition Biology Ph.D. in Biotechnology Ph.D. in Tourism and Hotel Management	Doctoral Programmes	5
	M.Sc. in Microbiology M.Sc. in Biochemistry	PG	5

	M.Sc. in Nutrition Biology		
	M.Sc. in Biotechnology		
	Master of Hotel Management & Catering Technology		

1.3.3. What are the strategies adopted for the revision of the existing programmes? What percentage of courses underwent a syllabus revision?

The syllabus of different courses are developed and revised by the Board of Studies and School Board concerned. The revision of syllabus is a continuous process which occurs according to the need of the faculty, student and other stakeholders. The curriculum of all the Post-Graduate courses was revised in the academic session 2015-2016 as the CBCS was introduced in the University across all Post-Graduate courses.

1.3.4. What are the value-added courses offered by the University and how does the University ensure that all students have access to them?

The Central University of Haryana is providing value-added courses to the students and ensures its accessibility to maximum number of students. The departments organise seminars, workshops and other activities to achieve the same. The cells and clubs, such as Community Development Cell, Centre for Innovation, Skills and Entrepreneurship; Career Counselling, Training and Placement Cell; and Group for Promotion of Art, Culture and Heritage provide ample opportunities to students for value addition. Some of the events organised by the various departments are briefly stated below:

1. SPSS workshop organised by the Department of Education and the Department of Statistics
2. Excel training provided to MBA students as part of Personality Development Course.
3. Coaching for NET, personality development classes are conducted by Career Counselling Training and Placement Cell
4. Centre for Innovation, Skills and Entrepreneurship offers MOOCs* on Entrepreneurship under the MOU signed with National Entrepreneurship Network (NEN).

*(MOOCs are provided by NEN)

1.3.5. Has the University introduced any higher order skill development programmes in consonance with the national requirements as outlined by the National Skills Development Corporation and other agencies?

The government is working towards leveraging the potential of India's demographic dividend by providing skill training and making every skilled youth employable. The University has strived hard to achieve national priorities for inclusive growth. The University has got a grant of Rs. 4.5 crores under the '*Deen Dayal Upadhyay Kaushal Kendra*' scheme and under this scheme, the three Vocational courses which will be offered by the University are as follows:

1. B.Voc. programme (Biomedical Sciences)
2. B.Voc. programme (Industrial Waste Management)

3. B.Voc. programme (Retail and logistics Management)
 - i. The University is collaborating with the National Cooperative Union of India, New Delhi to develop and nurture the cooperative movement in India.
 - ii. University has already notified admissions to One-Year PG Diploma in Cooperative Management in collaboration with National Cooperative Union of India.
 - iii. The University is also collaborating with National Small Industries Corporation to set up Incubation centre which will develop entrepreneurs and start-ups.

1.4. Feedback System:

1.4.1. Does the University have a formal mechanism to obtain feedback from students regarding the curriculum and how is it made use of?

Yes the University has a robust mechanism to obtain the feedback from the students. Recently the University has already developed a feedback form, through which feedback can be taken from the students on the curriculum of the respective syllabus.

1.4.2. Does the University elicit feedback on the curriculum from national and international faculty? If yes, specify a few methods such as conducting webinars, workshops, online discussions, etc. and its impact.

The following mechanism is used for the Development of curriculum:

1. First, the curriculum is framed at the departmental level.
2. Then, it is approved by the respective Board of Studies in which the experts with various areas of specialisation from prestigious institutions are involved for framing the course curriculum.
3. Thereafter the curriculum is finalised and approved by the regulatory and statutory bodies of the University i.e the Academic Council and the Executive Council.

At each step mentioned above, the feedback is taken from the experts. The University is proposing a feedback form for the external stakeholders of the University for Curriculum which will be implemented from the next academic session (2016-17).

1.4.3. Specify the mechanism through which affiliated institutions give feedback on curriculum enrichment and the extent to which it is made use of.

The University at present does not have any affiliated institutions. But the University, however may have such institutions in the future.

1.4.4. What are the quality sustenance and quality enhancement measures undertaken by the University in ensuring the effective development of the curricula?

The University has been striving hard for quality sustenance and quality enhancement. The University has taken several measures in the same direction. The major steps taken are as follows:

1. Choice-Based Credit System (CBCS):

The University of Haryana is a pioneer in the field of implementing the CBCS at post-graduation level in all the disciplines from the current Academic session (2015-16), providing horizontal mobility across the disciplines. Post-Graduate students of the University now have the freedom to opt one or more Elective Courses of 6 credits from another discipline of their choice thus building in an inter and multi-disciplinary approach

into their curriculum itself. Thus, the University practices 100% Choice-Based Credit System for its academic programmes.

2. Industry Linkages:

To improve academia-industry linkages and create synergies through partnerships and collaborations the University continuously strives to identify and invite potential industrialists and corporates to deliver extension lectures and conduct workshops and seminars. These lectures, workshops and seminars provide the platform for the University and the industry to explore the possibility of forging potential partnerships and long-term associations, which will be mutually beneficial to all stakeholders. Some of the experts from Industry and Corporate Sector on panel of Central University of Haryana include:

Potential experts from Industry & Corporate Sector:

1. Mr. Vinay Kaushik, Vice President – Human Resource Division Cell, Samsung Engineering Limited
2. Mr. Manjit Singh Gill, Corporate Chef, ITC Welcom Group Hotels Division
3. Mr. Vikram Singh, Associate Vice President and Head, IT, Airtel, Gurgaon
4. Dr. R.K. Garg, Director, Technology Application Services (TAS), New Delhi
5. Dr. Gautam Ghosh, Vice President, Panacea Biotech Ltd. New Delhi
6. Dr. Anup Kalra, Director, Ayurved Pvt. Limited
7. Dr. Ashok Sonsukera, R&D Head, Reliance Life Sciences, Navi Mumbai
8. Mr. Deepak Kumar, Vice President, Application Services, Sify Technologies Ltd. Noida, UP
9. Mr. Shiv Kaushik, President, SVI Analytica, New Delhi.
10. Mr. Ajay Arora, Business Head, Hindustan, HT Media Group, UP (West) and Uttarakhand

The University has also taken the initiative to formalize such interactions through MOU's and launching of full-time degree courses:

A three-day workshop was organised by the Departments of Physics and Chemistry, in collaboration with Technology Applications Service (TAS), New Delhi, from 22-24 September, 2015 on 'Vacuum, Plasma and Thin film Deposition Techniques'. Dr. R.K. Garg, Proprietor and Director, TAS, delivered lectures on basic and latent developments in the field of 'Vacuum, Plasma and Thin film Deposition Techniques'. The highlight of the three-day workshop was the signing of MOU between the Central University of Haryana and Technology Applications Service (TAS), New Delhi, for conducting joint training programme, one semester project work as part of the requirement of the post-graduate course work and exploring possibilities to jointly design, develop and fabricate new and innovative products based on proven technologies.

Having started full-time Master of Hotel Management & Catering Technology Programme from the current academic session, the Department of Tourism & Hotel Management conducted a workshop with celebrity Chef Manjit Gill from ITC Welcom Group (Hotels Division) as the resource person.

3. Region-relevant B. Voc. Programmes:

Based on the region-specific relevance and requirement, the University submitted the proposals for 6 B. Voc. Programmes to the UGC. The University was one of the very few Central Universities to be awarded two such programmes:

- B.Voc. in Retail & Logistics Management

- B.Voc. in Tourism & Hospitality Management

4. Community Colleges:

Under the Community College Scheme of the UGC the University is awarded a course on

- Biochemical Techniques.

5. Deen Dayal Upadhyaya Kaushal Kendra Scheme:

The University has received a grant for the '*Deen Dayal Upadhyaya Kaushal Kendra*', vide letter from Joint Secretary, UGC, DO no. 3-24/2015 (KAUSHAL), dated 14th Aug. 2015, with an approval to start the following programmes:

1. B. Voc. Programme (Biochemical Techniques)
2. B. Voc. Programme (Biomedical Science)
3. B. Voc. Programme (Industrial Waste Management)

As per the directives of the UGC and MHRD, the courses under the B.Voc. and Community College have been subsumed under '*Deen Dayal Upadhyaya Kaushal Kendra*'. Thus the University is in the process of starting the following three programmes under the '*Deen Dayal Upadhyaya Kaushal Kendra*':

1. B.Voc in Retail & Logistics Management
2. B.Voc in Biomedical Science
3. B.Voc in Industrial Waste Management

6. Centre for Innovation, Skill and Entrepreneurship Development:

The objectives of the Centre for Innovation, Skill and Entrepreneurship Development are:

- Providing opportunities to students to incubate their innovative ideas.
- Providing facilities to young researchers to transform their innovative ideas in proof of concept.
- Providing opportunities to students to learn basic skills to develop certain products like earthen pots, plant waste based products, electronic goods & culinary products etc.
- Orienting the students towards entrepreneurship.
- Organizing Research Colloquia/ Shodh Yatras.
- Organizing Science Exhibitions for promoting interest amongst students & researchers.

7. Incubation Centres:

The University has taken initiative to develop linkages with Innovation incubators. The University is creating partnerships with different such incubators both from the Industry and the Academia. The following linkages have been established:

- Technology-based Incubator (TBI), University of Delhi (South Campus), New Delhi
- Centre for Innovative and Applied Bio-processing, Mohali
- National Small Industries Corporation (NSIC), New Delhi
- SVI Analytica, New Delhi

8. Inspired Teachers Network:

Inspired-Teachers Network is being maintained to create information and knowledge networks for seamless transfer of the best innovative practices, latest researches and experiments in pedagogy.

Some of the practices shared through the Inspired Teachers Network include—recent research publications, avenues for faculty development, awards and recognitions, new initiatives of various central universities etc.

From Central University of Haryana Dr. Sanjiv Kumar, Department of English, participated as Inspired Teacher for the In-Residence Programme at Rashtrapati Bhawan and is maintaining networking with the Inspired Teachers of other Central Universities.

9. Massive Open Online Courses (MOOCs):

The University aims to adopt innovative pedagogy to provide the students with world-class teaching and learning environment. The University is in the process of offering blended learning options to students by combining the traditional teaching with the technology in form of MOOCs. The following steps are being taken to implement MOOCs:

University is in the process of developing infrastructure for preparing MOOCs.

For this purpose the University is in the process of setting up an audio-video recording and editing studio and a fully developed multi-media lab.

The faculty members are developing proposals for offering courses in MOOCs. The same will be submitted to MHRD for financial assistance.

Total numbers of courses proposed to be developed and delivered by the Central University of Haryana in each quarter starting from 1 January 2016 is 12 courses for the first semester and 12 courses in subsequent semester. A total of 24 courses are proposed in 4 quarters starting from 01.01.2016 as of now. The University may consider offering more courses under the MOOCs format depending on the infrastructure developed and the response to these courses.

10. Alumni Involvement:

The University through its different departments and Alumni Cell is actively engaged in creating a database of its alumni particularly those who have made the University proud and are willing to contribute towards their Alma Mater. The University is involving the alumni in its crucial organs and cells to make them a stakeholder in the decision-making mechanism of the University for ensuring fruitful and long-term growth and development of the University. At present the alumni are being involved in:

- Career and Placement Opportunities Cell
- Centre for Entrepreneurship, Skills and Innovations
- Community Development Cell
- Unnat Bharat Abhiyan (UBA) Cell

Each department is also roping in its alumni in its departmental Club where, on the basis of their expertise and experience, they can contribute in terms of devising the roadmap for putting the department on the path of high growth trajectory in the future.

The University also has a mechanism to obtain the feedback for ensuring quality enhancement. The feedback is taken from the experts and soon the University is proposing a feedback form for the external stakeholders and students of the University for enhancing the quality of curriculum and these feedback forms will be implemented from the next academic Session.

ANNEXURE-1

Generic Elective Courses List offered by Various Departments

1. Department of Economics

Sl. No.	Course Code	Course Title
1.	SAHS MAE 101 GE 3104	Basic Economics
2.	SAHS MAE 102 GE 3104	Indian Economy
3.	SAHS MAE 301 GE 3104	History of Economic Thought
4.	SAHS MAE 302 GE 3104	Development Economics

2. Department of Education

Sl. No.	Course Code	Course Title
1.	SAHS ED 1 1 01 GE 4004	Educational Management and Planning
2.	SAHS ED 1 1 02 GE 4004	Women Education
3.	SAHS ED 1 3 03 GE 4004	Life Skills Education
4.	SAHS ED 1 3 04 GE 4004	Yoga Education
5.	SAHS ED 1 3 05 GE 4004	Value and Peace Education

3. Department of History and Archaeology

Sl. No.	Course code	Course title
1	SAHS HA 01101GE4004	History of Haryana
2	SAHS HA 01102GE4004	Art, Architecture and Culture in Ancient World
3	SAHS HA 01103GE4004	Women in Ancient World
4	SAHS HA 01104GE4004	Life in Medieval Europe
5	SAHS HA 01105GE4004	Rise of Modern West (Compulsory)
6	SAHS HA 01105 ARCHGE4004	Proto History of India
7	SAHS HA 01106 ARCH GE4004	Indian Architecture Up to 1200 AD
8	SAHS HA 01107 ARCH GE4004	Introduction to Archaeology
9	SAHS HA 01105 ANC GE4004	Political History of Ancient India
10	SAHS HA 01106 ANC GE4004	Orientalism in India
11	SAHS HA 01107 ANC GE4004	Social History of Ancient India
12	SAHS HA 01105 MED GE4004	Gender and Women in Medieval India
13	SAHS HA 01106 MED GE4004	Medieval Indian Ideas and Institutions
14	SAHS HA 01107 MED GE4004	History of the Marathas
15	SAHS HA 01105 MOD GE 4004	Nationalist Movement: 1858-1947

16	SAHS HA 01106 MOD GE 4004	Introduction to Indian Marxism
17	SAHS HA 01107 MOD GE 4004	History of Indian Cinema

4. Department of Political Science

Sl. No.	Course Code	Course Title
1	SSH POS01 (105) G4004	Indian National Movement
2	SSH POS01 (110) G4002	Introduction to Indian Constitution
3	SSH POS01 (117) G4004	Politics in India

5. Department of Psychology

Sl. No.	Course code	Course title
1.	SAHS PSY 1 1 01 GE 4004	Advanced General Psychology
2.	SAHS PSY 1 1 02 GE 4004	Historical Foundation of Psychology
3.	SAHS PSY 1 2 03 GE 4004	Test & Scale Development
4.	SAHS PSY 1 3 04 GE 4004	Personality
5.	SAHS PSY 1 3 05 GE 4004	Stress & Health
6.	SAHS PSY 1 3 06 GE 4004	Psychological Testing

6. Department of Sociology

Sl. No.	Course code	Course title
1.	SAHS SC 1 1 01 GEC 4004	The Study of Society
2.	SAHS SC 1 1 02 GEC 4004	Women and Society
3.	SAHS SC 1 1 03 GEC 4004	Indian Society
4.	SAHS SC 1 1 04 GEC 4004	Sociology of Social Movements
5.	SAHS SC 1 1 05 GEC 4004	Environment and Society (Compulsory)

7. Department of Chemistry

Sl. No.	Course code	Course title
1.	SCS CH 1 1 01 GE 4004	Chemistry of Materials
2.	SCS CH 1 1 02 GE 4004	Bioorganic Chemistry
3.	SCS CH 1 2 03 GE 2002	Basic Techniques in Chemical Sciences (compulsory)
4.	SCS CH 1 3 04 GE 4004	General Polymer Chemistry
5.	SCS CH 1 3 05 GE 4004	Environmental Chemistry

8. Department of Computer Sciences and Information Technology

Sl. No.	Course code	Course title
1	SCS CSC 01 01 GEC 01 3003	Fundamentals of IT
2	SCS CSC 01 02 GEC 02 3003	Computer Oriented Optimization Techniques
3	SCS CSC 01 02 GEC 03 3003	Internet Fundamentals
4	SCS CSC 01 03 GEC 04 3003	Internet Fundamentals
5	SCS CSC 01 04 GEC 05 3003	Emerging Trends and Technologies
6	SCS CSC 01 05 GEC 06 3003	E- Commerce
7	SCS CSC 01 05 GEC 07 3003	Multimedia Technologies

9. Department of Library & Information Science

Sl. No.	Course Code	Course Title
1	SCSI MLS GEC 101(i)	Information Literacy
2	SCSI MLS GEC 101(ii)	Information Policy and Law
3	SCSI MLS GEC 101(iii)	Knowledge Management

10. Department of Environmental Science

Sl. No.	Course Code	Course Title
1	SEES EVS 1 1 01 GE 4004	Foundation course in Ecology and Environment
2	SEES EVS 1 1 02 GE 4004	Environmental Biology
3	SEES EVS 1 2 02 GE 4004	Global Environmental Issues (compulsory)

11. Department of Geography

Sl. No.	Course Code	Course Title
1	SEE GEO 1 1 01 GE 4004	Population and Development
2	SEE GEO 1 1 02 GE 4004	Biogeography
3	SEE GEO 1 2 03 GE 0042	Computer Aided Statistical Diagrams and Data Processing
4	SEE GEO 1 3 04 GE 4004	Geography of Natural Hazards and Disasters
5	SEE GEO 1 3 05 GE 4004	Cultural Geography
6	SEE GEO 1 3 06 GE 4004	Soil Geography

12. Department of Journalism, Media and Mass Communication

Sl. No.	Course Code	Course Title
1	SJM JMC 1101 GE 4004	Media Literacy
2	SJM JMC 1102 GE 4004	Media and Society
3	SJM JMC 1303 GE 2114	Film Appreciation
4	SJM JMC 1304 GE 2114	Event Management

13. Department of English and Foreign Languages

Sl. No.	Course code	Course title
1.	SLLCH ENG 01 01 GEC 01 3003	Communication Skills
2.	SLLCH ENG 01 02 GEC 01 3003	Literature and Theatre
3.	SLLCH ENG 01 03 GEC 01 3003	Research Methodology
4.	SLLCH ENG 01 04 GEC 01 3003	Gender Studies

14. Department of Hindi and Indian Languages

Sl. No.	Course code	Course title
1.	SLLCH HND 1 1 01 GE 4004	हिंदी की संस्कृति
2.	SLLCH HND 1 1 02 GE 4004	साहित्य की समझ
3.	SLLCH HND 1 2 02 GE 4004	पुस्तक/फिल्म समीक्षा (अनिवार्य)
4.	SLLCH HND 1 3 03 GE 4004	सिनेमाअध्ययन
5.	SLLCH HND 1 3 04 GE 4004	अस्मितामूलक साहित्य
6.	SLLCH HND 1 3 05 GE 4004	प्रयोजनमूलक हिंदी

15. Department of Commerce

Sl. No.	Course Code	Course Title
1.	SLM COM 11 01 GE 4004	Fundamentals of Investment
2.	SLM COM 11 02 GE 4004	Consumer Protection
3	SLM COM 13 04 GE 4004	Entrepreneurship Development
4	SLM COM 13 05 GE 4004	Income Tax law & Practice
5	SLM COM 13 06 GE 4004	Negotiation and Conflict Management

16. Department of Law

Sl. No.	Course Code	Course Title
1	SLM LAW 01 101 E 2103	Comparative Politics
2	SLM LAW 01 102 E 2103	Corporate Law

3	SLM LAW 01 103 E 2103	Industrial & Environmental Jurisprudence
4	SLM LAW 01 201 E 2103	Law relating to Cyber Crimes
5	SLM LAW 01 202 E 2103	Law & Biodiversity
6	SLM LAW 01 203 E 2103	Law, Science & Technology

17. Department of Management Studies

Sl. No.	Course Code	Course Title
1	SLM MGT 01 101 GEC 3104	Business Communication
2	SLM MGT 01 102 GEC 3104	Business Environment
3	SLM MGT 01 201 GEC 3104	Legal Aspects of Business
4	SLM MGT 01 301 GEC 3104	Personal Selling and Salemanship

18. Department of Mathematics

Sl. No.	Course code	Course title
1	SPM MAT 01 01 GEC 01 3104	Basic concepts and Applications of Mathematics
2	SPM MAT 01 01 GEC 02 3104	Numerical Analysis
3	SPMMAT 01 02 GEC 03 3104	Documentation in Latex
4	SPMMAT 01 02 GEC 04 3104	Linear Algebra
5	SPMMAT 01 02 GEC 05 3104	Discrete Mathematics

19. Department of Physics

Sl. No.	Course Code	Course Title
1	SPMS PHY 01 101 GEC 3104	Numerical Methods and Programming
2	SPMS PHY 01 102 GEC 3104	Modern Optics
3	SPMS PHY 01 101 GEC 3104	Numerical Methods and Programming
4	SPMS PHY 01 201 GEC 1102	Latex for Science & Mathematics
5	SPMS PHY 01 202 GEC 1102	Environmental Physics

20. Department of Statistics

Sl. No.	Course Code	Course Title
1	SPMSTA01101E4004	Linear Programming
2	SPMSTA01201E4004	Applied Statistics
3	SPMSTA01202E4004	Operation Research
4	SPMSTA01203E4004	Actuarial Statistics
5	SPMSTA01301E4004	Stochastic Process and Queuing Theory
6	SPMSTA01302E4004	Computer Programming

21. Department of Microbiology

Sl. No.	Course Code	Course title
1	SIAL MB 01 01 01 GEC 4004	Introduction to Microbiology
2	SIAL MB 01 01 02 GEC 4004	Microbial Energetic & Biosynthesis
3	SIAL MB 01 02 03 GEC 4004	Food Microbiology
4	SIAL MB 01 03 04 GEC 4004	Soil Microbiology

22. Department of Biochemistry

Sl. No.	Course code	Course title
1.	SIAL BC 1 1 01 GE 4004	Principles of Biochemistry
2.	SIAL BC 1 1 02 GE 4004	Proteins and Enzymes
3.	SIAL BC 1 1 03 GE 4004	Molecular Biology
4.	SIAL BC 1 1 04 GE 4004	Cell Biology
5.	SIAL BC 1 1 05 GE 4004	Biochemical correlations in Diseases
6.	SIAL BC 1 1 06 GE 4004	Bioinformatics (compulsory)

23. Department of Nutrition Biology

Sl. No.	Course Code	Course Title
1	SIAL NB 01 01 01 GEC 4004	Human Nutritional Requirement
2	SIAL NB 01 01 02 GEC 4004	Nutrient Deficiencies and Assessment
3	SIAL NB 01 03 01 GEC 4004	Nutrition in Chronic Degenerative Diseases
4	SIAL NB 01 03 03 GEC 4004	Work Physiology, Physical Fitness & Health
5	SIAL NB 01 03 02 GEC 4004	Food Microbiology and Food Safety
6	SIAL NB 01 02 02 GEC 4004	Bioinformatics (Compulsory)

24. Department of Biotechnology

Sl. No.	Course Code	Course Title
1	SIAL BT 01 101 GEC 4004	Environmental Biotechnology
2	SIAL BT 01 102 GEC 4004	Bioinformatics and Biostatistics (compulsory)

25. Department of Tourism & Hotel Management

Sl. No.	Course Code	Course Title
1	SLLCH THM 1 1 01 E 3003	Communication Skills & Personality Development for Hospitality & Service Sector
2	SLLCH THM 1 1 02 E 3003	Managing Hotels Effectively: Lessons from Managers

3	SLLCH THM 1 1 03 E 3003	Hospitality Information Systems & E Commerce
4	SLLCH THM 1 1 04 E 3003	Field / Industry Visit/ Excursion
5	SLLCH THM 1 2 05 E 3003	Foreign Language – French
6	SLLCH THM 1 2 06 E 3003	Hospitality & Tourism Services Facilitation Management
7	SLLCH THM 1 2 07 E 3003	Transport & Travel Management
8	SLLCH THM 1 2 08 E 3003	Theme Event

CRITERION II

TEACHING-LEARNING AND

EVALUATION

CRITERION II: TEACHING-LEARNING AND EVALUATION

2.1 STUDENT ENROLMENT AND PROFILE

2.1.1 How does the University ensure publicity and transparency in the admission process?

The University ensures national level publicity of its admission process through leading newspapers and also by using social media. Further, the comprehensive details of seat matrix of all the programmes are made available on the University website for the information of all stakeholders including aspiring students. The Information Bulletin is also uploaded on the website with complete details about the programmes, departments, faculty and all facilities available in the University for the students.

All students desirous to take admission in various programmes offered by the University are required to appear in the CUCET (Central University Common Entrance Test) conducted every year in the month of May-June. The information about CUCET is provided well in advance through University website and local/ national newspapers. The subject-wise merit list of CUCET is displayed on University website for information of all students. The admission committee, constituted at University level, conducts counselling sessions strictly as per the merit list of CUCET.

However, for the academic session 2015-16, the University has made admission in five new programmes including Master of Science (Microbiology), Master of Science (Biochemistry), Master of Science (Nutrition Biology), Master of Science (Biotechnology), and Master of Hotel Management & Catering Technology on the basis of merit strictly as per reservation policy of GOI.

2.1.2 Explain in detail the process of admission put in place by the University. List the criteria for admission: (e.g.: (i) merit, (ii) merit with entrance test, (iii) merit, entrance test and interview, (iv) common entrance test conducted by state agencies and national agencies (v) other criteria followed by the University (please specify).

University follows the policy of transparency in admissions and conducts the admission process with utmost care and due diligence. The University adopts all measures, in the best interest of transparency in the admission process, to ensure that the applicants are provided timely information about the programmes offered, no. of seats, reservation policy, deadlines and

eligibility conditions through University website and other means of publicity. The admission process is carried out purely on merit basis as per the scores of the CUCET.

Established in the year 2009, in the initial years the University used to conduct its own entrance test for admission to various PG Courses and Research Programmes. In the year 2014, the University decided to participate in the Central Universities Common Entrance Test (CUCET) conducted by a group of Central universities established under Central Universities Act 2009 to attract the talented students from all corners of the country.

The University participated in the CUCET in the year 2014 and the responsibility of conducting the entrance exam was given to Central University of Rajasthan by a Steering Committee consisting of Vice-Chancellors of all Participating Universities (PUs) and the Vice-Chancellor of CURAJ was nominated as the Chairperson of the Steering Committee. Since 2014, the University is participating in the CUCET for conduct of entrance test for admission.

As five new departments (Microbiology, Biochemistry, Nutrition Biology, Biotechnology, and Hotel and Tourism Management) were introduced from the session 2015-2016 only, admissions to the Post Graduate programmes in newly introduced departments were offered on the basis of merit in qualifying examination.

To administer the process of centralised admissions to various programmes, University constitutes Central Admission Committee every year and a Nodal Officer is appointed to liaison with coordinating University of CUCET. The Admission Committee and the Nodal Officer (CUCET) look after the entire process of admissions and redress the grievance, if any, of the aspiring students. The applications for various courses such as PG, M. Phil. and Ph. D. courses are available at University are invited online and all data related to admissions like availability of seats, merit status, applicants details etc. are made available online for the sake of transparency, fairness and above all for smooth carrying out of admission process.

Thereafter, keeping in view the merit in CUCET score the physical counselling is conducted and selection is made after verification of relevant documents regarding qualification, reservation and CUCET performance.

University is offering the following programmes under various Schools during the academic year 2015-16:

i. Post-Graduate Programmes (Through CUCET)

- a) Master of Arts (Economics)
- b) Master of Arts (Education)
- c) Master of Arts (English)
- d) Master of Arts (Hindi)
- e) Master of Arts (History)
- f) Master of Arts (Political Science)
- g) Master of Arts (Psychology)
- h) Master of Arts (Sociology)
- i) Master of Business Administration (MBA)
- j) Master of Commerce (M.Com)
- k) Master of Computer Applications (MCA)
- l) Master of Arts (Journalism and Mass Communication)
- m) Master of Law (LL.M)
- n) Master of Library & Information Science
- o) Master of Science (Environment Science)
- p) Master of Science (Geography)
- q) Master of Science (Chemistry)
- r) Master of Science (Physics)
- s) Master of Science (Mathematics)
- t) Master of Science (Statistics)

ii. Post-Graduate Programmes (Admission on the basis of marks in qualifying examination)

- a) Master of Science (Microbiology)
- b) Master of Science (Biochemistry)
- c) Master of Science (Nutrition Biology)
- d) Master of Science (Biotechnology)

Eligibility:

B.Sc. (Hons.)/B.Sc. in Botany /Microbiology/Biotechnology/Life Sciences/Zoology with 50 % marks in aggregate. Weightage of 5 % will be given to the candidates having B.Sc. (Hons.) while determining merit.

e) Master in Hotel Management & Catering Technology

Eligibility: Bachelor's Degree in any Discipline with 50 % marks in aggregate.

iii. Research Programmes (Admission on the basis of CUCET score and interview with weightage of 60 and 40, respectively):

M.Phil. Programmes (Duration: 1 year)

1. M.Phil (Economics)
2. M.Phil (Education)
3. M.Phil (English)
4. M.Phil (Hindi)
5. M.Phil (Political Science)

Ph.D. Programmes (Admission on the basis of CUCET score and interview with weightage of 60 and 40, respectively):

1. Ph.D (Economics)
2. Ph.D (Education)
3. Ph.D (English)
4. Ph.D (Hindi)
5. Ph.D (Management)
6. Ph.D (Political Science)

iv. Ph.D Programmes (Admission on the basis of M.Phil/NET-JRFetc. and interview /presentation)

1. Microbiology
2. Biochemistry
3. Nutrition Biology
4. Biotechnology
5. Hotel Management and Catering Technology

Detailed Information about the Programmes
(Schools-wise & Department-wise)

1. School of Arts, Humanities and Social Sciences

This school started functioning during the academic year 2009-10 with the Department of Economics & Department of Political Science offering research programmes. Department of Education started in the academic year 2010-11 with the two year PG programme: MA in Education. Department of History & Archeology; Psychology & Department of Sociology were introduced from the academic year 2014-15. All the departments of this School offers PG programmes of two-year duration which are divided into four semesters & are based on Choice Based Credit System (CBCS). Department of Education started M.Phil & Ph.D programmes from the academic year 2014-15.

Various details regarding the programme offered, eligibility and number of seats in **School of Arts, Humanities and Social Sciences** are as follows:

Sr. No.	Department	Programme	Eligibility	Number of Seats Available
1	Economics	Master of Arts (Economics)	(i) Bachelor's degree in any discipline or Economics from a recognized Indian or foreign University (foreign recognition to be as per AIU list) with a minimum of 50% aggregate marks or equivalent grade and have secured 50% marks in Economics (50% for SC/ST or differently abled categories). or (ii). 55%(50% for SC/ST or differently abled categories) or more marks in Graduate/Post Graduate degree in any other discipline or subject from a	30

			recognized Indian or foreign University (foreign recognition to be as per AIU list)	
		M.Phil (Economics)	<p>A candidate shall be eligible for admission to the programme of study leading to the Degree of Master of Philosophy (M.Phil), hereinafter called the programme, if he/she had taken Master's degree of any recognized University in relevant subject with at least 55% marks (50% for SC/ST or differently abled categories) or a degree recognized by the University for this purpose as its equivalent.</p> <p>Procedure for Admission to M.Phil: The procedure includes holding written test and interview, which shall carry weightage of 60% and 40% respectively. Candidates who have cleared NET/JRF/SLET/Teacher Fellowship shall be exempted from the written test. In such cases the interview shall carry 100% weightage.</p> <p>Note: For the candidates seeking admission in M.Phil Programmes and appearing in CUCET-2015 (Central Universities Common Entrance Examination) shall in no way be considered in 'Exemption Category' and in their case interview shall have the weightage of 40 marks. Therefore, candidates are advised to go through the</p>	10

			procedure of admission well before applying.	
		Ph.D (Economics)	<p>A candidate shall be eligible for admission to the Ph.D. programme, if he/she:</p> <p>Has M.Phil degree in the relevant subject from the recognized University or</p> <p>Has qualified UGC/CSIR- JRF/NET or SLET (Equivalent to NET/JRF as per UGC norms) or a holder of Teacher Fellowship or</p> <p>Has been a teacher in a constituent/affiliated college/department of the University for at least two years, and have previous research experience of at least two years and have research publication(s) comparable to MPhil standards or</p> <p>Is an in-service candidate with three years' experience of regular & approved teacher/researcher in higher education/research organization and has master's degree with at least 55% of marks (50% for SC/ST or Differently Abled Categories) in the relevant subjects.</p> <p>Procedure for Admission to Ph.D Programme: The procedure shall include written test and interview, which shall carry weightage of 60% and 40% respectively. Candidates belonging to</p>	08

			<p>(i), (ii) and (iii) above are exempted from the written test, and in their case the interview shall carry 100% weightage.</p> <p>Note: For the candidates seeking admission in Ph.D Programmes and appearing in CUCET-2015 (Central Universities Common Entrance Examination) shall in no way be considered in 'Exemption Category' and in their case interview shall have the weightage of 40 marks. Therefore, candidates are advised to go through the procedure of admission well before applying.</p>	
2	Education	Master of Arts (Education)	Bachelor degree in any discipline from any recognized University (foreign recognition to be as per AIU list) with a minimum 50% aggregate marks or equivalent grade (50% for SC/ST or differently abled categories).	15
		M.Phil (Education)	A candidate shall be eligible for admission to the programme of study leading to the Degree of Master of Philosophy (M.Phil), if he/she had taken Master's degree of any recognized University in relevant subject with at least 55% marks (50% for SC/ST or differently abled categories) or a degree recognized by the University for this purpose as its equivalent.	7

			<p>Procedure for Admission to M.Phil:</p> <p>The procedure includes holding written test and interview, which shall carry weightage of 60% and 40% respectively. Candidates who have cleared NET/ JRF/ SLET/ Teacher Fellowship shall be exempted from the written test. In such cases the interview shall carry 100% weightage.</p> <p>Note: For the candidates seeking admission in M.Phil Programme and appearing in CUCET-2015 (Central Universities Common Entrance Examination) shall in no way be considered in ‘Exemption Category’ and in their case interview shall have the weightage of 40 marks. Therefore, candidates are advised to go through the procedure of admission well before applying.</p>	
--	--	--	--	--

		<p>Ph.D (Education)</p>	<p>A candidate shall be eligible for admission to the Ph.D. programme, if he/she:</p> <p>has M.Phil degree in the relevant subject from the recognized University or has qualified UGC/CSIR- JRF/NET or SLET (Equivalent to NET/JRF as per UGC norms) or a holder of Teacher Fellowship or has been a teacher in a constituent/affiliated college/department of the University for at least two years, and have previous research experience of at least two years and have research publication(s) comparable to MPhil standards or is an in-service candidate with three years' experience of regular & approved teacher/researcher in higher education/research organization and has master's degree with at least 55% of marks (50% for SC/ST or Differently Abled Categories) in the relevant subjects.</p> <p>Procedure for Admission to Ph.D Programme: The procedure shall include written test and interview, which shall carry weightage of 60% and 40% respectively. Candidates belonging to (i), (ii) and (iii) above are exempted from the written test, and in their case the interview shall carry 100% weightage.</p> <p>Note: For the candidates seeking admission in Ph.D Programmes and</p>	<p>8</p>
--	--	-----------------------------	--	----------

			appearing in CUCET-2015 (Central Universities Common Entrance Examination) shall in no way be considered in 'Exemption Category' and in their case interview shall have the weightage of 40 marks. Therefore, candidates are advised to go through the procedure of admission well before applying.	
3	History & Archaeology	Master of Arts (History)	Graduation from any recognized University with a minimum 50 % marks or equivalent grade in aggregate(45% for SC/ST or differently abled categories)	25
4	Pol. Sc.	Master of Arts (Pol. Sc.)	Graduation from any recognized University with a minimum 50 % marks or equivalent grade in aggregate (45% for SC/ST or differently abled categories)	25
		M.Phil (Political Science)	A candidate shall be eligible for admission to the programme of study leading to the Degree of Master of Philosophy (M.Phil), if he/she had taken Master's degree of any recognized University in relevant subject with at least 55% marks (50% for SC/ST or differently abled categories) or a degree recognized by the University for this purpose as its equivalent.	10

		<p>Procedure for Admission to M.Phil:</p> <p>The procedure includes holding written test and interview, which shall carry weightage of 60% and 40% respectively. Candidates who have cleared NET/JRF/SLET/Teacher Fellowship shall be exempted from the written test. In such cases the interview shall carry 100% weightage.</p> <p>Note: For the candidates seeking admission in M.Phil Programmes and appearing in CUCET-2015 (Central Universities Common Entrance Examination) shall in no way be considered in ‘Exemption Category’ and in their case interview shall have the weightage of 40 marks. Therefore, candidates are advised to go through the procedure of admission well before applying.</p>	
	Ph.D (Political Science)	A candidate shall be eligible for admission to the Ph.D. programme, if he/she: has M.Phil degree in the relevant subject from the recognized University or has qualified UGC/CSIR- JRF/NET or SLET (Equivalent to NET/JRF as per UGC norms) or a holder of Teacher Fellowship or has been a teacher in a constituent/affiliated college/department of the University for at least two years, and have previous research experience of	08

			<p>at least two years and have research publication(s) comparable to MPhil standards or is an in-service candidate with three years' experience of regular & approved teacher/researcher in higher education/research organization and has master's degree with at least 55% of marks (50% for SC/ST or Differently Abled Categories) in the relevant subjects.</p> <p>Procedure for Admission to Ph.D Programme: The procedure shall include written test and interview, which shall carry weightage of 60% and 40% respectively. Candidates belonging to (i), (ii) and (iii) above are exempted from the written test, and in their case the interview shall carry 100% weightage.</p> <p>Note: For the candidates seeking admission in Ph.D Programmes and appearing in CUCET-2015 (Central Universities Common Entrance Examination) shall in no way be considered in 'Exemption Category' and in their case interview shall have the weightage of 40 marks. Therefore, candidates are advised to go through the procedure of admission well before applying.</p>	
--	--	--	---	--

5	Psychology	Master of Arts (Psychology)	Graduation from any recognized University with a minimum 50 % marks or equivalent grade in aggregate(45% for SC/ST or differently abled categories)	25
6	Sociology	Master of Arts (Sociology)	Graduation from any recognized University with a minimum 50 % marks or equivalent grade in aggregate(45% for SC/ST or differently abled categories)	15

2. School of Chemical Sciences

The School of Chemical Sciences started functioning during the academic year 2013-14 with the inception of Department of Chemistry. This department offers M.Sc programme of two year duration which is divided into four semesters & is based on Choice Based Credit System (CBCS).

Sr. No.	Department	Programme	Eligibility	Number of Seats Available
1	Chemistry	Master of Science (M.Sc.) Chemistry	(i). B.Sc. (Hons.) Chemistry with 50% or above marks in aggregate and 50% or above marks in Chemistry from any recognized Indian or foreign University (foreign recognition to be as per AIU list) Or (ii). Graduation in any branch of Science or Engineering with Chemistry and Biology/Mathematics as two of the Subjects of study with 55% or above marks in the aggregate.	30

3. School of Computer Science and Informatics

The School of Computer Science and Informatics started functioning during the academic year 2013-14 with the Department of Computer Sciences. Department of Library and Information

Science got functional from the academic year 2014-15. These departments offer PG programmes (4 Semester programme) based on Choice Based Credit System (CBCS).

Sr. No.	Department	Programme	Eligibility	Number of Seats Available
1	Computer Science	Master of Computer Application (MCA-3 Years duration)	Bachelor's degree in any discipline from a recognized Indian or foreign University (foreign recognition to be as per AIU list) with a minimum of 50% aggregate marks or equivalent grade with at least 50% marks (45% for SC/ST) or equivalent grade in Mathematical Sciences (Mathematics/Statistics/Operations Research/Computer Science).	30
2	Library and Information Science	Master of Library & Information Science (M.Lib. & Info. Sc.) 2 yrs.	Graduation from any recognized University with a minimum 50 % marks or equivalent grade in aggregate (45% for SC/ST or differently abled categories)	20

4. School of Earth, Environment and Space Studies

This school of the University started functioning from the academic year 2014-15. Two PG Programmes namely two-years Master of Science (Geography) under Department of Geography and Master of Science (Environment Science) under the Department of Environmental Sciences are being offered as per the following details:

Sr. No.	Department	Programme	Eligibility	Number of Seats Available
1	Environmental Science	Master of Science (Environmental Science)	B.Sc. (Hons.)/ B.Sc.(10+2+3) with a minimum 50% marks or equivalent (45% for SC/ST)	30
2	Geography	Master of Science (Geography)	Graduation from any recognized University with a minimum 50 % marks or equivalent grade in aggregate (45% for SC/ST)	30

5. School of Journalism and Mass Communication

This school was introduced from the academic year 2014-15. This school offers two-year Master of Journalism and Mass Communication (MJMC) programme under the Department of Journalism and Mass Communication. This programme is also based on Choice Based Credit System (CBCS).

Sr. No.	Department	Programme	Eligibility	Number of Seats Available
1	Journalism and Mass Communication	Master of Arts (Journalism and Mass Communication)	Graduation from any recognized University with a minimum 50 % marks or equivalent grade in aggregate (45% for SC/ST or differently abled categories)	20

6. School of Language, Linguistics, Culture and Heritage

The School of Language, Linguistics, Culture and Heritage is also one of the founding schools of the University. This school started functioning during the academic year 2009-10 with the Department of English and Foreign Languages offering research programmes—M.Phil and Ph.D and M.A. in English was started w.e.f. the session 2014-15.

Under this School, Department of Hindi and Indian Languages was started in the academic year 2011-12 with M.Phil and Ph.D programmes in Hindi. The Department of Hindi and Indian Languages started M.A. in Hindi from the academic session 2014-15.

Sr. No.	Department	Programme	Eligibility	Number of Seats Available
1	English & Foreign Languages	MA (English)	Graduation from any recognized University with a minimum 50 % marks or equivalent grade in aggregate (45% for SC/ST or differently abled categories)	30
		M.Phil (English)	A candidate shall be eligible for admission to the programme of study leading to the Degree of Master of Philosophy (M.Phil), if he/she had taken Master's degree of any recognized University in relevant subject with at least 55% marks (50% for SC/ST or differently abled categories) or a degree recognized by the University for this purpose as its equivalent. Procedure for Admission to M.Phil: The procedure includes holding written test and interview, which shall carry weightage of 60% and 40% respectively. Candidates who have cleared	10

			<p>NET/JRF/SLET/Teacher Fellowship shall be exempted from the written test. In such cases the interview shall carry 100% weightage.</p> <p>Note: For the candidates seeking admission in M.Phil Programmes and appearing in CUCET-2015 (Central Universities Common Entrance Examination) shall in no way be considered in 'Exemption Category' and in their case interview shall have the weightage of 40 marks. Therefore, candidates are advised to go through the procedure of admission well before applying.</p>	
		Ph.D (English)	<p>A candidate shall be eligible for admission to the Ph.D. programme, if he/she: has M.Phil degree in the relevant subject from the recognized University or has qualified UGC/CSIR- JRF/NET or SLET (Equivalent to NET/JRF as per UGC norms) or a holder of Teacher Fellowship or has been a teacher in constituent/ affiliated college/ department of the University for at least two years, and have previous research experience of at least two years and have research publication(s) comparable to MPhil standards or is an in-service candidate with three years' experience of regular & approved teacher/researcher in higher</p>	05

			<p>education/research organization and has master's degree with at least 55% of marks (50% for SC/ST or Differently Abled Categories) in the relevant subjects.</p> <p>Procedure for Admission to Ph.D Programme: The procedure shall include written test and interview, which shall carry weightage of 60% and 40%, respectively. Candidates belonging to (i), (ii) and (iii) above are exempted from the written test, and in their case the interview shall carry 100% weightage.</p> <p>Note: For the candidates seeking admission in Ph.D Programmes and appearing in CUCET-2015 (Central Universities Common Entrance Examination) shall in no way be considered in 'Exemption Category' and in their case interview shall have the weightage of 40 marks. Therefore, candidates are advised to go through the procedure of admission well before applying.</p>	
2	Hindi & Indian Languages	MA (Hindi)	Graduation from any recognized University with a minimum 50 % marks or equivalent grade in aggregate (45% for SC/ST or differently abled categories)	30
		M.Phil (Hindi)	A candidate shall be eligible for admission to the programme of study leading to the Degree of Master of Philosophy (M.Phil), hereinafter called	10

		<p>the programme, if he/she had taken Master's degree of any recognized University in relevant subject with at least 55% marks (50% for SC/ST or differently abled categories) or a degree recognized by the University for this purpose as its equivalent.</p> <p>Procedure for Admission to M.Phil: The procedure includes holding written test and interview, which shall carry weightage of 60% and 40% respectively. Candidates who have cleared NET/JRF/SLET/Teacher Fellowship shall be exempted from the written test. In such cases the interview shall carry 100% weightage.</p> <p>Note: For the candidates seeking admission in M.Phil Programmes and appearing in CUCET-2015 (Central Universities Common Entrance Examination) shall in no way be considered in 'Exemption Category' and in their case interview shall have the weightage of 40 marks. Therefore, candidates are advised to go through the procedure of admission well before applying.</p>	
	Ph.D (Hindi)	A candidate shall be eligible for admission to the Ph.D. programme, if he/she:	05

			<p>i. Has M.Phil degree in the relevant subject from the recognized University or has qualified UGC/CSIR- JRF/NET or SLET (Equivalent to NET/JRF as per UGC norms) or a holder of Teacher Fellowship or</p> <p>ii. Has been a teacher in a constituent/affiliated college/department of the University for at least two years, and have previous research experience of at least two years and have research publication(s) comparable to MPhil standards or</p> <p>iii. Is an in-service candidate with three years' experience of regular & approved teacher/researcher in higher education/research organization and has master's degree with at least 55% of marks (50% for SC/ST or Differently Abled Categories) in the relevant subjects.</p> <p>Procedure for Admission to Ph.D Programme: The procedure shall include written test and interview, which shall carry weightage of 60% and 40% respectively. Candidates belonging to (i), (ii) and (iii) above are exempted from the written test, and in their case the interview shall carry 100% weightage.</p>	
--	--	--	--	--

			<p>Note: For the candidates seeking admission in Ph.D Programmes and appearing in CUCET-2015 (Central Universities Common Entrance Examination) shall in no way be considered in 'Exemption Category' and in their case interview shall have the weightage of 40 marks. Therefore, candidates are advised to go through the procedure of admission well before applying.</p>	
--	--	--	---	--

7. School of Law, Governance, Public Policy and Management

The School of Law, Governance, Public Policy and Management started functioning during the academic year 2010-11 with the Department of Management Studies offering MBA programme & Department of Law offering LL.M programme. The Department of Commerce started functioning from academic year 2011-12 offering M.Com Programme. These programmes are of two year duration each divided into four semesters and based on Choice Based Credit System (CBCS). Ph.D in Management was started w.e.f. the session 2012-13.

Sr. No.	Department	Programme	Eligibility	Number of Seats Available
1	Commerce	M.Com	<p>A candidate seeking admission to M. Com. course must have:</p> <p>(i) Passed B.Com. (Hons.) Degree from a recognized Indian or foreign University (foreign recognition to be as per AIU list) with at least 50% marks or equivalent grade, Or</p>	30

			<p>(ii). Passed B.Com. (Pass) or B.Com. Degree from a recognized Indian or foreign University (foreign recognition to be as per AIU list) with at least 55% marks or equivalent grade. Or</p> <p>(iii). Passed B.A. (Hons.) Economics degree from a recognized Indian or foreign University (foreign recognition to be as per AIU list) with at least 50% marks or equivalent grade. Or</p> <p>(iv). Passed B.B.S., B.B.A., B.I.F.A. or B.B.E. degree from a recognized Indian or foreign University (foreign recognition to be as per AIU list) with at least 60% marks or equivalent grade.</p> <p>Note: 5% relaxation in aggregate of marks for SC/ST candidates.</p>	
2	Law	LL.M	Candidates having a three year/ five LL.B Degree from a recognized Indian or foreign University (As per AIU list) with at least 50% marks or equivalent grade point in aggregate (45% for SC/ST or differently abled categories).	20
3	Management Studies	MBA (Masters in Bussiness Administration)	Bachelor's degree in any discipline from a recognized Indian or foreign University (foreign recognition to be as per AIU list) with at least 50% marks aggregate or equivalent grade(45% for SC/ST or differently abled categories)	30

		<p>Ph.D (Management)</p>	<p>A candidate shall be eligible for admission to the Ph.D. programme, if he/she:</p> <ul style="list-style-type: none"> i. Has M.Phil degree in the relevant subject from the recognized University or ii. Has qualified UGC/CSIR-JRF/NET or SLET (Equivalent to NET/JRF as per UGC norms) or a holder of Teacher Fellowship or iii. Has been a teacher in a constituent/affiliated college/department of the University for at least two years, and have previous research experience of at least two years and have research publication(s) comparable to MPhil standards or iv. Is an in-service candidate with three years' experience of regular & approved teacher/researcher in higher education/research organization and has master's degree with at least 55% of marks (50% for SC/ST or Differently Abled Categories) in the relevant subjects. <p>Procedure for Admission to Ph.D Programme: The procedure shall include written test and interview, which shall carry weightage of 60% and 40% respectively. Candidates</p>	<p>08</p>
--	--	------------------------------	--	-----------

			<p>belonging to (i), (ii) and (iii) above are exempted from the written test, and in their case the interview shall carry 100% weightage.</p> <p>Note: For the candidates seeking admission in Ph.D Programmes and appearing in CUCET-2015 (Central Universities Common Entrance Examination) shall in no way be considered in 'Exemption Category' and in their case interview shall have the weightage of 40 marks. Therefore, candidates are advised to go through the procedure of admission well before applying.</p>	
--	--	--	---	--

8. School of Physical and Mathematical Sciences

The School of Physical sciences started functioning during the academic year 2013-14 with the Department of Statistics & Department of Physics coming into existence. The Department of Mathematics was established in the academic year 2014-15. These departments offer M.Sc programmes of two-year duration which are divided into four semesters & are based on Choice Based Credit System (CBCS).

Sr. No.	Department	Programme	Eligibility	Number of Seats Available
1	Mathematics	M.Sc (Mathematics)	B.A/B.Sc. or B.A/B.Sc./B.Com.(Hons.) with not less than 50% marks in aggregate OR in the subject concerned (45% for SC/ST or differently abled categories)	30

3	Physics	M.Sc (Physics)	(i). B.Sc. (Hons.) Physics from any recognized Indian or foreign University (foreign recognition to be as per AIU list) with 50% or above marks or equivalent grade in aggregate and 50% or above marks or equivalent grade in in Physics. Or (ii). Graduation in any branch of Science or Engineering with Physics and Mathematics as two of the Subjects of study with 55% or above marks or equivalent grade in in the aggregate and 55% or above marks or equivalent grade in in Physics. (45% for SC/ST or differently abled categories)	30
2	Statistics	M.Sc (Statistics)	Bachelor's degree in any discipline from a recognized Indian or foreign University (foreign recognition to be as per AIU list) with a minimum of 50% aggregate marks or equivalent grade with at least 50% marks in Statistics/Mathematics as one of the papers in the degree course (45% for SC/ST or differently abled categories)	15

9. Provide details of admission process in the affiliated colleges and the University's role in monitoring the same.

Central Universities Act 2009 doesn't allow University to give affiliation to any other college or institute in India and abroad.

10. Does the University have a mechanism to review its admission process and student profile annually? If yes, what is the outcome of such an analysis and how has it contributed to the improvement of the process?

The Central University of Haryana reviews its admission process annually by discussion with the members of the admission committee. The different intake capacities are published on the University website as well as leading national daily. After entrance test at national level, admission counselling sessions are conducted in different programmes. During counselling, an attempt is made to understand the specific requirements, if any, of admitted students so as to ensure special sessions for catering such requirements in the beginning of the academic session. On the basis of such assessments of student's profiles, the same is, sometime referred to the Career Counselling, Training and Placement Cell of the University for further necessary initiatives required. Through the review of admission process, necessary inputs are incorporated in the policy of admission for the next year.

2.1.3 What are the strategies adopted to increase / improve access for students belonging to the following categories:

- **SC/ST:** Reservation/scholarships and stipends offered by the Centre/State governments or UGC and the relaxation to pay the admission/tuition fee in instalments or on receipt of the scholarships/stipends by them. (this relaxation is given on the basis an undertaking had from the students that they will pay the admission/tuition fees on receipt of stipend/scholarship).
- **OBC:** Reservation in admission and scholarships and stipends offered by the Centre/State governments or UGC (like National Fellowship for OBC Candidate).
- **Women:** Internal Complaint Committee for Prevention, Prohibition and Redressal of Sexual Harassment and UGC scheme for Post-Graduate Indira Gandhi Scholarship for Single Girl Child.
- **Persons with varied disabilities:** University has established a dedicated Cell for the Persons with Disabilities (PWD) and Rajiv Gandhi National Fellowship for Students with Disabilities.
- **Economically weaker sections:** University runs a special Earn While You Learn (EWYL) scheme for the deserving students belonging to economically weaker sections. Under this scheme, selected students are engaged to contribute in Library, Labs and other such activities where they learn and earn. Maximum honorarium paid to a student is Rs. 3000/- p.m.

- **Outstanding achievers in sports and other extra-curricular activities**

The University is in the process of developing the sports facilities and the playgrounds like Cricket, Volley Ball, Athletic Track, Kho-Kho, Hand Ball, etc. Besides, indoor game facilities like Table Tennis, Badminton, Gymnasium, etc. have also been put in place for the students' and staff of the University. However, as such there is no award/trophy, etc. have been won by the University sportsperson but they have participated in many sports events.

Further, the University is governed by the reservation policies of the Govt. of India and University Grants Commission as issued and amended from time to time.

The reservation policy followed by the University for the current academic year is as follows:

- In deciding eligibility at the time of application for entrance test and admission:
 - 5% relaxation in marks to SC/ST/PH candidates for deciding minimum eligibility conditions.
- 10% relaxation for Kashmiri migrants for deciding minimum eligibility conditions.
- Reservation is available to the candidates belonging to the following categories as per Govt. of India norms:

✓ Other Backward Class (OBC) – NCL	=	27%
✓ Scheduled Class (ST)	=	15%
✓ Scheduled Tribes (ST)	=	7.5%
✓ Physically Handicapped (PwD's/PH)	=	3%
✓ Up to 5% supernumerary seats (over and above the prescribed seats) for Kashmiri migrants.		

A candidate in order to be eligible for any concession/Benefits under the Person with Disability (PwD) category, should have minimum degree of disability to the extent of 40%. Further that the certifying authority in all such cases will be a medical board at the district level consisting of the Chief Medical Officer/ Sub divisional Medical Officer in the district and other experts in the specified fields. Viz. Ophthalmic surgeon in the case of visually challenged (handicapped) and ENT surgeon or an audiologist in case of speech and hearing challenged (handicapped), an orthopaedic surgeon or a specialist in physical medicine and rehabilitation in case of locomotor challenged (handicapped).

Reservation to OBC candidates will only be applicable to the candidates belonging to "Non Creamy Layer". All such candidates are required to submit an OBC (Central Government List) certificate from the competent authority, format of which is available on <http://ncbc.nic.in/backward classes/index.html>.

2.1.4 Number of students admitted in University inception:

The list of students (category wise and Gender wise) admitted to various courses right since inception of the University is as below:

Category	Year 1 (2009-10)		Year 2 (2010-11)		Year 3 (2011-12)		Year 4 (2012-13)		Year 5 (2013-14)		Year 6 (2014-15)	
	Male	Female										
SC	02	02	08	05	15	06	09	14	09	08	64	33
ST	1	-	01	-	-	-	01	-	-	-	14	02
OBC	05	05	16	16	25	21	21	16	28	29	129	90
Gen	09	08	14	12	11	21	16	20	16	12	88	68
Others	-	-	--	-	-	-	-	-	-	-	-	-

2.1.5 Has the University conducted any analysis of demand ratio for the various programmes of the University departments and affiliated colleges? If so, highlight the significant trends explaining the reasons for increase / decrease.

The data given in table below represents the demand ratio of various courses/Programs over last four years:

			2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16		
Ph.D.	M.Phil.	PG	Programmes			Programmes			Programmes		
			Number of students Applied	Number of Students admitted	Demand Ratio	Number of students Applied	Number of Students admitted	Demand Ratio	Number of students Applied	Number of Students admitted	Demand Ratio
17	15	15	15	15	1:1	199	621	7365	9981	1:18	
17	15	15	15	15	1:1	48	76	410	545	1:18	
1:1	1:1	1:1	43	21	1:2	1:4	1:5	1:8	1:17	1:18	
45	43	72	203	98	1:2	20	230	708	41	1:17	
15	21	36	31	20	1:2	1:5	26	41	2552	40	
1:3	1:2	1:2	1:6	1:5	1:2	1:4	1:5	1:8	1:17	1:18	
281	230	247	25	26	1:11	1:4	1:5	1:8	1:17	1:18	
1:11	1:9	1:5	No admissions offered	117	1:9	1:5	1:5	1:8	1:17	1:18	
1347	708	7365	37	26	1:36	1:5	1:5	1:8	1:17	1:18	
No admissions offered	No admissions offered	No admissions offered	No admissions offered	No admissions offered	No admissions offered	No admissions offered	No admissions offered	No admissions offered	No admissions offered	No admissions offered	

The data given in table above reveals the following:

- i) The University started functioning in the year 2009 and in that year only the admission were offered in the research programmes in English and Economics because of the space constraints.
- ii) In the year 2010 the admissions were offered in PG Courses in the programmes; MBA, Economics, Law, Education, etc.
- iii) In the year 2011, two new departments, Department of Commerce and Hindi were started.
- iv) In the year 2013, four new PG programmes were started including Statistics, Physics, Chemistry and Computer Science with an intake of 15 students.
- v) In the year 2014, few new PG programmes were started in the Departments including

Sociology, Geography, Psychology, Environmental Science, Mathematics, Journalism and Mass Communication, Library and Information Science. During this year the University decided to participate in CUCET (Central Universities Common Entrance Test) to attract the talent from all over the country.

- vi) In the year 2015-16 the University decided to launch few new PG and research programmes like; Biotechnology, Microbiology, Nutrition Biology, Biochemistry and Hotel Management and Catering Technology for which the admission were made on the basis of merit. Whereas in the other 20 programmes the University continued with CUCET for which large number of applications were received those who opted to take admission in Central University of Haryana.

It is evident from the records that demand ratio has increased many fold and the University has achieved a national character especially after the introduction of CUCET as the quality of students admitted has also visibly gone up.

2.1.6 Were any programmes discontinued/staggered by the University in the last four years? If yes, please specify the reasons.

All programs as initiated by the University are being run continuously and well in demand of students. The integrated M.Phil and Ph.D programme which was started in 2009 was discontinued by the University authorities.

2.2 CATERING TO STUDENT DIVERSITY

2.2.1. Does the University organize orientation / induction programme for fresher's? If yes, give details such as the duration, issues covered, experts involved and mechanism for using the feedback in subsequent years.

The University envisions to develop conducive culture for grooming all round personality of young students during their stay at University. Every individual at University, be it students, teaching staff, non-teaching staff or the third party associates who are directly or indirectly connected with various operations of the University altogether foster this culture to nourish and produce the community of learners who are sensitive to societal, national and global needs while remaining conscious of the career opportunities.

The orientation programmes are conducted so as to familiarize the new students with the University atmosphere and its norms. All the new students inducted in various courses at University every year are addressed by the authorities of the University on the very first day of the session. The culture and legacy of the University is shared with the students and further they are advised to support the University fraternity to further grow the culture at campus better for learning and development of the students.

During the orientation programme, all students are informed about the welfare schemes, scholarships and other financial assistance. Welfare. Various facilities available at University campus are shared with the students like Earn while you Learn program, Library facility, Hostel facility, Administrative structure of the University and Anti Ragging provision. They are informed about the Cells/Clubs and other academic initiatives of the University.

Every department organizes familiarization programs and interaction of freshers separately with senior students of the department.

2.2.2. Does the University have a mechanism through which the “differential requirements of the student population” are analysed after admission and before the commencement of classes? If so, how are the key issues identified and addressed?

As different blocks are required to fill the holes of different size and shape, similarly identification of differential requirements of the student population is must for overall development of the complete lot of the students. Every teaching faculty interacts with the individual students before commencement of actual classes and before entering into the formal teaching curriculum. The students are assessed based on their previous qualifications, their background and previous educational institutions. The organs of the University like Equal Opportunity Cell, SC/ST Cell, OBC Cell, Cell for the Persons with Disabilities (PWD), Career and Placement Opportunities Cell, NSS, Youth Red Cross Unit, Women Empowerment Cell and Scholarship Section attend to the differential needs and issues of the students.

The key issues of different lots of students are identified by the Cells and Clubs through interaction and are addressed accordingly as per their present capabilities and strengths.

2.2.3. Does the University offer bridge/ remedial/ add-on courses? If yes, how are they structured into the time table? Give details of the courses offered, department-wise/faculty-wise?

In today's era where students need to undergo cut throat competition at every stage so as to achieve success in their ultimate goal, getting adequate educational qualification is the necessary requirement but not the sufficient requirement to succeed in practical life. Therefore, the University conducts remedial classes and sessions for career counselling, training & placement. University also runs skills/ proficiency development classes, Basic Computer skill classes and imparts coaching for NET and other competitive classes through Career and Placement Cell. These classes are taken by the internal faculty from various departments beyond the regular time table.

2.2.4. Has the University conducted any study on the academic growth of students from disadvantaged sections of society, economically disadvantaged, physically handicapped, slow learners, etc.? If yes, what are the main findings?

Women Empowerment Cell, Legal-Aid Clinic, Department of Education and NSS/YRC Units regularly conduct socio-legal, economic and cultural survey at regular intervals as a special drive to assess the difficulty level being faced by the students from disadvantaged sections of society, economically disadvantaged, physically handicapped and slow learners.

The general findings of the surveys conducted by the University include:

Area/Topic of Study: **Children with Special Needs and their Educational Aspirations: A Perceptive study of Peers of Children with Special Needs (CWSN)"** by **By Mr. Dilbag (M.Phil. Scholar), Department of Education.**

Findings of this study according to its objectives are:

- (I) **To find out educational opportunities available for Children with Special Needs (CwSN):** After review of educational policies, it is found that there are policies at various levels which are focused upon bringing the CwSN to the formal system of education. After 86th Constitutional Amendment and implementation of RTE Act- 2009, equal opportunities are available to CwSN in common schools. There are reserved seats available for CwSN in higher educational institutions and Universities to make sure their access in higher education and some other supporting facilities like scholarship, reservation of seats, exemptions in some skill tests, audio-visual aid, recorded study material, recorded lectures, home school education and hostels. These policies provide equal access and safeguard to CwSN in special schools, inclusive schools, and higher

educational institutions and in Universities. However there is lack of awareness among CwSN about educational opportunities and schemes for the benefits of state and central government.

(II) To understand educational aspirations of CwSN: It is found that in CwSN the level of educational aspirations is not very high. Majority of students stand at the level of below average. The level of educational aspirations of 58% students is less than average. Only 18% students have very high educational aspirations and 10% are at the level of high educational aspirations.

(III) To compare educational aspirations of Male and Female in the Category of CwSN: The level of educational aspirations is low in Girls than Boys. Most of the boys want to complete their higher education. Analysis of data presents that there are actually 23% boys, those have high educational aspirations, though 15% Girls have high educational aspirations and other 80% girls are at the level of average and below average and 13% Boys have the above average of educational aspirations. As per the data, total 37% Boys have level of above average and only 20% girls' stand at this level of educational aspirations.

(IV) To examine the motivational factor of very high educational aspirations of CwSN: Most of the special children, those have very high educational aspirations are motivated for higher education by their experiences, beliefs, economic and social desires. There are specially two aspects motivating them for higher education, one is to help them establish their social identity and second is to enable them to be economically strong by getting a nice job, as analyzed in their responses. These two factors are shaped by socialization processes and children experiences in childhood, mostly motivating them for higher education.

Educational implications of study:

Parents and Teachers: This study will be helpful to parents and teachers to understand the level of educational aspirations of CwSN and suggests them to provide information of educational opportunities available for CwSN of state and central government. Study will promote the role of parents and teachers in formation of their educational aspirations.

Policy maker: Study can be considered to design a policy framework to increase educational aspiration among CwSN.

Institutional leaders: Institutional leaders are expected to understand their educational aspirations, available educational opportunities and to organize teaching-learning process accordingly. They can consider this study to reframe their curricular and co-curricular activities in context of their educational aspirations.

Conclusion

The purpose of this study was to contribute to an understanding of level of educational aspirations of CwSN. It was found that the level of educational aspirations is not very high, but not equally in all. Some students have very high educational aspirations and they want to achieve highest degree in their life. The level of educational aspirations of CwSN is determined by gender and socio- economic status of their families. Socialization processes and its experiences are major determinants of their educational aspirations.

2.2.5. How does the University identify and respond to the learning needs of advanced learners?

Advanced learners are the assets to the University and, therefore, such students are provided conducive platform to inculcate research aptitude, innovative thinking and to enhance their intellectual capabilities through advanced techniques. Some of the activities initiated by the University to promote the advanced learners are as follows:

- i. Providing opportunities for interface with academic and industry experts
- ii. Organizing seminars and workshops on various emerging topics
- iii. Quiz competitions are organized from time to time
- iv. Summer trainings for the students in the industries
- v. Organising Book Reading sessions inviting participation of students
- vi. Organising Extension Lectures by the renowned scientists and academicians.
- vii. Providing latest print and online resources to the students in the library
- viii. By providing computer laboratory with internet facility

2.3 TEACHING-LEARNING PROCESS

2.3.1 How does the University plan and organise the teaching, learning and evaluation schedules (academic calendar, teaching plan, evaluation blue print, etc.)?

Detailed annual academic calendar is prepared by the University before the commencement of the classes and it is uploaded on the University website. Ordinance itself defines the requirements of credits, sessional tests/assignments and evaluation process.

All the faculty members are encouraged to plan their lectures in advance. Students are directed in advance about the sessional evaluation comprising sessional test I &II, presentations and assignments. Sessional test I is held during the sixth week of the semester for the syllabi covered till then. Sessional II is held during the twelfth week. End-semester examination covering the entire syllabus is conducted by the examination branch as clearly specified in the Ordinance.

2.3.2 Does the University provide course outlines and course schedules prior to the commencement of the academic session? If yes, how is the effectiveness of the process ensured?

Every faculty announces the course outlines and detailed course schedule (for the whole semester) before the commencement of regular classes for their respective courses allotted to them well before the commencement of the academic session. The Head of the Department ensures the effective implementation of the same.

2.3.3 Does the University face any challenges in completing the curriculum within the stipulated time frame and calendar? If yes, elaborate on the challenges encountered and the institutional measures to overcome these.

The course curriculum is designed with meticulous planning along with time span allotted to every topic and is thereby completed well in time as per plan of the course. The course is completed with the help of case studies presentations, class room lectures, organizing student-oriented seminars, workshops and industrial visits.

In case of any deviation, if arises, the same is being met by organizing extra classes at the department level itself. It becomes pertinent to share that there has not been any such deviation at CENTRAL UNIVERSITY OF HARYANA since inception.

2.3.4 How learning is made student-centric? Give a list of participatory learning activities adopted by the faculty that contributes to holistic development and improved student learning, besides facilitating life-long learning and knowledge management.

At the University, teaching/learning is being pursued with central focus on students as content delivery and lecture methods are reinforced with participation of students by conducting simulations, self-prepared presentations, group discussions, quiz competitions, assignments, case studies, industry visits and industrial trainings, student-centric seminars/workshops, panel discussions, post-dinner talks and discussions.

In every learning exercise, students are enabled to have all-round development empowering them to face any sort of challenges in their real lives after completion of their formal education.

2.3.5 What is the University's policy on inviting experts / people of eminence to deliver lectures and/or organize seminars for students?

Every department is allocated certain budget for every academic session to organize seminars, extension lectures and workshops by inviting industry and academic experts from the best of the institutions in the country.

The University encourages for organizing and initiating such advance learning activities and motivates students for active participation in the learning sessions conducted from time to time.

2.3.6 Does the University formally encourage blended learning by using e-learning resources?

In today's era of internet and technology, the whole world has become a small global village. Any advancement or research done in any corner of the globe can be known just with a click of the mouse on your desktop. The requirements to learning and the means to learn are changing very fast. To cop up with this change, the University encourages blended learning for its students by using e-learning resources.

The academic buildings and Hostel buildings are Wi-Fi enabled; various e-journals are made available to students through INFLIBNET.

The faculty of the University has initiated the process of developing Massive Online Open Courses (MOOCs) in various departments.

Ensuring IT intervention for qualitative reforms, University has even initiated the process of compulsory plagiarism check before the submission of M.Phil/Ph.D thesis.

2.3.7 What are the technologies and facilities such as virtual laboratories, e-learning, open educational resources and mobile education used by the faculty for effective teaching?

The faculty members at Central University of Haryana are provided with internet/Wi-Fi connections in their academic buildings and residential areas. Besides, each department has been provided with basic computer printer and LCD projector facility to facilitate the faculty in preparation of lectures before using latest information and advancements of the area through internet and various e-journals.

The usage of LCD projectors and conducting simulations is a very common practice in the University.

2.3.8 Is there any designated group among the faculty to monitor the trends and issues regarding developments in Open Source Community and integrate its benefits in the University's educational processes?

The faculty members at University themselves monitor the trends and issues regarding developments in open source community and integrate the benefits of the same in educational process of the University. However, the formal group of faculty members is being set up to monitor the trends and issues regarding the development of open source community in the University.

2.3.9 What steps has the University taken to orient traditional classrooms into 24x7 learning places?

Learning is a continuous process and takes place round the clock, round the week and round the year and, therefore, to add rigor to learning exercise, all the teachers remain in touch with their students through presentations, assignments, quizzes, group discussion, brain storming and other smart gazettes available online. Any query may be discussed or text may be written by the students to their respective teachers at any point of time. The availability of Wi-Fi system in the academic and hostel buildings have extended the boundaries of learning beyond the traditional classrooms. The faculty ensures the optimum utilisation of ICT enabled services in knowledge exchange and dissemination.

2.3.10 Is there a provision for the services of counsellors / mentors/ advisors for each class or group of students for academic, personal and psycho-social guidance? If yes, give details

of the process and the number of students who have benefitted.

At the University, the students are counselled through various mechanisms and their grievances/queries are resolved at the earliest. The platforms/cells through which the students may have proper counselling, guidance and advice from the below mentioned cell are as below:

Name of the Cell	Students Benefited
Career Counselling, Training and Placement Cell	Appx. 350
Dean of Students' Welfare (DSW)	All the issues concerning welfare of students are routed through DSW
Students' Grievance Redressal Cell	Till date all the grievances received have been resolved amicably
Students' Advisors provided at department level	Appx. 1:5 Teacher Students Ratio is maintained
SC/ST Cell	10
Equal Opportunity Cell	Students are entertained
Women Empowerment Cell	40
Legal Aid Clinic	60

2.3.11 Were any innovative teaching approaches/methods/practices adopted/put to use by the faculty during the last four years? If yes, did they improve learning? What were the methods used to evaluate the impact of such practices? What are the efforts made by the institution in giving the faculty due recognition for innovation in teaching?

The teaching faculty at CUH is committed to impart learnings to its students with innovative and latest technology so as to make learning process simple, long lasting and interesting.

Apart from regular classroom teachings, various innovative methods being used by teaching faculty during last four years are:

- Panel discussions.
- Simulations
- Research Projects
- Industrial Trainings
- Group Discussions.
- Case Study Discussions etc.

Especially, the department of management studies adopts the teaching methodology through case studies and also field works are assigned to the students time to time to impart practical knowledge about the industry and enabling them in better decision making. The outcome of such innovative methods of learning are being judged regularly by way of taking feedback from students through discussions and any changes found appropriate are incorporated for further betterment of the teaching learning process. The students' feedback is taken through well-devised proforma.

2.3.12 How does the University create a culture of instilling and nurturing creativity and scientific temper among the learners?

The University is sensitive about developing the culture of nurturing creativity and scientific temper among its learners by focusing on individual learners through:

- Usage of internet
- Usage of e-journals
- Usage of data-base available at University
- Discussion on more and more case studies
- Role play methods of learning etc.
- Sensitisation programmes being organised by the Cells like Women Empowerment

Cell, Legal Aid Clinic, NSS, Youth Red Cross Units etc.

2.3.13 Does the University consider student projects mandatory in the learning programme? If yes, for how many programmes have they been (percentage of total) made mandatory?

In some of the professional courses projects are made mandatory in the learning program so as to provide the students initial exposure of working style in industries. The programmes wherein the projects are mandatory are MBA, Computer Science, Commerce, Statistics, Education, Physics, Chemistry, M.Lib, Biotechnology, Biochemistry, Microbiology, Nutrition Biology and Tourism and Hotel Management.

- Number of projects executed within the University: 136 Projects
- Names of external institutions associated with the University for Student Project Work:
- SVI Analytica, New Delhi
- Centre for Innovative and Applied Bio-processing, Mohali
- Technology-based Incubator (TBI), University of Delhi (South Campus), New Delhi
- National Small Industries Corporation (NSIC), New Delhi
- National Cooperative Union of India, New Delhi

Role of faculty in facilitating such projects:

The faculty members play an important role as advisors/guides in completing the project work as mandatory part of their course curricula. The students are being guided at each step by their respective faculty members during completion of their project with external institutions. The University is associated with external institutions so as to facilitate students to carry out their project work.

2.3.14 Does the University have a well-qualified pool of human resource to meet the requirements of the curriculum? If there is a shortfall, how is it supplemented?

The University is one of the new central universities established in 2009. The University is in the process to appoint senior faculty in different departments and disciplines, however, at present there are 03 Professors, 05 Associate Professors and 69 Assistant Professors as a qualified pool of human resource in the University. To fill the gap, in the mean time, human resource in various departments is being taken care by inviting qualified Professors on deputation and also through contractual appointments.

2.3.15 How are the faculty enabled to prepare computer-aided teaching/ learning materials? What are the facilities available in the University for such efforts?

The faculty members are well versed with technology so as to prepare computer-aided audio visual aids for teaching materials. They are well equipped with laptop, desktop, internet facility and Wi-Fi system in academic blocks as well as residential areas. Further, the University is in the process of providing at least LCD/DLP projectors in every department so as to optimize the usage of ICT in teaching learning process.

2.3.16 Does the University have a mechanism for the evaluation of teachers by the students / alumni? If yes, how is the evaluation feedback used to improve the quality of the teaching-learning process?

As University believes in the culture of continuous improvement in teaching learning process, the interaction of teachers and students is quite open and the alumni feedback is had through feedback link on the University website and formal department-level meets at regular intervals. Cells/Clubs and the departments have included the potential alumni in the process of devising the draft plan and objectives. The University has also devised a informal mechanism for alumni feedback.

2.4 TEACHING QUALITY

2.4.1 How does the University plan and manage its human resources to meet the changing requirements of the curriculum?

Presently, the University has the faculty strength of 77 and nearly 100 positions are lying vacant for which the advertisement has already been given and a large number of applications have been received for various faculty positions. The data entry for the applications received is complete and the screening process is underway. In most likelihood, University will have a large pool of faculty members in various disciplines, very soon.

2.4.2 Furnish details of the faculty

The required details are given in the following table:

Highest Qualification	Professors		Associate Professors		Assistant Professors		Total
	Male	Female	Male	Female	Male	Female	
Permanent Teachers	NIL	NIL	02	01	15	12	30
D.Sc./D/Litt.	NIL	NIL	NIL	NIL	NIL	NIL	NIL
Ph.D.	NIL	NIL	02	01	12	06	21
M.Phil.	NIL	NIL	NIL	NIL	02	03	05
PG	NIL	NIL	NIL	NIL	01	03	04
Teachers on Deputation	02	NIL	01	NIL	01	NIL	04
D.Sc./D/Litt.	NIL	NIL	NIL	NIL	NIL	NIL	NIL
Ph.D.	01	NIL	01	NIL	01	NIL	03
M.Phil.	NIL	NIL	NIL	NIL	NIL	NIL	NIL
PG	NIL	NIL	NIL	NIL	NIL	NIL	NIL
Contractual/ Guest/Inspire Teachers	01		01		26	15	43
D.Sc./D/Litt.	NIL	NIL	NIL	NIL	NIL	NIL	NIL
Ph.D.	01	NIL	01	NIL	19	10	31
M.Phil.	NIL	NIL	NIL	NIL	02	01	03
PG	NIL	NIL	NIL	NIL	05	04	09
Total	02		05		69		77

2.4.3 Does the University encourage diversity in its faculty recruitment? Provide the following details (department / School wise).

University encourages diversity in its faculty recruitment and, therefore, there are significant no. of teachers from outside the state. The position is as under:

Sr. No.	Department	% faculty from the same University	% faculty from other Universities within the same State	% faculty from Universities outside the state	% faculty from other countries
1.	Economics	50	25	25	00
2	Education	00	25	75	00
3	English	16.5	67	16.5	00
4	Hindi	00	33.33	66.66	00
5	History	00	00	100	00
6	Political Science	00	33.33	66.66	00
7	Psychology	00	00	100	00
8	Sociology	00	00	100	00
9	Management	00	20	80	00
10	Commerce	00	100	00	00
11	MCA	00	66.66	33.33	00
12	Journalism	00	100	00	00
13	Law	00	75	25	00

14	Library and Information Science	00	33.33	66.66	00
15	Environmental Science	00	67	33	00
16	Geography	00	00	100	00
17	Chemistry	00	25	75	00
18	Physics	00	20	80	00
19	Mathematics	00	00	100	00
20	Statistics	00	100	00	00
21	Bio-Technology	00	50	50	00
22	Microbiology	00	00	100	00
23	Nutrition Biology	00	00	100	00
24	Bio-Chemistry	00	00	100	00
25	Tourism and Hotel Management	00	66.66	33.33	00

2.4.4 How does the University ensure those qualified faculties are appointed for new programmes / emerging areas of study (Bio-technology, Bio-informatics, Material Science, Nanotechnology, Comparative Media Studies, Diaspora Studies, Forensic Computing, Educational Leadership, etc.)? How many faculty members were appointed to teach new programmes during the last four years?

Even before a new programme is launched, an attempt is made through wide publicity to fill the vacant faculty position through the website of the University, National Newspapers and local newspapers to attract the talent from all over the country. Full details regarding the same is displayed on the website of the University along with detailed selection criterion strictly in accordance with the UGC/AICTE guidelines as applicable time to time. It is also ensured that sufficient time is given to receive the applications from the far flung areas of the country. After receiving the applications, the details of each and every application is endorsed in the records in the recruitment cell, established especially for the purpose, under the strict observation of the Vice Chancellor. After having recorded all the applications, Screening Committees are appointed by the University to check the eligibility of the candidates according to the specialization required in the departments. On the recommendations of the Screening Committee the candidates are shortlisted as per the norms decided by the University. After that, Selection Committees are held with the help of invited experts in the concerned areas.

In the recruitments of the first phase, University considered the specialisation in the relevant emerging areas of study. The details of the faculty are given in serial number 2.4.3 above.

2.4.5 How many Emeritus / Adjunct Faculty / Visiting Professors are on the rolls of the University?

The guidelines of hiring Emeritus Professors, Adjunct Faculty and Visiting Professors is in progress and soon the University will have a rich pool of such faculties. University has already framed the ordinance for hiring Adjunct Faculty.

2.4.6 What policies/systems are in place to academically recharge and rejuvenate teachers (e.g. providing research grants, study leave, nomination to national/international conferences/seminars, in-service training, organizing national/international conferences etc.?)

University has the practice of encouraging the faculty members to recharge themselves through orientation programmes, refresher courses, visiting assignments, etc. The University has the culture to motivate the faculty to participate in the National and International seminars and conferences time to time and there is provision of study leave, maternity leave, paternity leave, academic leave, duty leave, etc. for attending such events/occasions. There is provision of many awards for recharging and motivating the faculty like—Best Research Paper Award, Best Teacher award, Best Department Award in terms of maintenance and cleanliness, etc.

2.4.7 How many faculty received awards / recognition for excellence in teaching at the state, national and international level during the last four years?

1. Prof. Ashish Dahiya

- Recipient of ‘AttithyaRatanPuraskar’ Gem of Hospitality Award 2013, HNB Garhwal Central University, Uttarakhand.
- Recipient of ‘Teacher of the Year Award – Best Teacher Male’ Pearson Teaching Awards 2013, New Delhi.
- Recipient of ‘Indian Hospitality Congress Award’ 2014, Mumbai.

2. Ms. Shelley Duggal:

- Recipient of 'The Aspiring Researchers of Hospitality, Travel & Tourism' award Indian Hospitality Congress Awards 2014, Mumbai

3. Dr. Amit Kumar

- बाबूबालमुकुंदगुप्तसाहित्यएवंपत्रकारितासंरक्षणपरिषद, रेवाड़ीद्वारावर्ष 2014 के ‘बाबूबालमुकुंदपुरस्कार’ सेसम्मानित

4. Dr. Sanjiv Kumar, Associate Professor, Department of English and Foreign Languages

- Nominated as the Inspired Teacher by the University to attend In-Residence Inspired Teachers Programme at RashtrapatiBhawan from June 6-12, 2015.

5. Dr. Richa Sharma

- Awarded the “Young Scientist Award” for Environmental Microbiology by Association of Microbiologists of India in 2012.

6. Dr. Sarika Sharma

- Awarded with “Samaj Rattan Award” by Human Development Society, Delhi in 2012.

2.4.8 How many faculty underwent staff development programmes during the last four years (add any other programme if necessary)?

The brief information of the faculty who have undergone various staff development programmes is given below. The detailed information shall be made available to the Peer Team during the visit.

Academic Staff Development Programme	No. of Faculty
Refresher Courses	08
Orientation Programmes	16
HRD Programmes	00
Staff Training conducted by the University	05
Staff Training conducted by other institutions	05
Summer/Winter School, Workshops, etc.	17

2.4.9 What percentage of faculty have

- ❖ **Been invited as resource persons in Workshops / Seminars / Conferences organized by external professional agencies?**
 - About 35.52% of the faculty have been invited as resource persons in Workshops / Seminars / Conferences organized by external professional agencies.
- ❖ **Participated and presented paper in external Workshops / Seminars / Conferences organized by external professional bodies?**

- About 86% of the faculty have participated and presented papers in external Workshops / Seminars / Conferences organized by external professional bodies.

❖ **Teaching experience in other universities / national institutions and other institutions?**

- Approximately 67% of the faculty have teaching experience in other universities / national institutions and other institutions.

❖ **Industrial engagements?**

- About 14% of the faculty have industrial engagement.

❖ **International experience in teaching?**

More than 5% faculty members have international experience in teaching.

2.4.10 How often does the University organize academic development programmes (e.g. curriculum, teaching-learning methods, examination reforms, content / knowledge management, etc.) for its faculty aimed at enriching the teaching-learning process?

Most of the teaching departments organize academic development programmes through its Board of Studies and School Boards in the beginning of each academic session and also as and when required for developing and revising the curriculum, teaching pedagogy and other reforms related to content so that the new inputs can be incorporated in the syllabi in accordance with the contemporary requirements of the course. All efforts are made to ensure full participation from the faculty members from the concerned and sister departments. Time to time input from the students is also sought and being incorporated in the curriculum.

2.4.11 Does the University have a mechanism to encourage

❖ **Mobility of faculty between universities for teaching?**

❖ **Faculty exchange programmes with national and international bodies?**

If yes, how have these schemes helped in enriching the quality of the faculty?

The University follows the guidelines received from the UGC/AICTE time to time for the above mentioned criterion. In addition to this the University is in the process of engaging the people from the industries, NGOs and other academic institutions/universities to have exchange of the academic inputs. Definitely these efforts have been successful in the past and the process of engaging more and more people from various type of institutions is in progress. Some of the recent collaborations with this objective include—

- SVI Analytica, New Delhi

- Centre for Innovative and Applied Bio-processing, Mohali
- Technology-based Incubator (TBI), University of Delhi (South Campus), New Delhi
- National Small Industries Corporation (NSIC), New Delhi
- National Cooperative Union of India, New Delhi

2.5 EVALUATION PROCESS AND REFORMS

2.5.1 How does the University ensure that all the stakeholders are aware of the evaluation processes that are operative?

All the ordinances related to examinations, syllabus, related proforma, etc. are made available in each department and also uploaded on the University website for the information of the students. In addition, a duly attested hard copy of the ordinances and syllabus is also supplied to all the head of departments by the controller of examinations. The scheme of evaluation relating to internal as well as external assessment is also made available to the faculty and the students as and when required.

2.5.2 What are the important examination reforms initiated by the University and to what extent have been implemented in the University departments and affiliated colleges? Cite a few examples which have positively impacted the examination management system.

Various ordinances related to examinations are displayed on the website of the University for information of the faculty and the students. All these ordinances are duly approved by the Academic Council and Executive Council of the University. These ordinances include the rules for the promotion of different courses in different programmes and the University follows ten point grading system.

Some of the Recent Reforms in Examination System:

Recently ordinances have been modified in accordance with the CBCS and as an additional feature towards examination reforms, the students are allowed for re-checking of their end-semester examination answer sheets with a nominal fee.

Besides, University has made it mandatory for the students to fulfil the condition of 75% attendance through the revised Ordinance for Post-graduate Programmes.

The students are also shown their internal assessment answer sheets to ensure the transparency and satisfaction of the students.

In case a student is unable to complete the course in the due time then he/she may exercise the clause of availing 'zero semester'.

2.5.3 What is the average time taken by the University for declaration of examination results? In case of delay, what measures have been taken to address them? Indicate the mode / media adopted by the University for publication of examination results) e.g. website, SMS, email. Etc.).

The examination branch of the University generally declares the results of the end-semester examinations within a record time of 30 days. Once the result is declared by the Examination Branch, it is put on the University website and notice boards for the information of the students. The students are duly entertained for any query related to examination even after the declaration of the results and if required corrections are made accordingly. Till date, there has been no instances of delay in declaration of result.

2.5.4 How does the University ensure transparency in the evaluation process? What are the rigorous features introduced by the University to ensue confidentiality?

The Controller of Examinations invites the question papers from the concerned departments through the Head of the Departments and the necessary number of copies are got printed under the strict supervision of the COE. During the term-end examinations answer sheets are being received on the day of the examination itself from the Centre Superintendent in sealed envelopes. After having received the answer sheets of the students, the examination branch adopts necessary measures to ensure that each sheet is coded with a fake number to ensure the confidentiality of the details of the students before the scripts are sent for evaluation. These answer sheets are being evaluated by the concerned teachers at a central evaluation centre.

The internal assessment is received from the concerned teachers in a sealed envelope at least one week before the commencement of the term end examinations.

2.5.5 Does the University have an integrated examination platform for the following processes?

- **Pre-examination processes – Time table generation, OMR, student’s list generation, invigilators, squads, attendance sheet, online payment gateway, etc.**
- **Examination process-Examination material management, logistics, etc.**
- **Post-examination process – Attendance capture, OMR-based exam result, audio processing, generic result processing, certification, etc.**

Yes, the University has set pattern of setting the time table for the various programmes which are scheduled by each department separately in the beginning of the session for smooth conduct of classes. There is no pattern of OMR sheets for the students; however, before the examination, a list of students registered for various courses is generated by the Examination Branch. Centre Superintendent and Deputy Centre Superintendent are appointed for the conduct of the examination by the COE and all the faculty members are assigned the duty of invigilators. A separate team of faculty members is appointed to perform the duties of flying squad during the examinations. Separate attendance sheet for the students is generated for all the programmes.

All the material related to examinations is supplied to the Centre Superintendent by the examination branch on the day of the examination and it is assured through security that the material reaches safely to the examination centre and back to exam branch. Once the examinations are over all the attendance sheets are deposited back to the examination branch for final processing of the result and certification.

Detailed Grade Certificates are issued by the Examination Branch on declaration of the result.

2.5.6 Has the University introduced any reforms in its Ph.D. evaluation process?

Recent Reforms in Ph.D. Evaluation Process:

After taking admission to the Ph.D. programme, the PhD scholar has to mandatorily undergo six months course work before registration. The full procedure laid down by the UGC is followed in the case of Ph.D. Evaluation process. A panel of examiners is invited from the department and as per the University system the thesis is being sent to three external examiners appointed by the Vice Chancellor.

Scholar is required to publish at least two research papers in refereed journals before submission of thesis for evaluation.

Compulsory plagiarism check before submission of thesis for evaluation

Open house Viva Voce examination

2.5.7 Has the University created any provision for including the name of the college in the degree certificate?

The University is residential in nature.

2.5.8 What is the mechanism for redressal of grievances with reference to examinations?

The University has constituted an Examination Grievances Redressal Committee to redress the grievances of the students related to examinations. Besides, the examination branch makes sure that any complaint or grievances related to examination are met immediately to the satisfaction of the students. In addition to it, University constitutes a separate committee to resolve the case of Unfair Means.

2.5.9 What efforts have been made by the University to streamline the operations at the Office of the Controller of Examinations? Mention any significant efforts which have improved the process and functioning of the examination division/ section.

There is Controller of Examinations assisted by one Assistant Registrar and other staff working in the Examination Branch. Full coordination is ensured among all the staff members of the branch starting from pre-examination to the post examination process. The coordination is made effective through the regular meetings of the examination staff and efforts are made to make the process more effective through transformations. Utmost secrecy and confidentiality is maintained in the examination branch.

2.6 STUDENT PERFORMANCE AND LEARNING OUTCOMES

2.6.1 Has the University articulated its Graduate Attributes? If so, how does it facilitate and monitor its implementation and outcome?

The University has rich pool of disciplinary experts in each of the programmes including technical, human and conceptual skills. Every programme has its unique vision and mission to inculcate and imbibe the required contemporary skills among the students in accordance with the industrial and job-market requirements. The University has got its dedicated Career Counselling, Training and Placement Cell to cater to the required skills for the students. The cell organizes additional classes for the skill development in the areas like— communication skills, comprehensive skills, computer skills, social skills, ethical skills and others. The cell also organizes the special classes for the Staff Selection Board (SSB) for the aspirants who wish to be officer in the defence forces. This has been very successful as far as the feedback of the students are concerned. Utmost care is taken by all the departments that the students are inculcated with the attributes which enable them to be good citizen in addition to career achievements. These things are monitored by inviting the meetings of alumni and taking feedback from them.

2.6.2 Does the University have clearly stated learning outcomes for its academic programmes? If yes, give details on how the students and staff are made aware of these?

Yes, the University states the learning outcomes through the vision and mission of the departments. Efforts are on to develop the linkages with external agencies so that the contemporary input can be incorporated in the various programmes. All the departments take the help of IT facilities to enrich the teaching-learning process. Computers and LCD Projectors have been made available to facilitate the IT based teaching in all the departments. Various online learning resources are made available to the faculty through the library. As the campus is fully Wi-Fi, hence the students are even given the online assignments.

2.6.3 How are the University's teaching, learning and assessment strategies structured to facilitate the achievement of the intended learning outcomes?

The University's teaching, learning and assessment strategies are structured in such a way that the students get the regular updates related to their courses. To achieve this, curricula is updated time to time with the help of external academicians and experts from industries. The internal assessment process has been designed in such a way that the students are compelled to attend the classes and complete the assignment given to them time to time. The internal assessment is a combination of many criteria like— assignments, presentations, case studies, written internal exams and viva-voce. Field assignments are also given to the students to have the real time practical exposure. This makes the student learn in many ways and the desired learning outcomes are achieved.

2.6.4 How does the University collect and analyse data on student learning outcomes and use it to overcome the barriers to learning?

Feedback from the students on various parameters like; teaching pedagogy, syllabi, evaluation process and others is sought to improve the quality of teaching and bring more improvement in the teaching learning process. Every effort is made to make the teaching learning process a two way process. The feedback and suggestions received from the students are analysed at the department level and appropriate changes are incorporated.

2.6.5 What are the new technologies deployed by the University in enhancing students learning and evaluation and how does it seek to meet fresh / future challenges?

The University campus is made fully Wi-Fi to enable the learning process easy and accessible all the time. The laboratories of science departments are being equipped with the latest equipment for better teaching, learning and research activities. The proper use of information technology is being done to make the teaching learning process vibrant and live.

Any other information regarding Teaching, Learning and Evaluation which the University would like to include:

1. Amendments in the following Ordinances:

- Ordinance Relating to the Award of Postgraduate Degree/Diplomas—Implementation of Choice Based Credit System,
- Relating to Ph.D Programme
- Relating to M.Phil Programme
- Prohibition of and punishment for Ragging
- Rules for Refund of Various Kinds of Fee

2. New Ordinance Relating to the Code of Professional Ethics for Teachers

The University has already adopted an ordinance related to code of professional ethics for teachers.

3. Initiatives of the University towards adopting Massive Open Online Courses:

- a. To synergize the advantages of anytime-anywhere format of e-Learning and the merits of traditional classroom-based Chalk and Talk method, University is all set to adopt a blended MOOCs strategy.
- b. University is in the process of developing infrastructure for MOOCs.
- c. The faculty members have initiated developing static content for developing courses in MOOCs.

CRITERION-III

(RESEARCH, CONSULTANCY & EXTENSION)

CRITERION III: (RESEARCH, CONSULTANCY AND EXTENSION)

3.1 Promotion of Research

3.1.1 Is there a research committee to facilitate and monitor research? If yes, give details.

The University has constituted a Departmental Research Committee in each department responsible for maintaining the standards of research in University. The committee ensures standardization of research process starting from the selection of topic to the submission of thesis. The University also monitors the research output to ensure that every research work submitted for conferment of degrees is plagiarism free. This is executed by mandatorily checking the submitted work through plagiarism check using URKUND software at central level in university. In addition, every department has a dedicated scholar room where different facilities related to research (Software, Access to Journals etc.) are provided.

3.1.2 What is the policy of the university to promote research in its affiliated / constituent colleges?

Not applicable, as the University is a Non- affiliating, Residential and Unitary University.

3.1.3 What are the proactive mechanisms adopted by the university to facilitate the smooth implementation of research schemes/ projects?

Central University of Haryana encourages all eligible faculty members for participation in active research in various forms (Publications in National and International Journals with good impact factor, Submission of Research Projects – Major & Minor to various agencies, Supervision of PhD, Post-Doctoral Fellowships, Inspired Teachers etc.). For smooth implementation of the research schemes, proper infrastructure is provided to researchers.

3.1.4 How is interdisciplinary research promoted?

The University has included interdisciplinary approach in academics and research as one of its mission statements. The University publishes an interdisciplinary journal – “Journal of Central University of Haryana”, an International Multidisciplinary Refereed Research Journal, which invites the scholarly inputs from all disciplines and publish it under one name. Faculty members are also encouraged to carry out group project works involving interdisciplinary research.

3.1.5 Give details of workshops/ training programmes/ sensitization programmes conducted by the university to promote a research culture on campus.

The university has conducted various workshops/training programmes since its establishment in the year 2009. The details are as follows:

1. The Department of Statistics and Education jointly organized a one week workshop on Research Methodology and Data Analysis using SPSS from 15.04.2015 to 20.04.2015.
2. The Department of Chemistry, Physics and Microbiology under the aegis of the Rashtriya Avishkar Abhiyan on 11th Sep 2015 organized event displaying scientific working models/experiments for the school students of the villages adopted by university to popularize the science aptitude among students.
3. Dr Sunita Tanwar, Department of Management Studies Organized a One Day National Seminar as convenor on “Cooperation for Cooperators” in CUH in Collaboration with

- NCUI Delhi and HARCOFED on 13th Oct, 2015
4. A 3 Days Workshop on Vacuum, Plasma and Thin Film Deposition Techniques was jointly organized by Department of Chemistry and Department of Physics from 22nd – 24th October, 2015. It was sponsored by CUH, Mahendergarh and TAS, New Delhi.
 5. A three days workshop on “Basics of SPSS” was organized by the Department of Management Studies from 16th Oct – 18th Oct 2015.
 6. The Department of Management studies organized a workshop by eminent corporate trainer Mr. Subhash Jagota on Business Etiquette and Social Skills.
 7. The Department of Management Studies organized Investors Awareness Seminar on “Investment Management and Financial Planning: Some Practical Aspects” by Mr Jasmit Singh, Financial Epxpert in collaboration with Regional Centre for Entrepreneurship Development (RCED), Chandigarh on 28th Nov 2011.
 8. The Department of Management Studies organized a Panel Discussion on the topic- “Kingfisher: Some Issues and Challenges” during a one month celebration, entitled “Journey of Changes”, in 2012.
 9. The Department of Computer Science and Information Technologies conducted a Two days National Workshop “IBNC”, 29-30 January, 2015.
 10. The Department of Hindi organized a ‘Chatra Adhyayan Yatra’ and a National Seminar on “Hindi Bhasha”, 10-12th Feb. 2014, sponsored by Kendriya Hindi Nideshalya, (MHRD).
 11. The Department of Tourism and Hotel Management organized one day workshop on Chocolate Making and Mocktails in September 2015

In addition, other related activities to Seminar/Workshop/Training Programe/Sensitization include:

1. The Department of Law actively engaged/participated in organizing a National Seminar ‘Inclusive Democracy: People, Power & Progress’ organized by Central University of Haryana, May 2012 at temporary campus at Narnaul.
2. The Department of Law actively participated in the institutional Month-long academic Programme/Celebration for creating and sharing knowledge—an initiative of the University wherein the department organized Seminar, Colloquium, Symposia, Round Table discussion, Debate, Panel Discussion on Contemporary Topic, student’s participation in debate/discussion etc. for a month long tenure.
3. In National Workshop on RTE wherein eminent Scientists/ Prof.Yash pal and Justice Leila Seth were invited as key speakers, the Department of Law actively participated in the workshop. The faculty members contributed in the Book titled “RTE— An Imperative for Progress” edited by Prof. M. C. Sharma.
4. Celebration of important days such as Constitution Day, Human Rights Day etc. has been an institutional Academic practice in the Department of Law.
5. On Sept. 23rd, 2015 CUH Legal Aid Clinic and the Department of Law organised a series of events including Special Lecture on the “Institution of Lokayukta: An Imperative for Good Governance by Hon’ble Lokayukta of Haryana, Mr. Justice Pritam Pal. An Aadhar Card registration camp was also organised by the Department of Law in association of Legal Aid Clinic of the University.

3.1.6 How does the university facilitate researchers of eminence to visit the campus as adjunct professors? What is the impact of such efforts on the research activities of the university?

Central University of Haryana has invited many experts in past for discussion/invited talk/extension lectures in different departments. The University has carved out rules for

appointment of adjunct professors to felicitate the research and learning. The University has proposals for increasing the faculty strength of departments in form of adjunct professors.

3.1.7 What percentage of the total budget is earmarked for research? Give details of heads of expenditure, financial allocation and actual utilization.

Earmarking funds for research has never been a problem in the Central University of Haryana. Given below is the detailed utilization of budget for research activities:

Sr. No.	Year	Fellowship/ Stipend/ Scholarship	Workshop/ Seminar/ Conference/ Symposium	Books & Journals	Research Infrastructure	Expenditure on Research	Total Expenditure	Percentage of Total Expenditure
1	2009-10		6440	561624	165043	733107	15929334	4.60
2	2010-11	719758	162725	839437	678	1722598	230944378	0.75
3	2011-12	1822451	503156	2387981	316798	5030386	177667069	2.83
4	2012-13	4864570	1067941	6421729	199267	12553507	37600000	33.39
5	2013-14	3188954	1349817	12883393	7877673	25299837	70510000	35.88
6	2014-15	6375057	373592	3315764	2056604	12121017	116873000.00	10.37

Note: Numbers in INR

3.1.8 In its budget, does the university earmark fund for promoting research in its affiliated colleges? If yes, provide details.

This section is not applicable to Central University of Haryana as the University is residential in nature.

3.1.9 Does the university encourage research by awarding Post-Doctoral Fellowships/Research Associate ships? If yes, provide details like number of students registered, funding by the university and other sources.

Yes, the Central University of Haryana is offering opportunities to those who are interested in post-doctoral research. The University provides the required infrastructure to the post-doctoral scholars and presently the University has two post-doctoral students working in department of Hindi and Environmental Science each as per the details given below:

Dr Archana, Department of Hindi is working on the topic ‘Diaspora,’ under Dr. S. Radharkrishnan Post-Doctoral Fellowship in Humanities and Social Sciences (Including languages), UGC.

Dr Virender Kumar, Department of Environmental Science, Dr D S Kothari Post-Doctoral Fellowship, UGC

3.1.10 What percentage of faculty have utilized the sabbatical leave for pursuit of higher research in premier institutions within the country and abroad? How does the university monitor the output of these scholars?

The University, being in its formative stages, do require undivided attention of all its members including faculty in its development. Currently, the university has no faculty on sabbatical leave for higher research.

3.1.11 Provide details of national and international conferences organized by the university highlighting the names of eminent scientists/scholars who participated in these events.

The University is committed for dissemination of knowledge by organizing the national and international seminar/conferences. A two day National Seminar on ‘Application and Role of Statistics in Multidisciplinary Research’ was organized jointly by the Department of Management Studies and the Department of Statistics in October 2013. The eminent scholars such as Prof B.S Bodla from Kurukshetra University, Prof RC Dalal, Kurkshetra University, Dr. K.D Prasad from IGNOU, Dr. Sandeep Goyal, MDI, Gurgoan, Prof. Arvind Panday from NIMS along with many other scholars participated in this seminar. Apart from this many of the departments are in planning of organizing seminars and conferences in near future.

3.2 Resource Mobilization for Research

3.2.1 What are the financial provisions made in the university budget for supporting students’ research projects?

The University encourages the involvement of students in research activities and to achieve this objective various journals have been subscribed to keep the students updated and maintain the research outlook. Apart from this, the university also provides a scholarship of INR 8000 to each student pursuing PhD and INR 5000 to each student pursuing M. Phil from any department of the university.

3.2.2 Has the university taken any special efforts to encourage its faculty to file for patents? If so, how many have been registered and accepted?

The University is in nascent stage and the process of rolling out courses is in progress in phased manner. The faculty in various departments have been working overtime in setting up various departments. So far, 4 patents have been filed by the faculty of the university. Three out of these 4 patents are filed by Prof R C Kuhad and one patent is filed jointly by Prof R C Kuhad and Dr Rishi Gupta from Department of Biotechnology. Details of these patents are given below:

Prof. R. C. Kuhad

1.	Title	:	Method of producing alkalothermostable xylanase from <i>Bacillus pumilus</i> MK001 by solid state fermentation
	File No	:	IN 984 DEL 2008

	Status	:	Under examination
2.	Title	:	A process for production of fermentation sugars from lignocellulosic substrates
	File No	:	IN 1348DEL2011
	Status	:	Under process
3.	Title	:	A Bioconversion method to improve nutritional properties of lignocellulosic residues
	File No	:	IN 4039DEL2012
	Status	:	Under Process
4.	Title	:	A novel process for biobleaching of kraft pulps employing laccase and xylanase enzymes and oxygen as mediator.
	File No	:	IN2944/DEL/2013
	Status	:	Under Process

Dr. Rishi Gupta

Title	:	A process for production of fermentation sugars from lignocellulosic substrates
File No	:	IN 1348DEL2011
Status	:	Under Process

3.2.3. Provide the details of ongoing research projects of faculty:

Sl No.	Name of PI/Co-PI	Department	Funding Agency	Project Name	Grant Sanction (INR)
1	Prof R C Kuhad	Microbiology and Biotechnology	MNRE	Development of pretreatment strategies and bioprocess for improved production of cellulolytic enzymes and ethanol from crop byproduct for demonstration at pilot plant	1,48,47,400
2	Prof R C Kuhad	Microbiology and Biotechnology	DBT	Development of seaweeds biorefinery and pilot demonstration of bioethanol	41,50,000
3	Prof R C Kuhad	Microbiology and Biotechnology	UGC	Production of e-content courseware on post graduate subjects	1,12,00,000
4	Prof R C Kuhad	Microbiology and Biotechnology	DBT	DBT Virtual Enzyme Centre-Development of Enzyme formulation for treatment of lignocellulosic biomass	85,75,000

5	Prof. Nawal Kishore	Physics	UGC	Study of Thermal Electrical and Structural Properties of conducting polymers	1004000
6	Prof Ashish Dahiya	Tourism and Hotel Management	UGC	Evaluating the Existing Culinary Practices & Gastronomy Delights of Haryana State for the Promotion of Community Oriented Highways Tourism to Dr. Ashish Dahiya Principal Investigator	878000/-
7	Dr. Ranjan Aneja	Economics	ICSSR, New Delhi	A Study of Regional Divergence in Growth of Haryana: A District Level Analysis	550000
8	Dr. Rajiv Singh	Political Science	ICSSR, New Delhi	Human Security and Conflict: A Comparative Study of Sonbahadra and Mahendergarh District of Uttar Pradesh and Haryana	800000
9	Dr. Chanchal Sharma	Political Science	ICSSR, New Delhi	Regional Disparities and Role of Intergovernmental Transfers in the era of Economic	1000000

				Reforms and Coalition Politics	
10	Dr. Anurag Sunda	Chemistry	DST-Inspire	Ab Initio Molecular Dynamics simulation of Ionic Liquid doped Polymer Electrolyte Membranes and Platinum Electrode Interface	3500000
11	Dr Richa Sharma	Microbiology	DST	Bacterial γ -glutamyl transpeptidase: Characterization and application as debittering enzyme	23,00,000

In addition to this Dr. Chanchal Kumar Sharma received grant from Leverhulme International Network Grant (U.K.) through the University of Edinburgh, Scotland (U.K.) Grant received so far (as travel grant): GBP 1875.12

3.2.4 Does the university have any projects sponsored by the industry / corporate houses? If yes, give details such as the name of the project, funding agency and grants received.

The University is collaborating with industry at various levels for organizing various academic and research activities. Faculty members are working in this direction for involvement of industry and corporate houses. However, till date the University has no project sponsored by industry/corporate houses.

3.2.5 How many departments of the university have been recognized for their research activities by national / international agencies (UGC-SAP, CAS; Department with Potential for Excellence; DST-FIST; DBT, ICSSR, ICHR, ICPR, etc.) and what is the quantum of assistance received? Mention any two significant outcomes or breakthroughs achieved by this recognition.

Being a new University, the Central University of Haryana is proactively involved in the process of setting up of departments. Some of the departments of university are very new and started in academic session of 2015. Being newly established university, many departments do not fulfill the criteria for applying for recognition from such agencies.

3.2.6 List details of:

a) Research projects completed and grants received during the last four years (funded by National/International agencies other than UGC).

Central University of Haryana has witnessed first regular appointments of faculty during November – January 2013-14. Faculty from various departments has submitted proposals to UGC.

b) Research projects completed and grants received during the last four years (By UGC).

Central University of Haryana has witnessed first regular appointments of faculty during November – January 2013-14. Faculty from various departments has submitted the proposals for major projects to UGC. Though, no grants have been received yet for any of these projects.

List of Proposal Submitted:

Department of Economics

Dr Ranjan Aneja

- Project Submitted to UGC
Title of Project: A Study of Productivity, Efficiency and Competitiveness of Indian Manufacturing Sector: New Evidence using Non-Parametric Approach
Budget: INR 12.68 Lakh

Department of Education

Dr. Sarika Sharma:

- Project Submitted to ICSSR
Title of Project: Crossing Boundaries, Escaping Marginality: An exploration of Socio-Cultural Changes and its impact on Girls Education in Haryana
Budget: INR. 18 Lakh

Dr. Renu Yadav:

- Project Submitted to ICSSR
Title of Project: Impact of Sexual Harassment on Women in Higher Education
Budget: INR. 7.2 Lakh
- Project Submitted to UGC
Title of Project: Impact of Social campaigns on female foeticide: A Case study of Mahendergarh
Budget: INR 17.55 Lakh

Dr. Dinesh:

- Project Submitted to ICSSR
Title of Project: Comprehensive Examination of the Mid- Day Meal Scheme: A Study of Haryana
Budget: INR 18.06 Lakh

Ms. Aarti Yadav:

- Project Submitted to ICSSR
Title of Project: Impact of Social Constructivism on Academic Achievement, High Order Skills and Socio Emotional Growth of Students
Budget: INR 17.00 Lakh

Department of English and Foreign Languages

Dr. Sanjiv Kumar:

- Project Submitted to ICSSR
Title of Project: Text and content in Dalit literature: Social, Cultural and Human Right Perspectives
Budget: INR 16.10 Lakh

Dr. Bir Singh Yadav:

- Project Submitted to UGC
Title of Project: Spirituality and Science for the Bright Future of the Earth: Sparks from Literature and Science
Budget: INR 15.00 Lakh

Department of Hindi and Indian Languages

Dr. Arvind Singh Tejawat

- Project Submitted to ICHR (Indian Council of Historical Research)
Title of the Project: Study and Construction of the Annotated Oral Corpus Related to Socio-Cultural History of South-Western Rajasthan.
Budget: 480000
- Project Submitted to ICSSR (Indian Council of Social Science Research)
Title of the Project: The study of language change and development at the backdrop of cultural, social, political and economic changes in the context of Southern and Western Rajasthani society based on written and oral tradition
Budget: 1247000

Department of Management Studies

Dr. Sunita Tanwar:

- Project submitted to UGC,
Title of the Project: “Status of Women Entrepreneurs: A Case Study of Southern Haryana”,
Budget: Rs. 14.71 Lakh
- Submitted to ICSSR
Title of the Project: “Role of Cooperatives in Women Empowerment: A Study of Haryana State”
Budget: Rs. 19.5 Lakh.

Dr. Ajai Pal Sharma:

- Project Submitted to: ICSSR
Title of the Project: “Impact of Panchyati Raj Institutions in Rural Transformation: A Study of Mahendergarh District of Haryana”,
Budget: Rs. 15 Lac
- Project Submitted to UGC
Title of Project: “Public Healthcare Services: A Study of Rural Haryana at District Level”,
Budget: Rs. 12 Lakh

Dr. Ajay Kumar

- Project Submitted to ICSSR
Title of Project: “Quality Mapping of Management Education in Central Universities of India on Industry Parameters”
Budget: Rs. 15.41 Lakh

Department of Law

Dr. Pardeep Singh

- Project Submitted for UGC
Title of Project: Impact of Legal Services Institutions in realising access to justice for all: A Socio-legal study of Haryana State.
Budget: 9.84 lakh

Dr. Pardeep Singh & Dr. Anju

- Project Submitted for ICSSR MRP by on title
Title of Project: “Impact of National Green Tribunal (NGT) towards realizing Environmental justice: A Socio-Legal Case Study.”
Budget: 16.11 lakh

Dr. Samiksha Godara

- Project Submitted to UGC
Title of Project: “Impact of Vocational Training Programmes on the Rehabilitation & Reformation of the Prisoners in the State of Haryana”
Budget: 14.99 Lakh
- Project Submitted to ICSSR
Title of Project: “Implementation of the Sexual Harassment of Women at Workplace (Prevention, Prohibition & Redressal) Act, 2013 in the Higher Educational Institutions in the State of Haryana”
Budget: 22.50 Lakh

Department of Political Science**Rajiv Kumar Singh**

- Project Submitted to UGC
Title of Project: “Contextualizing Dalits in Political Economy of Eastern Uttar Pradesh”
Budget: INR 12.38 Lakh
- Project Submitted to NCW, New Delhi
Title of Project: “Problems in Basic service Delivery among Women: A study of Mewat district of Haryana”
Budget: INR 10.79 Lakh

Dr Raghvender Pratap Singh

- Project Submitted to UGC
Title of Project: “Violation of Right to Life in the Context of Water: A Case Study of Rivers in Chhattisgarh”
Budget: INR 16.00 Lakh

Dr Chanchal Kumar Sharma

- Project Submitted to UGC

Title of Project: “Economic Liberalization and Party System Change: Evidence from India”

Budget: INR 10.00 Lakh

c) Inter-institutional collaborative projects and grants received:

National/International: Collaboration

Central University of Haryana being a new university is in the process of having inter-institutional collaborative. Currently university have two collaborative projects. Details of these projects are given below.

S. no.	Title of project	Funding Agency	Collaborating Institutes	Associated grant received
1.	Development of seaweeds biorefinery and pilot demonstration of bioethanol production	DBT (Ongoing)	Department of Botany, University of Delhi	74,82,000.00
2.	DBT Virtual Enzyme Centre-Development of enzyme formulations for treatment of ligno-cellulosic biomass	DBT (Ongoing)	School of Life Sciences, JNU, New Delhi; DBT-IOC, Faridabad;	4,50,35,000.00

3.3 Research Facilities:

3.3.1 What efforts have been made by the university to improve its infrastructure requirements to facilitate research? What strategies have been evolved to meet the needs of researchers in emerging disciplines?

Central University of Haryana is constantly putting its efforts to provide the best of infrastructure to scholars and faculty members so that best research practices can be followed. Some of the efforts of the University in this regards is given below:

1. The scholars of various departments are provided with separate spacious rooms with facilities of computers, 24 x 7 internet accessibility having access to journals.
2. The University is part of the Inflibnet network of Govt of India enabling its members to get online access to best of the journals in various fields.
3. The University is also subscribing to various journals in its library. These journals are openly available to students along with open reading space available to students.
4. The University has also recently purchased a 10 user license of SPSS to facilitate the usage of current software packages to encourage research. The computers in e-library of the

university are installed with SPSS package which are open for use by the students of University.

5. The University is providing uninterrupted power supply and 24 X 7 internet connectivity to facilitate research. The campus of the University is fully Wi-Fi enabled.
6. The University has also made provisions of having software for plagiarism check to facilitate the quality and original research work for its scholars. The software (URKUNT) is accessible to all members of university.
7. The University is also encouraging the inspired teachers and post-doctoral fellows to improve the quality of ongoing research. In this context, the University provides necessary infrastructure including residential facility.

3.3.2 Does the university have an Information Resource Centre to cater to the needs of researchers? If yes, provide details of the facility.

The University publishes an Information Booklet having the comprehensive information about the various courses in addition to hosting the various communication/information on the university website. The University is also planning to have an Information Resource Center to cater to the needs of researcher.

3.3.3 Does the university have a University Science Instrumentation Centre (USIC)? If yes, have the facilities been made available to research scholars? What is the funding allotted to USIC?

The University is in the process of setting up of an instrumentation centre in near future. Presently, various equipments are managed at the departmental level. The University expects to procure advance instruments for research, which will be functioning under the instrumentation centre.

3.3.4 Does the university provide residential facilities (with computer and internet facilities) for research scholars, post-doctoral fellows, research associates, summer fellows of various academies and visiting scientists (national/international)?

Yes, the University is providing all the basic facilities to all its members including students, faculty, inspired teachers, Post-doctoral fellows, visiting scientists and adjunct faculty. The facilities include residences, hostels, office spaces, 24X7 internet connectivity, uninterrupted power supply, computers, etc.

3.3.5 Does the university have a specialized research Centre/ workstation on-campus and off-campus to address the special challenges of research programmes?

The University has Research Promotion Cell for to encourage the development and felicitation of quality research work in the university. Faculty members and students are utilizing the research promotion cell for advancing the research environment in university.

3.3.6 Does the university have centers of national and international recognition/repute? Give a brief description of how these facilities are made use of by researchers from other laboratories.

Being a new University, Central University of Haryana is encouraging the researchers to carry out research work through various means. But yet, no such centers exist in university.

3.3.7 What are the major research facilities developed and are available to the faculty and students on the campus?

The University is constantly attempting to provide the best of facilities to scholars and faculty members. Some of such efforts are listed below:

1. The scholars of various departments are provided with separate spacious rooms with computing facilities, 24 x 7 internet accessibility having access to journals.
2. The University is part of the Inflibnet network of Govt of India enabling its members to get online access to best of the journals in various fields.
3. The University is also subscribing to various journals in its library. These journals are openly available to students along with open reading space available to students.
4. The University has also recently purchased a 10 user license of SPSS to felicitate the usage of current software packages to encourage research. The computers in e-library of the university are installed with SPSS package which are open to be used by any student of University.
5. The University is providing uninterrupted power supply and 24 X 7 internet connectivity to its scholars. The campus of the university is fully Wi-Fi enabled.
6. The University has also made provision of having software for plagiarism check to felicitate the quality and original research work. The software is accessible to all members of university.
7. The University is also encouraging the inspired teachers/Post-doctoral fellows to join the university so that research work can be improved. University is currently providing all the facilities including residential facility to inspired teacher/post-doctoral fellows in campus.

3.4 Research Publications and Awards

3.4.1 Does the university publish any research journal(s)? If yes, indicate the composition of the editorial board, editorial policies and state whether it/they is/are listed in any international database.

Yes, the University is currently publishing inter-disciplinary journal - Journal of Central University of Haryana – An International Multidisciplinary Refereed Research Journal. It is a biannual journal with ISSN number 2348-3377.

The Editorial Composition of Journal:

1. Dr. Bir Singh Yadav, Editor in Chief
2. Dr Sarika Sharma, Member
3. Dr Sanjiv Kumar, Member
4. Dr Pardeep Kumar, Member
5. Dr Manoj K Vidhyalankar, Member
6. Ms Rinu, Member

Currently, Journal of Central University of Haryana is not listed in any international database.

The Editorial Policy of the Journal of the University is:

1. Articles are considered provided they have not been published previously or concurrently submitted for publication elsewhere.
2. Figures or tables that have been published elsewhere must be identified, and permission of the copyright holder for both the online and print editions.
3. Authorship must be limited to those who have contributed substantially to the work. The corresponding author must have obtained permission from all authors for the submission of each version of the paper and for any change in authorship.
4. All authors, members, reviewers, and editors must disclose any association that poses a conflict of interest in connection with the manuscript. Authors must acknowledge all funding sources supporting the work. Recent collaborators, defined as people who have co-authored a paper or were a principal investigator on a grant with the author or member within the past 48 months, must be excluded as editors and reviewers. Other examples of possible conflicts include past or present association as thesis advisor or thesis student, or a family relationship, such as a spouse, domestic partner, or parent–child relationship. Please see the Conflict of Interest Policy for details.
5. All work should be free from fabrication, falsification, and plagiarism.
6. Manuscripts requested for publication will be reviewed critically. After receipt of a manuscript by the Editor-in-Chief, it is sent to the editorial board who will send the manuscript to an appropriate number of reviewers (usually two, depending on the type of manuscript). Editors may ask for suggested reviewer names from an Editorial Board Member. Comments from reviewers are examined by the Editor-in-Chief and/or Editorial Board, who make the final decisions.
7. All reviewers remain unknown to the authors. Every manuscript is treated by the Editors and Reviewers as privileged information, and they are instructed to exclude themselves from review of any manuscript that might involve a conflict of interest or the appearance thereof.
8. The manuscript should precede a detailed statement clearly describing the sponsorships, financial disclosures of the author/s and other relevant (direct or indirect) relationships with the Company and the product being reported. A simple statement of ‘No Conflict of Interest’ should not suffice. The role of the sponsor (funding, protocol development and finalization, monitoring, data analysis, manuscript preparation and review) must be defined clearly.

3.4.2 Give details of publications by the faculty:

- **Number of papers published in peer reviewed journals (national / international) – 1044**
- **Number of Monographs published – 03**

- **Number of Chapters in Books-** 149
- **Number of Books with ISBN with details of publishers:** 72
- **Number of papers listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, EBSCO host, etc.):** 292
- **Citation Index- range/ average:** 6977 (Total Citations)
- **SNIP:** ---
- **SJR:** --
- **Impact Factor- range/ average:** 0.02 -14.5
- **H- index/ i10 index:** 125

(**Note:** Department and faculty wise details of Journal Publications and Books has been given in Annexure I and II respectively)

3.4.3 Give details of:

- **Faculty serving on the editorial boards of national and international journals:**

Central university of Haryana always encourages its faculty members to be involved in research work in various capacities. The list of faculty members as part of various editorial boards is given below:

Faculty Members serving as Member, Editorial Board			
Sr. No.	Name (Dr./Ms. /Mr.)	Department	Member of Editorial Boards (Name of the Journal)
1	Prof R C Kuhad	Biotechnology and Microbiology	Annals of Microbiology
			Scientific Reports
			Advances in Biology
			Journal of Fungal Biology and Biotechnology
			Journal of Sustainable Bioenergy Systems
			Journal of Microbiology
			Special Issue of 3 Biotech
			Special Issue of Biodegradation
2	Dr. Sanjay Kumar	Biochemistry	Science Publishing Groups journal
3	Dr. Rishi Gupta	Biotechnology	Scientific Reports (Nature Publishing Group)
			Bioresource Technology (Elsevier)
			Annals of Microbiology(Springer)

			Journal of Biomedicine and Biotechnology (Biomed Res. Int.)
4	Dr. Bir Singh	English & Foreign Lang.	<i>GNOSIS</i> , An International Journal of Language and Literature. <i>Labyrinth</i> , An International Refereed Journal of Postmodern Studies.
5	Dr. Ranjan Aneja	Economics	International Journal of Liberal Arts and Social Science Advances in Economics and Business, Horizen Research Publishing Corporation
6	Dr. Amit Kumar	Hindi & Indian Lang.	Retpath Bhasha Aur Abhivyakti
7	Dr. Siddharth Shanker Rai	Hindi & Indian Lang.	Lok-Chetna Varta
8	Dr. Sharanjeet Dhawan	Mathematics	International Journal of Advance Research in Engineering, Science and Technology
9	Dr. Deepika Mehta	Microbiology	Indian Journal of Microbiology and Related Research African Journal of Microbiology Association of Microbiologists of India American Society of Microbiology
10	Dr. Chanchal Kumar Sharma	Political Science	South Asian Journal of Socio-Political Studies Asian Social Science Journal of Political Science
11	Dr. Aditya Saxena	Physics	Journal of Nano Science, Nano-Engineering & Application. OmniScience: A Multi-disciplinary Journal Journal of NanoScience, Nano Engineering & Applications
12	Dr. Ashish Dahiya	Tourism & Hotel Management	Journal of Hospitality Application & Research International Journal of Hospitality & Tourism Systems Journal of Tourism – An International Journal Journal of Tourism & Hospitality Journal of Tourism, Hospitality & Culinary Arts Journal of Tourism Law
13	Dr Sunita Tanwar	Management	ISTD Journal
14	Prof A J Varma	Chemistry	Carbohydrate Polymers

			Trends in Carbohydrate Research
15	Dr Sarika	Education	International multidisciplinary Refereed Research Journal of Central University of Haryana
16	Dr Renu Yadav	Education	Journal of Education & Social Policy European Journal of Business Management
17	Dr Sanjiv Kumar	English	Journal of Central University of Haryana
18	Dr Manoj	English	Literary Discourses
19	Dr Naresh Kumar Verma	Geography	World Academy of Science, Engineering and Technology
20	Dr Anand Sharma	Management	Business Studies for Secondary classes, NIOS
21	Prof Naval Kishore	Physics	Invertis Journal of Renewable Energy
22	Dr Avinash C Yadav	Physics	Journal of Nuclear Physics, Material Science, Radiation and Application

- **Faculty serving as members of steering committees of international conferences recognized by reputed organizations / societies.**

None of the faculty members are currently serving as the member of the steering committees of international conference recognized by reputed organization/ societies.

3.4.4 Provide details of:

- **Research awards received by the faculty and students:**

Following faculty members have received various awards for research and academic activities:

Faculty

Prof R C Kuhad

- Fellow of Biotech Research Society of India (FBRS)
- Fellow of National Academy of Agricultural Sciences (FNAAS)
- Association of Microbiologists of India (AMI) Dr. G. B. Manjreker Award (2014)
- Association of Microbiologists of India (AMI) Platinum Jubilee Life Time Achievement Award (2013)
- Association of Microbiologists of India (AMI) Titan Biotech Award (2011).
- Short Term Biotechnology Overseas Research Associateship Award Department of Biotechnology, Ministry of Science and Technology, (Govt. of India). (2002-2003)
- AMI- Alembic Award by Association of Microbiologists of India. (1999)
- Biotechnology Long Term Overseas Research Associateship Award by Department of Biotechnology, Ministry of Science and Technology, (Govt. of India). (1995-1996)
- UNIDO/ICGEB Fellowship for Short Term Research Training at the University of Santiago, Santiago, Chile. (1994)
- Commonwealth Scholarship for Post Doctoral Research by Government of United Kingdom, at the University of Manchester, United Kingdom (1985-1986)

- Felicitation by Association of Microbiologists of India (AMI) during 38th Annual Conference of AMI at New Delhi (December 13, 1997) and again in 42nd Annual Conference of AMI at Gulbarga (November 9th-11th, 2001) for services to AMI as Treasurer (1993-2001).
- Certificate of Appreciation and Trophy awarded by plant science colloquium, H.A.U. Hisar, for the research project being adjudged as one of the best projects submitted in the Regional contest “Innovative ideas in Plant Research” (1987).
- Facilitation award by Madhya Pradesh Shikshak Congress (1988).
- Senior Research Fellowship from C.S.I.R., New Delhi (1983-1985).
- Junior Research Fellowship from C.S.I.R., New Delhi (1981-1983).
- Fourth Rank in Merit in M.Phil in Life Sciences Faculty (1981).
- First Rank in Merit in M.Sc. in Life Science Faculty (1980).
- Merit certificate for being standing- IInd in aggregated in B.Sc. IInd year (1976)
- Merit certificate for being standing First in Botany in B.Sc. IIIrd year in College (1977).
- National Scholarship Award (Govt. of India) during Graduation (1972).
- Merit Scholarship Award Board of School Education, Haryana, Chandigarh (1972).
- The American Society for Microbiology Best Poster Prize for the poster “Influence of Ganoderma sp. RCKK-02in goats” during the International Symposium on Recent Advances in Cross-disciplinary Microbiology: Avenues and Challenges at BIT, Mesra, Ranchi, India. (2010)
- Awarded with Second prize for Best Research Poster in the field of “Microbes in Food and Fermentation” during the 20th Annual Conference of AMI at National Chemical Laboratory, Pune, India (2009)

Prof. Ashish Dahiya

1. Recipient of ‘Attithya Ratan Puraskar’ Gem of Hospitality Award 2013, HNB Garhwal Central University Uttarakhand
2. Recipient of ‘Teacher of the Year Award – Best Teacher Male’ Pearson Teaching Awards 2013, New Delhi.
3. Recipient of ‘Indian Hospitality Congress Award’ 2014, Mumbai.
4. Certificate of Appreciation by Vice Chancellor Uttarakhand Open University – Uttarakhand for Contribution to Launching of Hospitality & tourism Programme at Uttarakhand Open university as Programme Advisor & Publishing of study Material. (2008)
5. Certificate of Appreciation by Vice Chancellor Birla Institute of Technology, Mesra Ranchi for Contribution of Launching Journal of Hospitality Application & Research (JOHAR) India’s first University Journal of Hospitality. (2006)
6. Biography listed in Asia Pacific Who’s Who (2006)

Dr Rishi Gupta

- DST Fast Track Young Investigator Award (2013) by Science and Engineering Research Board, Department of Science and Technology, Government of India
- CSIR Senior Research Fellowship Award (2011) by Human Resource Development Group, Council of Scientific and Industrial Research, India
- International Travel Grant for paper presentation in 6th Annual symposium on environment, Athens, Greece (2011) by Department of Science and Technology, Government of India, and Indian National Science Academy, New Delhi, India

- AMI Young Scientist Award in Environmental Microbiology (2010) by Association of Microbiologists of India, India

Dr Meenu Goyal

1. Canadian Commonwealth Scholarship (CCSP) award for research project at University of Saskatchewan, Canada (2012)

Ms. Shelley Duggal

1. Recipient of 'The Aspiring Researchers of Hospitality, Travel & Tourism' awarded Indian Hospitality Congress Awards 2014, Mumbai
2. Gold Medal and certificate of merit for certificate course in French at MD University

Dr. Amit Kumar

1. बाबूबालमुकुंदगुप्तसाहित्यएवंपत्रकारितासंरक्षणपरिषद, रेवाड़ीद्वारावर्ष 2014 के 'बाबूबालमुकुंदपुर स्कार' सेसम्मानित

Dr. Sanjiv Kumar, Associate Professor, Department of English and Foreign Languages

1. Nominated as 'Inspired Teacher' by the University to attend In-Residence Inspired Teachers Programme at Rashtrapati Bhawan from June 6-12, 2015.

Dr. Richa Sharma

1. Awarded the "Young Scientist Award" for Environmental Microbiology by Association of Microbiologists of India in 2012.

Prof A J Varma

1. Fellow of Biotech Research Society of India for outstanding contributions to Industrial Biotechnology (Thiruvananthapuram, Nov., 2011)
2. CSIR-NCL Scientist-of-the-year Award 2011 for outstanding research (Jan., 2012)
3. Life-time Achievement Award in Cellulose Chemistry and Technology by Association of Carbohydrate Chemists & Technologists of India, (Dehra Dun, Jan., 2014)
4. Professor B.D. Tilak Visiting Fellowship by ICT, Mumbai (Mumbai, 2013-14)
5. National VASVIK Industrial Technology Award winner for Chemical Technology transferred to Indian Industry (Gujarat, Oct.,2011)
6. NCL Scientist-of-the-Year Award given by NCL Research Foundation for outstanding work on Biodegradable Polymers and Biomass Fractionation Technology (03 January, 2012) The Biomass Fractionation Technology has also been selected as being amongst the Top 10 High Impact Technologies of CSIR-NCL since inception of NCL, during the 70th. Anniversary of CSIR in 2012.
7. Certificate of Appreciation from American Chemical Society Publications for valuable contribution and dedicated service in peer review for ACS Journals (December 2011)
8. Director's Commendation Award at NCL Foundation Day for successfully commissioning a demonstration plant on waste biomass to value-added polymers (January 2008)
9. MRF Award for Best scientific & technological work in elastomers in India (1988)
10. Award of Research Foundation of New York for Ph.D. (1974-1979)
11. Award of Research Foundation of New York for Post-doctoral Research (1980-1981)
12. National Science Talent Search Scholar of India (1971-74)
13. Basic and Applied work done in Dr. Varma's lab has been highlighted in several National and International newspapers, magazines, and technical journals

14. Nine scientific publications selected as Top 10 papers of prestigious research journals like “JCS ChemComm”, “Green Chemistry”, and “Carbohydrate Polymers”, (2002-2009)
15. Article in “Nature” high-lighted work done by Dr.Varma (2003) on biodegradable polymers synthesis strategy

7. Dr Mohini Singh

1. Awarded INSPIRE Fellowship by Department of Science and Technology (DST), New Delhi, India in Ph.D programme.
2. Awarded Second Prize in Paper Presentation on “Horizontal sub-surface flow constructed wetlands for wastewater treatment and reuse” National Seminar on “Strategic Resource Management for Sustainable Food and Water Security” held at G.B.P.U.A&T, Pantnagar, India, 2011.
3. Awarded the Junior Research Fellowship under RC-UK/EPSRC international research project “Demonstration of Municipal wastewater management through fuelwood plantation” in Department of Environmental Science, G.B.P.U.A&T, Pantnagar sponsored by IIT, Delhi from Jan, 2010 - Jan, 2011.
4. Awarded the YOUNG SCIENTIST AWARD for the research work by Uttarakhand Council of State Science and Technology (UCOST) in 4th Uttarakhand State Science and Technology Congress (USSTC)-2009 held at G.B.P.U.A&T., Pantnagar, India.
5. Awarded First Rank in M.Sc. Environment Sciences (2006-2008) at G.B Pant University of Agriculture & Technology, Pantnagar, Uttarakhand, India.
6. Awarded Graduate Teaching Assistantship from Jan, 2007 to April, 2008 during M.Sc. programme at G.B.P.U.A &T., Pantnagar, India.
7. Visited Aston University, Birmingham, UK in connection with RC-UK DST-India sponsored project.

8. Dr. Anoop Yadav

1. Qualified in UGC-NET JRF (Environmental Science), December 2005.
2. Awarded CSIR Extended JRF from CSIR, New Delhi April 2013.
3. Qualified State Level Eligibility Test (SLET-Haryana) for Lectureship in Environmental Sciences, 2004.
4. Won Best Paper Award in National Seminar on “Strategies for Mitigation of Environmental Degradation and Climate Change” held on 2nd – 3rd March, 2012 in Guru Jambheshwar University of Science & Technology, Hisar.

9. Dr. Mona Sharma

1. Won Best Paper Award in National Seminar on “Strategies for Mitigation of Environmental Degradation and Climate Change” held on 2nd – 3rd March, 2012 in Guru Jambheshwar University of Science & Technology, Hisar.
2. Topper (Gold Medalist) in P.G. Diploma in Industrial Safety Management from Guru Jambheshwar University of Science & Technology, Hisar (India)
3. Second Topper in M.Sc. in Environmental Sciences from Guru Jambheshwar University of Science & Technology, Hisar (India)
4. UGC-National Eligibility Test (NET) for Lectureship qualified in June, 2007 in Environmental Sciences.
5. Recipient of Meritorious Fellowship during M.Sc. Programme from 2005-2006.

10. Dr. Naresh Kumar Verma

1. Publication Grant for Ph.D. Publication from ICSSR, 2014-15
2. Travel Grant for attending International Seminar by ICSSR in 2014

11. Dr Ajai Pal Sharma

1. Dr. Ajai Pal Sharma won best research paper award one each in National Conference organized by BVIMR, New Delhi and BLSIMT, Bahadurgarh

12. Prof Naval Kishore

1. Nominated for Haryana Vigyan Ratna Award by Guru Jambheshwar University of Science and Technology, Hisar.

13. Dr Aditya Saxena

1. Dr. Aditya Saxena awarded Teaching Excellence Award for Innovation by Delhi University

14. Dr Abhiranjan

1. Best paper award at a National Seminar held at JVM College, Dadri, Haryana

15. Dr Ishwar Prasad

1. Best Ph.D. thesis award at the convocation held in the University of Hyderabad

16. Dr Chanchal Kumar Sharma

1. Appointed as FELLOW (Hon.) CMF, Institute of Social Sciences, New Delhi w.e.f. March 2011.
2. Invited to join as partner in a collaborative project on Indian Federalism by the University of Edinburgh, Scotland.

17. Dr Rajeev Kumar Singh

1. Awarded Post Doctoral Fellowship by ICSSR

18. Dr Jitendra Kumar

1. Senior Research Fellowship (SRF) in 'Psychology' under the Indian Council of Medical Research (ICMR) Senior Research Fellowship Scheme, qualified for the award under All Indian competitive exam, July 2009 and availing w.e.f. June 2010 to May 2014.
2. Junior Research Fellowship (JRF) Under the Scheme of The M. Phil/PhD. Fellowship of the Centre for Studies in Sociology of Education (CSSE), Tata Institute of Social Sciences, availed from April 2009 to May 2010.
3. DAAD Fellowship for four months to Freie University Berlin, Germany for Research and Study under the auspices of the 'Passage to India' programme, supported by the DAAD (German Academic Exchange Service), availed from 1st October 2010 to 31 January 2011

19. Dr Sumedha Dutta

1. Awarded the ICSSR Doctoral Fellowship, from (2012 – 2014), by the Indian Council of Social Science Research (ICSSR), Ministry of Human Resource Development, and Government of India.

20. Mr Sunil Kumar (Student – Environment Science)

1. Awarded with ‘Aggar Gaurav Samman’ at National level in the field of Science and Technology by National Aggarwal Conference held at Agaroha Hissar, Haryana on Aug. 23, 2015.
2. Awarded with Special Youth Award for Best Co-ordination by Indian Red-Cross Society Haryana branch Chandigarh in National level YRC camp held at Panchkula from Sept, 16-22, 2015.
3. Awarded with 1st position in Ex-tempo Speech Competition by Indian Red-Cross Society Haryana (Branch-Chandigarh) in National level YRC camp held at Panchkula from Sept, 16-22, 2015.
4. Awarded with 1st position in Quiz Competition by Indian Red-Cross Society Haryana branch Chandigarh in National level YRC camp held at Panchkula from Sept, 16-22, 2015.

21. Mr Irfan Khan (Scholar – Department of Management Studies)

1. Mr Irfan Khan, Ph D Scholar received Best Research Paper Presented Award in International Conference “Innovation based sustainable practices of organization” in SGPC’s Guru Nanak Institute of Management Studies, Mumbai, and 20 March 2015 on the topic of **A Study of Emerging Islamic Stock Market Volatility: Using Garch Family Models**

22. Students of Department of Management Studies

1. Team of four MBA students won first prize in National Case Study Competition conducted by GIBS (GGS IP University), New Delhi
2. Mr Dinesh and Gaurav, MBA Students won third prize in National Conference conducted by BLSITM, Bahadurgarh

23. Students of Department of Journalism and Mass Communication

1. Yasha Jain, Sakshi and Himanshu participated in Theatre organized at GD Goenka University and won first prize.

24. Students of Department of Mathematics

1. Pooja Yadav, M.Sc 3rd sem, has won the third prize in the state level yoga Competition organized by Indian Yoga Federation, 2015.
2. Shiv Kumar, M.Sc 3rd sem, got the first prize in quiz contest in Youth Red Cross Camp (National level) sep 16 -sep 22, 2015.
3. Beena Kumari, M.Sc 3rd sem has won the First position in skit in Youth Red Cross Camp (state level) 30 August-04 Sep., 2015.

25. Students of Department of Physics

1. Sumit Yadav:
 - NSS Best Volunteer Award in 7-day Camp.
 - 2nd Position in Group Dance & Group Song in YRC Haridwar
 - 3rd in Skit in YRC Haridwar
2. Jyoti Yadav
 - NSS Most Creative Award in 7-day Camp.
 - 2nd Position in Group Dance & Group Song in YRC Haridwar
 - 3rd in Skit in YRC Haridwar
3. Nirmala Maharana

- 2nd Position in Group Song in YRC Haridwar
- 3rd in Skit in YRC Haridwar

26. Students of Department of Computer Science and Information Technologies

1. Mr. Pawan, Mr. Deepak, Mr. Arun (MCA 5th sem) and Mr. Aaquib Bhatt (MCA 3rd sem) won first prize in a National Level Theatre event and enacted “Jan Se Mann Ki Jai Ho” play organized at G.D. Goenka University

3.4.5 National and international recognition received by the faculty from reputed professional bodies and agencies.

Faculty members of the University have been working hard to produce quality academic and research work. As university is still in formative stages, university do not have huge number of senior faculty members. List of it is given below:

Prof. R. C. Kuhad

1. Chairman, Expert Committee, UGC for on spot assessment of programmes, faculty, infrastructural facilities, financial viability, etc in respect of Babu Banarsi Das University, BBD City, Lucknow, UP
2. Chairman, Expert Committee, UGC for on spot assessment of programmes, faculty, infrastructural facilities, financial viability, etc in respect of The Rai University, Saroda, Dholka Taluka ahmedabad, Gujarat
3. Chairman, Expert Committee, UGC for on spot assessment of programmes, faculty, infrastructural facilities, financial viability, etc in respect of Mother Teresa Women’s University, Kodaikanal
4. Chairman, Expert Committee, UGC for on spot assessment of programmes, faculty, infrastructural facilities, financial viability, etc in respect of O P Jindal Global University, Sonapat
5. Chairman, Governing Body, Acharya Narendra Dev College, University of Delhi, Delhi (2013 onwards)
6. Chairman, Governing Body, Saheed Bhagat Singh College, University of Delhi, Delhi (2013 onwards)
7. Chairman, Mid-Term Monitoring Committee of UGC’s UPE scheme for on the spot assessment of Banaras Hindu University, Varanasi, UP
8. Chairman, Research Degree Committee, Department of Microbiology, University of Delhi south Campus, New Delhi (2005-2008).
9. Chairman, Subcommittee of the standing committee for the task of production of courseware e-content for post-graduate subjects by University Grant Commission, New Delhi (2013-2014)
10. Chairman Course committee on Faculty of Interdisciplinary and Applied Sciences, University of Delhi South Campus, New Delhi (2006-2008).
11. Chairman Expert Committee for coordinating the development of model curricula for undergraduate course under the Choice Based Credit System by UGC.
12. Chairman U.G. and PG Board of Studies in Biotechnology, Kurukshetra University, Kurukshetra (2003-2005).
13. Chairman, Central Pool Grievance Committee, University of Delhi, Delhi (2011-2015)
14. Co-Chairman, Expert Committee, of the Twinning Program for N-E Region (Environmental Biotechnology and Allied areas) by DBT, Ministry of Science and Technology (Government of India) (2013-2015)

15. Convenor Adhoc Board of Studies in Biotechnology and Applied Sciences, Kurukshetra University, Kurukshetra (2003-2005)
16. Convenor Adhoc Board of Studies in Chemical/Mechanical/civil engineering, Kurukshetra University, Kurukshetra (2003-2005)
17. Coordinator Visiting Team for smooth conduct of Examinations, University of Delhi South Campus (1998-1999, 1999-2000 and 2000-2001).
18. Expert Member, Steering Committee for the Center of Excellence Program of the Ministry of Environment and Forest, Govt. of India at CEMDE, University of Delhi, Delhi (2005-onwards).
19. Expert, Microbiology/Zoology/Entomology for a meeting for selection of the candidates under PDFs for the year 2015-17, Research Award scheme for 2016-2018 and Emeritus fellowship scheme for 205-2017
20. Member Academic Council, Deenbandhu Chhotu Ram University of S & T, Murthal, Haryana (2008-2010).
21. Member Academic Council, Jawaharlal Nehru University, Delhi (2006-2008).
22. Member Academic Council, University of Delhi, Delhi (2005-2008)
23. Member Advisory Committee for devising the roadmap for launching the courses approved by UGC under B. Voc/Community College and KAUSHAL Kendra scheme
24. Member Advisory Committee, Centre with Potential for Excellence, University of Mysore, Mysore (2013)
25. Member Board of studies in Biotechnology, Chaudhary Devi Lal University, Sirsa (2004-2006)
26. Member Committee of Courses in Microbiology, U. D. S. C. New Delhi (1988-continue).
27. Member Committee, UGC for taking a view as to whether the Monograph can be considered as a full-fledged publication for the purpose of promotion of a Reader to Professor under career Advancement scheme.
28. Member Court, Guru Jambheshwar University of Science and Technology, Hisar, Haryana (1999-2002).
29. Member Departmental Research Committee, Department of Zoology, University of Delhi (2013-2014)
30. Member Establishment Committee, Deenbandhu Chhotu Ram University of Science and Technology, Murthal, Haryana (2012-2013)
31. Member Establishment Committee, Guru Jambheshwar University of Science and Technology, Hisar, Haryana (2000-2003; 2007-2010).
32. Member Examination disciplinary Committee, University of Delhi South Campus (1999-2001).
33. Member Executive Committee of Goyal award, Kurukshetra University (2004-2005).
34. Member Executive Council, Deenbandhu Chhotu Ram University of S & T, Murthal, Haryana (2011-2013).
35. Member Executive Council, Guru Jambheshwar University of S & T, Hisar, Haryana (1999-2010).
36. Member Governing Body, Devanga Arts College, Virudhnagar, Tamilnadu (2012-2018)
37. Member Governing Body, Acharya Narendra Dev College, University of Delhi, Delhi (2013-2014).
38. Member Governing Body, Dayal Singh College, University of Delhi, Delhi (2010-2011).
39. Member Governing Body, P.G.D.A.V college, University of Delhi, Delhi (2006-2007; 2010-2012; 2014-2016)
40. Member Governing Body, Ram Lal Anand College, University of Delhi, Delhi (2012-2014).

41. Member Governing Body, Rani Amrit Kaur College of Nursing, University of Delhi, Delhi (2010-2011).
42. Member Governing Body, Saheed Bhagat Singh College, University of Delhi, Delhi (2006-2010; 2014-2016).
43. Member Governing Body, Sri Aurobindo college, University of Delhi, Delhi (2005-2006)
44. Member of the jury for Merck-India Innovation Award for innovative research by Indian Scientists (2012 onwards)
45. Member Planning and Monitoring Board, National Institute of Food Technology Entrepreneurship and Management (NIFTEM), Sonapat, Haryana (2013-2014)
46. Member Reserch Development and Patent Council Advisory Committee, MD University, Rohtak, Haryana (2014-2016).
47. Member Secretary Institutional Biosafety Committee, University of Delhi South Campus (2006-2008)
48. Member Standing Committee on Course Committee University of Delhi (2006-2008)
49. Member- Task Force of Animal Biotechnology, DBT, Government of India, New Delhi (2010-2013)
50. Member, Academic Audit Committee, Guru Jambheswar University of S & T (2013 onwards)
51. Member, Academic Audit Committee, Kurukshetra University, Kurukshetra (2013 onwards)
52. Member, Academic Council of Cochin University of Science and Technology, Kochi
53. Member, Advisory Committee, Consortium for Education Communication (CEC), New Delhi
54. Member, APEX Committee for North-Eastern Region (Environmental Biotechnology and Allied areas) constituted by DBT, Ministry of Science and Technology, Government of India (2013-2015)
55. Member, Bio-safety Committee of Daiichi Sankyo, Gurgaon (2010-2013)
56. Member, Biosafety Committee, Daiichi Sankyo, Gurgaon (2010-2013)
57. Member, Bio-safety Committee, J.P. Institutes of Science and Technology, Noida, U.P. (2010-2012)
58. Member, Board of Research Studies, Faculty of Inter-disciplinary and Applied Sciences, University of Delhi (2001-2003; 2005-2008; 2013-2015)
59. Member, Board of Residence, Health and Discipline, University of Delhi, Delhi (2013-14)
60. Member, Board of studies in Biotechnology, Himachal Pradesh University, Shimla (2008-2010)
61. Member, Board of Studies in Microbiology, Maharaja Ganga Singh University, Bikaner (2014-2016)
62. Member, Departmental Research Committee, Department of Microbiology, University of Delhi South Campus (1988- continue).
63. Member, Departmental Research Committee, Faculty of Medical Sciences, University of Delhi, Delhi (2013-2015)
64. Member, Expert Committee to formulate guidelines for Non-Net Fellowships
65. Member, Governing Council, Inter-University Accelerator Centre, New Delhi (2013-2015)
66. Member, Implementation and monitoring Committee for MOOC's content, under the Chairmanship of Prof. Bhaskar Ramamurthi, Director, IIT Madras
67. Member, Inspection Committee for the feasibility of imparting UG/PG/Super specialty courses in Departments/Institutes/Hospitals of Delhi under Faculty of Medical Sciences, University of Delhi (2013-2014).
68. Member, P.G. Board of Studies in Microbiology and Biotechnology, M.D.U, Rohtak (2009-2010)
69. Member, P.G. Board of Studies in Microbiology, M.D. University, Rohtak, Haryana (2013-2015)

70. Member, Research Advisory committee (RAC), National Bureau of Agriculturally Important Microorganisms (ICAR), New Delhi (2013-2015)
71. Member, Research Degree Committee, Department of Microbiology, CCS University, Meerut (2009-2011)
72. Member-UGC Standing Committee on developing courseware E-content for P.G. subjects (2012-2014).
73. Nominee of the UGC on the Search Committee for preparation of a panel of names for the appointment of Vice-Chancellor of Potti Sriramulu University, Hyderabad
74. Member, Academic Council of Cochin University of Science and Technology, Kochi
75. Member Planning and Monitoring Board, National Institute of Food Technology Entrepreneurship and Management (NIFTEM), Sonapat, Haryana (2013-2014)
76. Member, Governing Council, Inter-University Accelerator Centre, New Delhi (2013-2015)
77. Chairman, Central Pool Grievance Committee, University of Delhi, Delhi (2011-2015)
78. Member Executive Council, Deenbandhu Chhotu Ram University of S & T, Murthal, Haryana (2011-2013).
79. Member Executive Council, Guru Jambheshwar University of S & T, Hisar, Haryana (1999-2010).
80. Member Academic Council, Deenbandhu Chhotu Ram University of S & T, Murthal, Haryana (2008-2010).
81. Member Academic Council, Jawaharlal Nehru University, Delhi (2006-2008).
82. Member Academic Council, University of Delhi, Delhi (2005-2008)
83. Member Executive Committee of Goyal award, Kurukshetra University (2004-2005).
84. Member Court, Guru Jambheshwar University of Science and Technology, Hisar, Haryana (1999-2002).
85. Member Establishment Committee, Guru Jambheshwar University of Science and Technology, Hisar, Haryana (2000-2003; 2007-2010).
86. Member Establishment Committee, Deenbandhu Chhotu Ram University of Science and Technology, Murthal, Haryana (2012-2013)
87. Member Advisory Committee, Centre with Potential for Excellence, University of Mysore, Mysore (2013)
88. Member, Academic Audit Committee, Guru Jambheshwar University of S & T (2013 onwards)
89. Member, Academic Audit Committee, Kurukshetra University, Kurukshetra (2013 onwards)
90. Chairman U.G. and PG Board of Studies in Biotechnology, Kurukshetra University, Kurukshetra (2003-2005).
91. Convenor Adhoc Board of Studies in Biotechnology and Applied Sciences, Kurukshetra University, Kurukshetra (2003-2005)
92. Convenor Adhoc Board of Studies in Chemical/Mechanical/civil engineering, Kurukshetra University, Kurukshetra (2003-2005)
93. Member, Board of Research Studies, Faculty of Inter-disciplinary and Applied Sciences, University of Delhi (2001-2003; 2005-2008; 2013-2015)
94. Member, P.G. Board of Studies in Microbiology, M.D. University, Rohtak, Haryana (2013-2015)
95. Member, Board of Studies in Microbiology, Maharaja Ganga Singh University, Bikaner (2014-2016)
96. Member Board of studies in Biotechnology, Chaudhary Devi Lal University, Sirsa (2004-2006)
97. Member, Board of studies in Biotechnology, Himachal Pradesh University, Shimla (2008-2010)

98. Chairman Course committee on Faculty of Interdisciplinary and Applied Sciences, University of Delhi South Campus, New Delhi (2006-2008).
99. Member Committee of Courses in Microbiology, U. D. S. C. New Delhi (1988-continue).
100. Member, P.G. Board of Studies in Microbiology and Biotechnology, M.D.U, Rohtak (2009-2010)
101. Chairman, Research Degree Committee, Department of Microbiology, University of Delhi south Campus, New Delhi (2005-2008).
102. Member, Departmental Research Committee, Faculty of Medical Sciences, University of Delhi, Delhi (2013-2015)
103. Member, Departmental Research Committee, Department of Microbiology, University of Delhi South Campus (1988- continue).
104. Member Departmental Research Committee, Department of Zoology, University of Delhi (2013-2014)
105. Member Reserch Development and Patent Council Advisory Committee, MD University, Rohtak, Haryana (2014-2016).
106. Member, Research Degree Committee, Department of Microbiology, CCS University, Meerut (2009-2011)
107. Chairman, Governing Body, Acharya Narendra Dev College, University of Delhi, Delhi (2013 onwards)
108. Chairman, Governing Body, Saheed Bhagat Singh College, University of Delhi, Delhi (2013 onwards)
109. Member Governing Body, Devanga Arts College, Virudhnagar, Tamilnadu (2012-2018)
110. Member Governing Body, Acharya Narendra Dev College, University of Delhi, Delhi (2013-2014).
111. Member Governing Body, Dayal Singh College, University of Delhi, Delhi (2010-2011).
112. Member Governing Body, P.G.D.A.V college, University of Delhi, Delhi (2006-2007; 2010-2012; 2014-2016)
113. Member Governing Body, Ram Lal Anand College, University of Delhi, Delhi (2012-2014).
114. Member Governing Body, Rani Amrit Kaur College of Nursing, University of Delhi, Delhi (2010-2011).
115. Member Governing Body, Saheed Bhagat Singh College, University of Delhi, Delhi (2006-2010; 2014-2016).
116. Member Governing Body, Sri Aurobindo college, University of Delhi, Delhi (2005-2006)
117. Coordinator Visiting Team for smooth conduct of Examinations, University of Delhi South Campus (1998-1999, 1999-2000 and 2000-2001).
118. Member Standing Committee on Course Committee University of Delhi (2006-2008)
119. Member, Inspection Committee for the feasibility of imparting UG/PG/Super specialty courses in Departments/Institutes/Hospitals of Delhi under Faculty of Medical Sciences, University of Delhi (2013-2014).
120. Member Examination disciplinary Committee, University of Delhi South Campus (1999-2001).
121. Member Secretary Institutional Biosafety Committee, University of Delhi South Campus (2006-2008)
122. Member, Bio-safety Committee, J.P. Institutes of Science and Technology, Noida, U.P. (2010-2012)
123. Member, Biosafety Committee, Daiichi Sankyo, Gurgaon (2010-2013)
124. Member, Board of Residence, Health and Discipline, University of Delhi, Delhi (2013-14)

125. Chairman, Expert Committee, UGC for on spot assessment of programmes, faculty, infrastructural facilities, financial viability, etc in respect of Babu Banarsi Das University, BBD City, Lucknow, UP
126. Chairman, Expert Committee, UGC for on spot assessment of programmes, faculty, infrastructural facilities, financial viability, etc in respect of The Rai University, Saroda, Dholka Taluka ahmedabad, Gujarat
127. Chairman, Expert Committee, UGC for on spot assessment of programmes, faculty, infrastructural facilities, financial viability, etc in respect of Mother Teresa Women's University, Kodaikanal
128. Chairman, Expert Committee, UGC for on spot assessment of programmes, faculty, infrastructural facilities, financial viability, etc in respect of O P Jindal Global University, Sonapat
129. Chairman, Mid-Term Monitoring Committee of UGC's UPE scheme for on the spot assessment of Banaras Hindu University, Varanasi, UP
130. Chairman Expert Committee for coordinating the development of model curricula for undergraduate course under the Choice Based Credit System by UGC.
131. Chairman, Subcommittee of the standing committee for the task of production of courseware e-content for post-graduate subjects by University Grant Commission, New Delhi (2013-2014)
132. Member Committee, UGC for taking a view as to whether the Monograph can be considered as a full-fledged publication for the purpose of promotion of a Reader to Professor under career Advancement scheme.
133. Member, Advisory Committee, Consortium for Education Communication (CEC), New Delhi
134. Member, Expert Committee to formulate guidelines for Non-Net Fellowships
135. Member Advisory Committee for devising the roadmap for launching the courses approved by UGC under B. Voc/Community College and KAUSHAL Kendra scheme
136. Member, Implementation and monitoring Committee for MOOC's content, under the Chairmanship of Prof. Bhaskar Ramamurthi, Director, IIT Madras
137. Expert, Microbiology/Zoology/Entomology for a meeting for selection of the candidates under PDFs for the year 2015-17, Research Award scheme for 2016-2018 and Emeritus fellowship scheme for 205-2017
138. Nominee of the UGC on the Search Committee for preparation of a panel of names for the appointment of Vice-Chancellor of Potti Sriramulu University, Hyderabad
139. Member-UGC Standing Committee on developing courseware E-content for P.G. subjects (2012-2014).
140. Expert Member, Steering Committee for the Center of Excellence Program of the Ministry of Environment and Forest, Govt. of India at CEMDE, University of Delhi, Delhi (2005-onwards).
141. Member- Task Force of Animal Biotechnology, DBT, Government of India, New Delhi (2010-2013)
142. Member, APEX Committee for North-Eastern Region (Environmental Biotechnology and Allied areas) constituted by DBT, Ministry of Science and Technology, Government of India (2013-2015)
143. Co-Chairman, Expert Committee, of the Twinning Program for N-E Region (Environmental Biotechnology and Allied areas) by DBT, Ministry of Science and Technology (Government of India) (2013-2015)
144. Member, Research Advisory committee (RAC), National Bureau of Agriculturally Important Microorganisms (ICAR), New Delhi (2013-2015)
145. Member, Bio-safety Committee of Daiichi Sankyo, Gurgaon (2010-2013)

146. Member of the jury for Merck-India Innovation Award for innovative research by Indian Scientists (2012 onwards)

Prof A J Varma

1. UNIDO-ICS Expert Group Member on Biomass Valorization (Italy, 2006-2011)
2. Professor S.Sethna Visiting Professor at Sardar Patel University (Anand, 2005)
3. President, Society of Polymer Science (India) (Pune Chapter) (2012-contd.)
4. Invited Speaker and Chairperson at Symposia in many countries- USA, UK, Germany, Italy, China, Turkey, Denmark, Egypt, France, Sweden, Denmark, S. Africa, (1995-2011)
6. Invited to deliver "Distinguished Alumni Lecture" in State Univ. Of New York, USA (2000)
7. Transferred high value technologies to industry, industrial consultant to many industries, led large industrial & basic research projects, selected as nodal officer of CSIR Biomass Program (2012-2017)
8. Press reports in several national and international newspapers, magazines, and technical journals for work done by his group.
9. Member of Scientific Panels, Ministry of Health, Ministry of New & Renewable Energy, DBTBIRAC
10. Elected as Executive Body Member, Association of Carbohydrate Chemists & Technologists (India) (Jan. 2014)
11. University Grants Commission Expert Member for setting up Center of Excellence in Applied Polymers at Sardar Patel University, Gujarat (2004-2006)
12. 14. Expert Group Member Meeting on Evaluation of Forefront Technologies in Environmentally Degradable Polymers, ICS-UNIDO, Italy (2005, 2009)
13. Chairman and member of several committees at local and national level (UGC Experts Committee, UNIDO Experts Committee, Chairman of Purchase Committee of NCL, Member of CSIR SRF Committee, Member of selection committees for scientists and staff, Represented NCL/CSIR at Planning Commission meeting, Jan. 2008, etc.)
14. Member of Scientific Panels of Food Safety and Security Authority of India, Ministry of Health,
15. Delhi (2014-15), Ministry of New & Renewable Energy (MNRE), and DBT-BIRAC
16. Member of High Power Government Delegation to Mauritius to discuss scientific cooperation between India and Mauritius
17. Fellow of the association of Carbohydrate Chemist and Technologists (India, Dec. 2014)

Prof Naval Kishore

1. Member-expert in Selection Committee (GJUS&T Hisar, KU Kurukshetra and CDLU Sirsa, DCRUST Murthal, TITS Bhiwani, Jammu University Jammu, MDU Rohtak, Central University of Haryana, Mahendergarh)
2. Member-expert of delegation for meeting H.E. the President of India (2003)
3. Chairman, UG & PGBOS GJUS&T Hisar (2001-04, 2006-08, 2009-12) Member-Expert, UG/PGBOS GJUS&T Hisar, KU Kurukshetra, CDLU Sirsa, DCRUS&T, Murthal and NIT Kurukshetra, MM College Israna, Central University of Haryana, Mahendergarh, G.G.D. University Bilaspur)

4. Member Expert Committee for Establishment of Private Universities in Haryana, constituted by State Government (2010-11)
5. Expert in UGC committee for awarding research Projects.
6. Delivered lecturers during orientation/referresher courses in GJUS&T, Hisar, Jammu University, Jammu, Govt. College for women, Rohtak, and D. Govt. College Gurgaon

Prof Ashish Dahiya

1. Board of Studies/Expert Committee (Hotel And Tourism Management)
 - a. HNB Garhwal Central University
 - b. BIT – Mesra Ranchi
 - c. University of Patanjali
 - d. Kumaon University
 - e. M.D University Rohtak
 - f. Dev Sanskriti University Hardwar
 - g. Deen Bandhu Chhotu Ram University of Science And Technology- Murthal Sonipat
 - h. IGNOU – New Delhi
2. Member Expert Committees On Education, Research And National Development
 - a. University Grants Commission
 - b. CBSE – New Delhi
 - c. AICTE
 - d. Department of Technical Education, Govt. of Haryana
3. Office Bearers of Professional Bodies Including Teachers’ Association, Teachers’ Club, Alumni Association, Academic Societies Etc
 - a. Vice President and Member M.D. University Teacher’s Club
 - b. Jt. Secretary – Indian Hospitality Congress
 - c. Life Member – Indian Tourism Congress
 - d. Life Member – Indian Society for Technical Education

Dr Aditya Saxena

1. Member Expert in Physics of the UGC constituted committee for Choice Based Credit System (CBCS)
2. Member Implementation and Monitoring Committee for MOOCs Content, Consortium for Educational Communication (CEC), UGC
3. Member Committee for Services of Media Centres in e-content development for PG subjects under e-PG Pathshala, Consortium for Educational Communication (CEC), UGC
4. Resource Person for “Field Trial of Training Package in Physics at higher Secondary Level”, DESM, NCERT, 23-27th March, 2015.
5. Resource Person for “Field Trial of Training Package in Physics at higher Secondary Level”, DESM, NCERT, 16-20th February, 2015.
6. Resource Person for “Field Trial of Training Package in Physics at higher Secondary Level”, DESM, NCERT, 26-28th November, 2014.
7. Resource Person for “Field Trial of Training Package in Physics at higher Secondary Level”, DESM, NCERT, 11-13th August, 2014.
8. Resource Person for “Development of Training Package in Physics at higher Secondary Level”, DESM, NCERT, 10-14th March, 2014.
9. Invited Speaker on e-Content Development under 4-Quadrant approach for Workshop of Paper Coordinators under e-PG Pathshala in ‘Comparative Literature’.

10. Invited Speaker on e-Content Development under 4-Quadrant approach for Workshop of Paper Coordinators under e-PG Pathshala in 'Microbiology'.
11. Invited Speaker on e-Content Development under 4-Quadrant approach for Workshop of e-content writers under e-PG Pathshala in 'Russian Studies'.
12. Member Committee of Courses, Department of Physics and Astrophysics, Delhi University for the academic session 2013-2014
13. Member, Student Information System Committee, Ramjas College, for the academic sessions 2006-07 and 2010-11.
14. Coordinator for Certificate Course in Forensic Science, Ramjas College, for the academic sessions 2005-06, 2006-07 and 2007-08.
15. Jury Member INSPIRE AWARD National Level Exhibition and Project Competition (NLEPC)- 2014, October 6-8, 2014 organized by Department of Science and Technology, Government of India.
16. Jury Member INSPIRE AWARD National Level Exhibition and Project Competition (NLEPC)- 2013, October 8-10, 2013 organized by Department of Science and Technology, Government of India.
17. Member Organizing Committee Workshop on "Intellectual Property Rights" 21st March, 2013, ILL, UDSC.
18. Jury Member INSPIRE AWARD National Level Exhibition and Project Competition (NLEPC)- 2012, October 21-23, 2012 organized by Department of Science and Technology, Government of India.
19. Resource Person INSPIRE Internship Program-2012, October 1-5, 2012 organized by Deshbandhu College, Delhi University and Department of Science and Technology, Government of India.

Dr Sarika

1. Member, All India Association Of Teacher Education (3100)
2. Member, All India Association Of Educational Research (0033)
3. Member, International Association Of Academician & Research (Inaar/0649)
4. Member, Bhartiya Yog Mahasangh
5. Life Member Indian Red Cross Society

Dr Renu Yadav

1. Member, International Society for Development and Sustainability (ISDS), Japan
2. Member, All India Teacher Educators Association
3. Member, American Psychological Association

Dr Dinesh

1. Member, Editorial Advisory for Journal- Milestone Education Review (ISSN 2278-2168)
2. Life Member of NGO 'SEED' (Society for Education and Environment Development)
3. Life Member of AIAER (All India Association for Educational Research)
4. Life Member of CTE (Council of Teacher Education) Punjab/Chandigarh and Haryana Chapter
5. Life Member of AIATE (All India Association of Teacher Education)
6. Life Member of Learning Community

Dr Aarti Yadav

1. Life Member, All India Association for Educational Research
2. Member, Association of Indian Universities
3. Member, American Psychological Association

Dr Sanjiv Kumar

1. Member, Academic Council, Ch. Ranbir Singh University, Jind
2. Member, Ordinance Committee, Ch. Ranbir Singh University, Jind.

Dr Aneesh Kumar Mishra

1. Member, Association of Punjab Geographers, Patiala
2. Member, National Geographical Society of India, Varanasi
3. Member, Magadh Bhoogol Parishad, Bodhgaya

Dr Naresh Kumar Verma

1. Counsellor member, IGNOU Study Centre, SSN College, New Delhi
2. Member, The Deccan Geographical Society, Pune
3. Member, National Association of Geographers of India (NAGI)

Dr Anand Sharma

1. Member, Expert member for TV and Radio programs NIOS, Noida
2. Member, as Nodal officer, All India Survey on Higher Education, An MHRD project
3. Member, All India Commerce Association

Dr Ajai Pal Sharma

1. Member, All India Management Association, New Delhi
2. Counsellor member and Evaluator, IGNOU, New Delhi

Dr. Deepika Mehta

1. Lifetime Member: AMI (Association of Microbiologists of India)
2. Annual Member of ASM (American Society of Microbiology): 2012-13

Dr. Richa Sharma

1. Lifetime Member: AMI (Association of Microbiologists of India)

Dr Sumedha Dutta

1. Life Member, Indian Sociological Society (ISS)

Mr A.P.A. Kabir

1. Life Member, Comparative Education Society of India (CESI)

3.4.6 Indicate the average number of successful M.Phil. and Ph.D. scholars guided per faculty during the last four years. Does the university participate in Shodhganga by depositing the Ph.D. theses with INFLIBNET for electronic dissemination through open access?

In the University, at present 83 M.Phil. and 17 Ph.D. have been successfully awarded. On an average each eligible faculty member has successfully guided 6.30 and 1.30 M.Phil. and Ph.D. scholars respectively. Presently, the University is not participating in Shodhganga by submitting Ph.D. with INFLIBNET, however, efforts are on to join it in near future.

3.4.7 What is the official policy of the university to check malpractices and plagiarism in research? Mention the number of plagiarism cases reported and action taken.

The University has made provision of having software for plagiarism check to felicitate the quality and originality of research work. The software is accessible to all members of university. Software (URKUND) is installed in Central Library of University.

Official Policy

It is mandatory to obtain anti plagiarism certificate before the submission of research work. If any work is found, having plagiarism, his/her work is sent back for reviewing and rework. Research work submission is not possible in the University until the clearance certificate is given by the library mentioning the status of the plagiarism.

Till date, no case of plagiarism has been reported in the university.

3.4.8 Does the university promote interdisciplinary research? If yes, how many interdepartmental / interdisciplinary research projects have been undertaken and mention the number of departments involved in such endeavors?

Interdisciplinary is a central idea to the academic and research activities in the University as interdisciplinary is included as one of the mission statements of the University. The University also publishes an interdisciplinary journal – “Journal of Central University of Haryana – An International Multidisciplinary Refereed Research Journal” which invites the scholarly inputs from all disciplines and publishes it under one name. Faculty members are also encouraged to carry out group project works involving interdisciplinary research. As a matter of central idea, interdisciplinary courses are offered by each and every department of university. All the students of each department have to necessary take a course from other department as part of his programme ordinance. This endeavour is expected to result into interdisciplinarity in resarch.

3.4.9 Has the university instituted any research awards? If yes, list the awards.

No, Central University of Haryana has not yet instituted any research awards.

3.4.10 What are the incentives given to the faculty for receiving state, national and international recognition for research contributions?

All faculty members at Central University of Haryana are encouraged to apply for and receive

recognition for their research contributions. University encourages this by providing the required administrative and logistic support required for the same. University also sponsors the participation of faculty members in workshops and conferences.

3.5 Consultancy

3.5.1 What is the official policy of the University for Structured Consultancy? List a few important consultancies undertaken by the university during the last four years.

Being a new University, it is yet to formulate the policy for structured consultancy. However, faculty members of the University allowed/encouraged to get involved in consultancy work.

3.5.2 Does the university have a university-industry cell? If yes, what is its scope and range of activities?

The University promotes the industry-academia linkages and as part of this initiative, the University invites industry experts from time to time to deliver lectures and interactions. Various departments of the University have been communicating with industry at individual levels. However, there is no formal university-industry cell functioning in university and the same is expected to be in place in the near future.

3.5.3 How does the university utilize the expertise of its faculty with regard to consultancy services?

The University encourages the faculty members for various consultancy services. The faculty members are free to identify their areas of research interests and University supports the efforts of the faculty to provide consultancy to any external agency.

3.5.4 What is the mode of publicizing the expertise of the University for Consultancy Services? Which are the departments from whom consultancy has been sought?

The University promotes the expertise of its faculty members to external agencies through the use of internet, webpage, blogs etc. Complete profile of all faculty members with their research area is being highlighted at the university website. Along with profile of faculty members, their e-mail-ids are also mentioned on website.

3.5.5 List the broad areas of consultancy services provided by the university and the revenue generated during the last four years.

Since the university is new, still many departments of the university have the potential to provide consultancy services in respective areas. Till now, no consultancy work has been completed in university.

3.6 Extension Activities and Institutional Social Responsibility (ISR)

3.6.1 How does the university sensitize its faculty and students on its Institutional Social Responsibilities? List the social outreach programmes which have created an impact on students' campus experience during the last four years.

The University being located in the most economically backward region of the state has adopted caring attitude for the community around the campus. As part of social responsibility of university, it has undertaken various measures as per following details:

Events Held

1. Time to time the University screens the movies to advance the teaching learning process. For example-Screening of Syllabi-specific Movie "A Tale of Two Cities" on 18th Sept. 2015; Screening of Movie "The Colour Purple" on 13th Oct. 2015
2. Sanitation drive & sanitation awareness rally at adopted Village Jant was organized by the University fraternity with the involvement of Panchayat & villagers, A successful rally and Nukud Natak to spread the message of sanitation and health among the villagers was enacted on 9th Oct 2015
3. The University has also conducted awareness programmes on Swachchh Bharat Abhiyan in the schools of adopted villages on 24th Sep 2015
4. The University organized Aadhar Card Camp for the adopted villages under the banner of CUH Legal-Aid Clinic on 15th Sep 2015
5. Dr. Deepika Mehta, Department of Microbiology and few students visited to 21st Delhi Book Fair on 5th September 2015. It was organised by India Trade Promotion Organisation (ITPO) at Pragati Maidan, New Delhi from August 29th to September 6th, 2015
6. The University successfully conducted Science Exhibition for the school children from the adopted villages in tune with Rashtriya Avishkar Abhiyan on 11th Sep 2015.
7. The University has started and successfully culminated the awareness programme on the issues concerning education with special focus on women education 5th Sep 2015.
8. Dr. Meenu Goyal, department of Biotechnology has conducted an Education Awareness Program at Jant Pali Village, Distt. Mahendergarh, Haryana with special emphasis on Women Education on 5th September 2015
9. The University has adopted six villages – Jant, Pali, Bhurjat, Dholi, Lalwan and Malda as part of Unnat Bharat Abhiyan on 15th Aug 2015
10. NSS unit volunteers of the University has conducted survey in village Jant to analyze various issues i.e the status of females in Jant village, to check whether people in village were addicted to alcoholism or not, awareness, knowledge and working of government schemes related to welfare. Ultimate goal of survey was to spread awareness, if villagers were unaware. Volunteers went to each and every house of the village and tried to guide right path to the villagers. The university has started Plantation Drive in and around the Campus on 15th Aug 2015
11. The Department of Environmental Science under the aegis of Eco club, celebrated World Environment Day on 5th June 2015. Various events such as Plantation drive, documentary movie on environmental issues, drawing competition (among students of elementary school, Mahendergarh), special lecture by distinguished speaker Dr. R.N. Yadav was organized to sensitize and create environmental awareness not only among the students

but the villagers who were the special invitee. In addition, students actively participated in activities like blood donation camps, environmental awareness rallies, social services schemes, plantation drive etc. on 5th June 2015

12. The University has organized rally on the theme “Beti Bachao, Beti Padhao” to sensitize the community about the girl child on 23rd March 2015
13. ‘Run for unity’ as ‘Rashtriya Ekta Divas’ or the National Integration Day was organized by the University fraternity with the involvement of local villagers, A successful run through which the University tried to spread the message of Integration, brotherhood, harmony in society was organized on 31st Oct 2014.
14. Students from various Department of the University enacted a very beautiful Nukud Natak on the very pertinent theme “Aao Milkar Karein Nyaya Ke Swapan ko Sakar” in the Legal Literacy Camp organized for the community on 30th Oct 2013.
15. Legal Aid Clinic organized Legal Literacy Camp on the eve of ‘Legal Services Day’ on 30th Oct 2013
16. The students of the Department of Law conducted a Legal Literacy Survey of the 5 villages (Gahda, Jant, Malda, Unchi Bandhor & Unhani,) of District Mahendergarh of Haryana to understand the awareness level about legal aspects among society on 29th and 30th Sep 2013.
17. The University has established a Legal Aid Cell with the aim of assisting vulnerable segment of the society like senior citizens, children, women, and workmen etc. for realizing their rights, assisting needy people in various kind of legal drafting. The cell was established on 18th Feb 2012.
18. Legal Aid Clinic of University has organized a grand Exhibition on the theme of ‘Inclusive judicial Process’ at the District Court Complex depicting various dimension of idea of access to justice on 18th Feb 2012.

Other General Events

1. Since its inception, the University has been officially organizing national festivals like Republic Day, Independence day with full involvement from nearby community sensitising them about the importance of these events and hence making them better citizens.
2. The University has been organizing other extension activities also in the form of Declamation contest, Poem Recitation, Speech, Patriotic songs, Essay writing, Quiz, Yoga etc.
3. The University is constantly organizing Free Evening Coaching Classes for the school students from the neighbouring village- Jant throughout the year
4. The University has a Literary Club named “Literati Rendezvous” to pursue student-centric literary and cultural activities.
5. The University keep on providing Remedial Coaching to the school students of neighbouring village.

Events Proposed

1. The University has future plans of organizing Health, Sanitation and Hygiene Camp in all the adopted villages on the occasion of International Day of Girl Child.

2. The University has planned for organizing Blood Donation Camp with the participation of adopted villages.
3. The University has decided to install Solar Panel-based Street LED lights in the adopted villages in phased-manner.
4. The University has also decided to carry out Soil and Water quality-testing in the adopted villages.
5. The University also proposes to organise the Science Conclave to be sponsored by the department of Science and Technology, government of Haryana.
6. The University have plan of organizing workshop on handicraft.
7. The University has also planned to adopt strategies for waste-water reuse.
8. The University is also planning to conduct awareness programmes for improving the standards of education.
9. The University has planned for Short-term skill-based Courses including IT Applications, culinary skills, knitting, embroidery, stitching, pottery making, beautician-courses, animal husbandry, cooperative management etc. in future.
10. The University has established Unnat Bharat Abhiyan Cell for the adopted villages to address the issues concerning cleanliness, sanitation, hygiene, health etc.
11. The University has also decided to promote agriculture and allied activities in the neighbouring areas.
12. The University has plans of working on Bio-Gas generation and rural financing.

3.6.2 How does the university sensitize its faculty and students on its Institutional Social Responsibilities? List the social outreach programmes which have created an impact on students' campus experience during the last four years.

The University has been constantly sensitizing its faculty and students about society by organizing various events. Faculty members and students have been participating in events pertaining to social outreach programmes. List of these events are listed in point 3.6.1

3.6.3 How does the university promote the participation of the students and faculty in extension activities including participation in NSS, NCC, YRC and other National/ International programmes?

The University has established NSS, YRC, Legal Aid Clinic to promote the extension activities among students and faculty members. All of these units of NSS, YRC and Legal Aid Clinic are open to all students and faculty members for its membership. Every student and faculty members are free to become part of these campaigns. Students who are part of these units are specially recognized by university for their contribution. Alternatively it helps them in developing themselves as refined personalities which help them in becoming better citizens along with being good academicians.

Events by NSS in University

Date	Activities of National Service Scheme
------	---------------------------------------

<p>20th to 26th September 2014</p>	<p>STATE LEVEL N.S.S. TRAINING CAMP 4 Volunteers participated in State Level N.S.S. Training Camp at Haryana Agriculture University Hisar (Haryana). Team performed well in all the activities like skit, singing, rally etc. during the camp of camp.</p>
<p>24th September, 2014</p>	<p>NSS DAY CELEBRATION NSS Unit of CUH celebrated the N.S.S. Day at Prof M.C. Sharma Auditorium, Central University of Haryana and invited lecture of Dr. R.N. Yadav, Principal, Janta College Dadri was organized on the theme “N.S.S. and Youth”.</p>
<p>29th September, 2014</p>	<p>SWACHH BHARAT ABHIYAN Declamation contest (Neha, Sheetal Das adjudged first and second respectively) and slogan Writing (Neha, Mona, Ramakant adjudged first ,second and third respectively) competitions were organized on various topics like sanitation, public hygiene, waste management & related issues under the theme of Swachh Bharat</p>
<p>30th September, 2014</p>	<p>SANITATION AWARENESS Sanitation drive & sanitation awareness rally at adopted Village Jant was organized by university fraternity with the involvement of villagers. Through a successful rally and nukud natak university tried to spread the message of sanitation and health among the villagers. SPECIAL LECTURE In afternoon session special lecture by Dr. Pankaj Mishra, University of Delhi on “Role of Youth in Swachh Bharat Abhiyan” was organized.</p>
<p>2nd October, 2014</p>	<p>LAUNCHING OF SWACHH BHARAT ABHIYAN NSS and YRC units of CUH Launched the “Swachh Bharat Abhiyan” at university with great enthusiasm.</p>
<p>31st October , 2014</p>	<p>CELEBRATION OF NATIONAL INTEGRATION DAY ‘Run for unity’ was organized by University fraternity with the involvement of local villagers on ‘Rashtriya Ekta Divas’ or the National Integration Day. A successful run through which university tried to spread the message of integration, brotherhood and harmony in society.</p>

<p>20th March,2015</p>	<p>NSS ANNUAL CAMP (20th to 26th March, 2015)</p> <p>First NSS Annual Camp on the theme “Healthy Youth, Healthy India” was organized by NSS Unit of CUH with participation of 50 volunteers with great enthusiasm and feeling of social service through various activities. The camp was inaugurated by then Vice- Chancellor Prof. U.P Sinha with his message of service to the society with good intension. On this occasion DSW addressed volunteers about their positive roles in university and nearby villages and shared his NSS experience with volunteers. During first camp the main focus on personality development.</p>
<p>20th March,2015</p>	<p>During the camp volunteers participated in various programmes and activities with true spirit of social service. With the mission of “MAKING UNIVERSITY CAMPUS AND SURROUNDING CLEAN AND GREEN”. Volunteers started cleanliness drive in campus and village Jant. Gardening was done by removing weeds and digging, watering plants. Undesirable wastes were dumped at dumping zone.</p>
<p>21st March,2015</p>	<p>Volunteers also create awareness among villagers about the “Swacch Bharat Abhiyan” through awareness rally and Nukad Natak on the theme “Swachh Gaav Abhiyaan”. Awareness rally was given green signal by the V.C of CUH with the presence of many dignitaries like Registrar, DR, DSW and many HODS’ of different departments. Villagers were inspired by the practices of volunteers. Volunteers cleaned the drainage of the village. Volunteers interacted with the villagers and gave suggestion regarding cleanliness.</p>
<p>22nd March,2015</p>	<p>Another campaign of “Green and Clean Village ” at Baba Jai Ram Das Dhaam, Pali was organised in the temple campus under the supervision of head of the temple committee</p>
<p>23rd March,2015</p>	<p>Rally on “BETI BACHAO, BETI PADHAO” also organized and flagged off by then Registrar Dr. A.K. Jha. This Rally was organized to spread awareness regarding “Save Girl Child” in adopted village Jant. A play was also there which motivated villagers that they must send their girls (daughters) to the schools. Play was successfully played by volunteers and villager praised the play very much. Throughout the rally, volunteers gave slogans.</p> <p>Working on the mantra of “Sound mind in sound body” volunteers participated in various games according to their groups.</p>

	Volleyball, Kabaddi, Badminton, and Tug-of-war matches were also held. Volunteers filled themselves with energy and great enthusiasm.
24th March, 2015	Some basic of March past and parade were learned by the volunteers in the morning sessions of the camp. Volunteers practiced various yoga exercises during morning sessions and learned various asanas and pranayams to protect their body from all kinds of disease.
25st March, 2015	Some literary and other activities were also organized side by side during camp like debate, declamation, poetic recitation, patriotic songs. Quiz Competition (based on Vivekananda ideas) was held on the topic "Leadership and personality development". Volunteers participated enthusiastically in the competition.
26th March, 2015	Camp was concluded with happy ending. In valedictory address, Major Gen. (Dr.) Ranjit Singh, Vice Chancellor, CRSU Jind motivated the volunteers for social service and service to the nation in true spirit. He motivated youths that they must be strong and healthy. He said that "Only a healthy mind and healthy body can lead a nation".
5TH June, 2015	Tree Plantation in campus and invited Lecture by Dr. R.N Yadav, Principal Janta College, Dadri organized by NSS.
21ST June, 2015	Hawan and Yoga Camp in the morning session, which was followed by invited Lecture of Acharya Abhay Dev, Gurukul Khanpur (Narnaul) on " Yoga and Youth ". Yoga demonstration and competition was also held in which many teams from district participated and showed their talents.
1st July to 18th August, 2015 (during admission)	Volunteers provide the facilities of " Help Desk " to the new comers in CUH during admission.
15th August, 2015	Van Mahotsav was celebrated with sapling of many trees on Independence Day 2015 at CUH Campus.
10th to 19th September, 2015	Team of four NSS volunteers- Nikhil, Barkha, Sakshi and Shashi participated in Adventure Programme at ABVIMAS, Pong Dem (HP).

<p>24th September, 2015</p>	<p>NSS volunteers celebrated NSS Day and participated in many events. Awareness program on Sanitation was organized by the volunteers at adopted village Malra. First session was conducted at Government Senior Secondary School Malra Bass. In first session a skit was performed by NSS volunteers on sanitation to create awareness among the students. After that a Rally was organized which was flagged off By Hon'ble Vice Chancellor Prof. R.C. Kuhad to aware the villagers of village Malra Baas and Malra Sarai.</p> <p>During rally volunteers performed street – play done at the various places in both the villages to sensitize the villagers on the various sanitation.</p>
<p>24th September 2015</p>	<p>In the afternoon session volunteers enthusiastically participated in the lecture delivered by the guest speaker Dr. Mahender Singh on the “Role of youth in nation building”. Volunteers enjoyed programme through various cultural activities which were based on various social evils such as save girl child, sanitation, rape etc.</p>
<p>15th October, 2015</p>	<p>In the memory of Bharat Ratan Dr. A P J Kalam the first ever students' day celebrated by NSS volunteers of Central University of Haryana in the form of organising first <i>Blood Donation Camp</i>'. NSS volunteers altruistically contributed in this camp. Donation was started with the inauguration ceremony by Hon'ble Vice- Chancellor Prof. R.C. Kuhad. In this camp 134 donors donated their blood.</p>

3.6.4 Give details of social surveys, research or extension work, if any, undertaken by the university to ensure social justice and empower the underprivileged and the most vulnerable sections of society?

Various units of the University like; NSS, YRC and Legal Aid Clinic have been actively involved in social surveys, research and extension work. These activities are highlighted below:

1. NSS unit of the University has conducted a survey in village Jant by volunteers to analyze various issues i.e the status of females in Jant village , to check whether people in village were addicted to alcoholism or not, awareness, knowledge and working of government schemes related to welfare. Ultimate goal of survey was to spread awareness, if villagers were unaware. Volunteers went to each and every house of the village and tried to guide right path to the villagers. University has started Plantation Drive in and around the Campus – 15th Aug 2015
2. Legal Aid Clinic of the University has organized a grand Exhibition on the theme of ‘Inclusive judicial Process’ at the District Court Complex depicting various dimension of idea of access to justice– 18th Feb 2012.

3. Students of the Department of Law conducted a Legal Literacy Survey of the 5 villages (Gahda, Jant, Malda, Unchi Bandhor & Unhani,) of District Mahendergarh of Haryana to understand the awareness level about legal aspects among society – 29th and 30th Sep 2013.
4. Nirmala from Department of Hindi based on field survey brought out folklore entitled ‘Lokgeeton ka Bugcha’ with ISBN No. 978-93-5072-694-5.

These are the list of surveys carried out by various units of Central University of Haryana. The exhaustive list of various events can be seen in section 3.6.1.

3.6.5 Does the university have a mechanism to track the students’ involvement in various social movements / activities which promote citizenship roles?

Students and faculty members of the University are actively involved in various activities as already pointed in 3.6.2. The University as part of its CSR obligation encourages participation in such activities for betterment of life in general and also to inculcate the feeling of good citizen in the stakeholders.

3.6.6 Bearing in mind the objectives and expected outcomes of the extension activities organized by the university, how did they complement students’ academic learning experience? Specify the values inculcated and skills learnt.

Education in today’s environment is not limited to only the content of their curriculum. To groom the students into a holistic manpower resource and to develop their personality various extension activities are conducted in the University.

As part of their extension activities, students have been involved in teaching the school students of neighborhood villages, doing Nukad Natak for spreading awareness, executing rallies for sensitizing the citizens, carrying out sanitation programs, cultural programs etc. All these activities holistically develop students and complement their academic learning. These activities inculcate the social, cultural and communication skills in students making their personality holistic and versatile.

3.6.7 How does the university ensure the involvement of the community in its outreach activities and contribute to community development? Give details of the initiatives of the university which have encouraged community participation in its activities.

The University is dedicated to maximise the spread of the messages on important social issues such as female foeticide, right to education, rural literacy, dowry, afforestation, etc. To realize this, different activities are undertaken outside the campus to ensure involvement of the community. Many of the activities conducted are carried out in form of rally and awareness programs which are executed as part of community.

Exhaustive list of such outreach activities are detailed in section 3.6.2.

3.6.8 Give details of awards received by the institution for extension activities and/contributions to social/community development during the last four years.

The University has been involved in many extension activities as is detailed in section 3.6.2. However, an award is yet to be received by the University for these activities.

3.7 Collaboration

3.7.1 How has the university's collaboration with other agencies impacted the visibility, identity and diversity of activities on campus? To what extent has the university benefitted academically and financially because of collaborations?

The University has planned to rope in the expertise of external experts in its various academic activities including Curriculum Development, Internship, Research, Publications, Extension Lectures and Students Placement. Each department of the University is involved in one or the other activity mentioned before. These activities have resulted in positive reflection of the University in community as coverage in newspapers as well as word-of-mouth. The University has benefited hugely from these activities in both academic and holistic sense.

3.7.2 Mention specific examples of how these linkages promote

- **Curriculum Development:** The University constantly looks for updating the curriculum of all the courses. One of the reasons of updating the curriculum is to bring in the contemporary concepts, theme into class room for students. The linkages with industry of university in current from helps in achieving this objective.
- **Internship:** The University is running various professional courses to cater the need of manpower in industry. Current associations with external industry experts is not only helping in benefiting the students with the world of work but is also helping in setting up a platform for good internship and placement offers for students of various departments.
- **On Job Training:** The University is trying to utilize the association of industry for placing students in on the job training.
- **Faculty Exchange and Development:** In today's world when knowledge is becoming highly volatile, faculty has to be constantly enriching their domain of knowledge. Programs like faculty exchange and development fulfills this need of a university. University is trying to cash on the benefits of such activities.
- **Research:** The University believes that quality of research cannot be carried out in isolation, rather requires participation of all concerned quarters of the society. As a part of this initiative, University encourages faculty members to identify and work on industry related issues.
- **Publications:** The University believes that linkages with various institutes can surely help in increasing the standard of publications. University is not only trying to get in collaborative research work with various academic bodies but is also looking for collaborative research work with industry.
- **Consultancy:** Consultancy is a great medium of dissemination of the knowledge of

faculty members and also bringing the acquired knowledge into class room. Various departments of university like Economics, Physical Sciences, Tourism and Hotel Management have the potential and are expected to provide consultancy in near future.

- **Extension:** Extension activities are not only an added advantage but have become necessary part of acquiring education. Linkages are a great medium to enrich the education system. The University is open to any such extension activities.
- **Student Placement:** Student placement is not only one of the most challenging aspects of delivering the professional education to students but is also most important. Linkages are surely good opportunities in giving more options to students. Central University of Haryana utilizes the current connections with industry in getting students placed.

3.7.3 Has the university signed any MoUs with institutions of national/international importance/other universities/ industries/corporate houses etc.? If yes, how have they enhanced the research and development activities of the university?

The University has always encouraged all of its departments to sign MOUs for better education opportunities. In line of this the Departments of the University are seeking the possibilities of MOUs. Till now, 2 MOUs have been signed officially. List of these MOUs are given below:

1. MOU signed with National Cooperative Union of India, New Delhi on 24th Sep 2015
2. MOU signed with Technology Applications Service (TAS), New Delhi on 24th Sep 2015.

Since, these MOUs are signed very recently, their impact is yet to be seen. Ideologically, these MOUs are expected to enhance the understanding of both parties by offering certain programme and hence providing the platform for those students who are looking for unconventional means of learning.

3.7.4 Have the university-industry interactions resulted in the establishment / creation of highly specialized laboratories / facilities?

The University has been involved in industry interactions by means of lectures by industry experts, workshops etc. The university is in the process of developing new linkages with industry. The University is also keenly looking for creating laboratories/facilities using industry expertise. But, till date no such laboratory has been developed in University.

Annexure I

Department and faculty wise Details of Research Publications

Department of Biochemistry

Dr. Sanjay Kumar

1. Sanjay Kumar and Muhammad Ashraf. Tadalafil, a Phosphodiesterase Inhibitor Protects Stem Cells over Longer Period against Ischemic-Reperfusion Injury through STAT3/PKG-I Signaling. *Stem Cells Dev.* 2015; 24(11):1332-41. [PMID: 25602782]
2. Sanjay Kumar. Hypoxia Inhibits Mesenchymal Stem Cell Proliferation through HIF1 α Dependent Regulation of P27. *Mol Cell Biochem* 2015
3. Sanjay Kumar. P53 Induction Accompanying G2/M Arrest upon Knockdown of Tumor Suppressor HIC1 in U87MG Glioma cells. *Mol Cell Biochem.* 2014; 395 (1-2):281-90. [PMID: 24992983]
4. Sanjay Kumar. Molecular Cloning and Expression of High GC rich Novel Tumor Suppressor Gene HIC-1. *Mol Biotechnol.* 2014; 56(11):1040-8. [PMID: 25001210]
5. Nidhi Kapoor, Jianli Niu, Yasser Saad, Sanjay Kumar, Tatiana Sirakova, Edilu Becerra, Xioman Li, and Pappachan E. Kolattukudy. MCP1 implements STAT6/KLF4 mediated IL-4 induction of macrophage polarization via its dual catalytic activities. *J Immunol.* 2015 194(12):6011-23 [PMID: 25934862]
6. Nazima Nisar, Randeep Guleria, Sanjay Kumar, Tirlok Chand Chawla, Nihar Ranjan Biswas. *Mycoplasma pneumoniae* and its role in asthma. *Postgrad Med J.* 2007; 83(976):100-4. [PMID: 17308212]
7. Sanjay Kumar and Muhammad Ashraf. A Novel Phosphorylating Mechanism of STAT3 in Protection against Ischemia/reperfusion by Pharmacological Preconditioning with Tadalafil, a PDE Inhibitor. *Circulation* 2013; 128: A9244 (Accepted AHA abstract 2013)
8. Sanjay Kumar and Muhammad Ashraf. Heart specific conditional STAT3 knockout abolish cardioprotection against ischemic reperfusion injury upon Tadalafil Treatment, a Phosphodiesterase Inhibitor. *Circulation* 2012; 126: A16938. (Accepted AHA abstract 2012)
9. Nazima Nisar, Randeep Guleria, Sanjay Kumar, Tirlok C. Chawla, Niranjan Nayak, Arvind K. Singh, and Nihar R. Biswas, Sero-prevalence of *Mycoplasma pneumoniae* in asthmatics: Correlation with Interleukin-5 levels. *Chest* 2006

Dr Navrinder Kaur

1. Kaur N, Ranjan A, Tiwar V, Aneja R, Tandon V. DMA, a Bisbenzimidazole, Offers Radioprotection by Promoting NF κ B Transactivation through NIK/IKK in Human Glioma Cells. 2012 *PLoS ONE* 7(6): e39426.
2. Ranjan A, Kaur N, Tiwari V, Singh Y, Chaturvedi MM, Tandon V. 3,4-Dimethoxyphenyl bis-benzimidazole derivative, mitigates radiation-induced DNA damage. *Radiation Research* 2013 Jun;179(6):647-62.
3. Parkash B, Ranjan A, Tiwari V, Gupta SK, Kaur N, Tandon V. Inhibition of 5'-UTR RNA conformational switching in HIV-1 using antisense PNAs. *PLoS One.* 2012;7(11):e49310.
4. Kumar M, Nagpal R, Verma V, Kumar A, Kaur N, Hemalatha R, Gautam SK, Singh B.

- Probiotic metabolites as epigenetic targets in the prevention of colon cancer. *Nutrition Reviews* 2013 Jan;71(1):23-34.
5. Laveti D, Kumar M, Hemalatha R, Sistla R, Naidu VG, Talla V, Verma V, Kaur N, Nagpal R. Anti-inflammatory treatments for chronic diseases: a review. *Inflammation Allergy and Drug Targets*. 2013 Oct;12(5):349-61.
 6. Ingham P, Wang X, Wang H, Kaur N, Mathavan S, Fowler S, Weiser T, Cohen S, McGinnis C. A novel zebrafish model to predict organ toxicities in mammals. *Toxicology Letters* 2013 221:S233

Department of Biotechnology

Dr. Rishi Gupta

1. Gupta, R., Mehta, G., Kuhad, R.C. (2015). Scale-up of abatement of fermentation inhibitors from acid hydrolysates for efficient conversion to ethanol as biofuel. *Journal of Chemical Technology and Biotechnology*. <http://dx.doi.org/10.1002/jctb.4775>
2. Sharma, A., Thakur, V.V., Shrivastava, A., Jain, R.K., Mathur, R.M., Gupta, R., Kuhad R.C. (2014). Xylanase and laccase based enzymatic kraft pulp bleaching reduces adsorbable organic halogen (AOX) in bleach effluents: A pilot scale study. *Bioresource Technology*. <http://dx.doi.org/10.1016/j.biortech.2014.06.066>
3. Antil, P., Gupta, R., Kuhad, R.C. (2014) Simultaneous saccharification and fermentation of pretreated sugarcane bagasse to ethanol using new thermotolerant yeast. *Annals of Microbiology*. DOI 10.1007/s13213-014-0875-2
4. Deswal, D., Gupta, R., Nandal, P., Kuhad RC. (2014). Fungal pretreatment improves amenability of lignocellulosic material for its saccharification to sugars. *Carbohydrate Polymers* 99:264-269
5. Kumar S., Gupta R., Kumar G., Sahoo D. and Kuhad R.C. (2013). Bioethanol production from *Gracilaria verrucosa*, a red alga, in a biorefinery approach. *Bioresource Technology*. 135: 150-156.
6. Singh, R., Gupta, R., Adsul M, Kuhad RC, Gokhale D.V., Verma A.J. (2013). Biodegradation of Styrene-Butadiene-Styrene Copolymer via sugars attached to the polymer chain. *Advances in Materials Physics and Chemistry*. 3:112-118
7. Kumar L, Kumar D, Nagar S, Gupta R, Garg N, Kuhad RC and Gupta VK (2013). Modulation of xylanase production from alkaliphilic *Bacillus pumilus* VLK-1 through process optimization and temperature shift operation. *3 Biotech*. Doi:10.1007/s13205-013-0160-2
8. Gupta R., Mehta G and Kuhad R.C. (2012). Fermentation of pentose and hexose sugars from corncob, a low cost feedstock into ethanol. *Biomass and Bioenergy*. 47:334-341.
9. Gupta R, Kumar S., Gomes J. and Kuhad R.C. (2012). Kinetic study of batch and fed-batch enzymatic saccharification of pretreated substrate and their subsequent fermentation to ethanol. *Biotechnology for Biofuels* 5:16
10. Deswal D., Gupta R., and Kuhad R.C. (2012). Statistical optimization of process parameters for exoglucanase production by brown rot fungus *Fomitopsis* sp. RCK2010. *Applied Biochemistry and Biotechnology*. 168:2004-2016.
11. Kumar A., Gupta R., Khasa Y.P. and Kuhad R.C. (2012). Enhanced xylanase production from *Streptomyces* sp. RCK-2010, an actinomycete, and its application in saccharification of cellulotics. *Journal of Molecular Catalysis B: Enzymatic*. 74:170-177.
12. Gupta R., Khasa Y.P. and Kuhad R.C. (2011). Evaluation of pretreatment methods in improving the enzymatic saccharification of cellulosic materials. *Carbohydrate Polymers*. 84:1103-1109.

13. Gupta R., Mehta G., Khasa Y.P. and Kuhad R.C. (2011). Fungal delignification of lignocellulosic biomass improves the saccharification of cellulose. *Biodegradation*. 22:797-804.
14. Kuhad R.C., Gupta R., Khasa Y.P. and Singh A. (2011). Bioconversion of pentose sugars to ethanol: Current and Future prospects. *Renewable and Sustainable Energy Reviews*. 15:4950-4962.
15. Kuhad R.C., Gupta R., and Singh A. (2011). Microbial Cellulases and their industrial applications. *Enzyme research*. Doi:10.4061/2011/280696
16. Kuhad R.C., Gupta R., Khasa Y.P. and Singh A. (2010). Bioethanol production from *Lantana camara* (red sage): Pretreatment, saccharification and fermentation *Bioresource Technology* 101: 8348-8354.
17. Kuhad R.C., Mehta G., Gupta R. and Sharma K.K. (2010). Fed batch enzymatic saccharification of newspaper cellulose improves the sugar content in the hydrolysates and eventually the ethanol fermentation by *Saccharomyces cerevisiae*. *Biomass and Bioenergy* 34:1189-1194.
18. Deswal D., Sharma A., Gupta R. and Kuhad R.C. (2011). Application of lignocellulolytic enzymes produced under solid state cultivation conditions. *Bioresource Technology*. 115:249-254.
19. Gupta R., Sharma K.K. and Kuhad R.C. (2009). Separate hydrolysis and fermentation (SHF) of *Prosopis juliflora*, a woody substrate, for the production of cellulosic ethanol by *Saccharomyces cerevisiae* and *Pichia stipitis*-NCIM 3498. *Bioresource Technology*. 100(3): 1214-20.
20. Gupta R, Mehta G, Deswal D, Sharma S, Jain KK, Devi N, Khasa YP and Kuhad RC. (2013). Cellulases and their biotechnological applications. In: *Biotechnology of Environmental Management and Resource Recovery*. (Editors) Kuhad, R.C. and Singh A. Springer Verlag, Germany. pp 89-106.
21. Gupta R., Bhardwaj K.N., Choudhary C., Chandna P., Jain K.K., Kaur A., Kumar S., Shrivastava B., Ninawe S., Singh A., Kuhad R.C. (2013). Biofuels: the environment friendly energy carriers. In: *Biotechnology of Environmental Management and Resource Recovery*. (Editors) Kuhad, R.C. and Singh A. Springer Verlag, Germany. 125-150.
22. Kuhad R.C., Gupta R. and Khasa Y.P. (2010). Bioethanol production from lignocellulose: an overview. In: *Waste from Wealth* (Editors) Lal, B. and Sharma P.M. TERI Press Delhi. Pp. 53-106.
23. Kapoor, R.K., Chandel, A.K., Kuhar, S., Gupta, R. and Kuhad R.C. (2007). Bioethanol from crop residues, production, forecasting and economics: An Indian perspective. In: *Lignocellulose Biotechnology: Future Prospects*. (Editors) Kuhad, R.C., Singh, A. Pp. 247-260.
24. Sharma A., Shrivastava A., Sharma S., Gupta R. and Kuhad R.C. (2013). Microbial pectinases and their applications. In: *Biotechnology of Environmental Management and Resource Recovery*. (Editors) Kuhad, R.C. and Singh A. Springer Verlag, Germany. pp 107-124.
25. Kuhad R.C., Gupta R. and Khasa Y.P. (2011). Microbial decolorization of colored industrial effluents. In: *Microorganisms in Environmental Management and Biotechnology* (Editors) Dr. B. N. Johri and Dr. T. Satyanarayana. Springer verlag, Germany. Pp. 787-813
26. Shukla P., Nigam V., Gupta R., Kuhad R.C. and Singh A. (2013). Sustainable enzyme technology for environment: biosensors for monitoring of pollutants and toxic compounds. In: *Biotechnology of Environmental Management and Resource Recovery*. (Editors) Kuhad, R.C. and Singh A. Springer Verlag, Germany. pp 69-76.
27. Kuhad, R.C. and Gupta, R. (2009). Biological remediation of Petroleum contaminants. In: *Advances in Applied Bioremediation*. Soil Biology Series Vol. 17. (Editors) Dr. Ajay Singh, Dr. Ramesh C. Kuhad and Dr. O. P. Ward. Springer Verlag, Germany.
28. Kapoor R.K., Gupta R. and Singh A. (2013). Patenting trends in bioremediation technologies for oil contaminated sites. In: *Biotechnology of Environmental Management and Resource Recovery*. (Editors) Kuhad, R.C. and Singh A. Springer Verlag, Germany. pp 289-313.

Dr. Meenu Goyal

1. Goyal, M., Gautam, R., Kumar, P., and Dhillon, S. (2015) Application of intersimple sequence repeat markers to analyze molecular relationships in wheat (*Triticum aestivum* L. Em. Thell). *Agricultural Science Digest-A Research Journal*. 35:195-198.

Department of Chemistry

Prof Anjani J. Varma

1. P.R. Sharma and A.J. Varma. Supramolecular transitions in native cellulose I during progressive oxidation reaction leading to quasi-spherical nanoparticles of 6-carboxycellulose, *Carbohydrate Poly*. 2014; 113:615–623.
2. P.R. Sharma and A.J. Varma. Thermal stability of cellulose and their nanoparticles: Effect of incremental increases in carboxyl and aldehyde groups. *Carbohydrate Poly*. 2014; 114:339-343.
3. P.R. Sharma and A.J. Varma. Functionalized celluloses and their nanoparticles: morphology, thermal properties, and solubility studies. *Carbohydrate Poly*. 2014; 104:135-142.
4. P.R. Sharma and A.J. Varma. Functional nanoparticles from cellulose: engineering the shape and size of 6-Carboxycellulose. *Chem. Commun*. 2013;49:8818-8820.
5. P.R. Sharma, K.D. Trimukhe, and A.J. Varma. Some aspects of cellulose hydrolysis.
6. *Trends in Carbohydrate Research*. 2013; 5(2):7-11.
7. Rakesh Singh, Ramesh Chander Kuhad, Rishi Gupta, Mukund G. Adsul, Digambar V. Gokhale, Anjani J. Varma. Biodegradation of Styrene-Butadiene-Styrene Copolymer via sugars attached to the polymer chain. *Advances in Materials Physics and Chemistry*. 2013;3: 112-118.
8. R. Singh and A.J. Varma. Towards biodegradable elastomers: green synthesis of carbohydrate, functionalized styrene-butadiene-styrene copolymer by click chemistry. *Green Chemistry*. 2012; 14:348-356.
9. H. M. Shaikh, M. G. Adsul, D. V. Gokhale and A. J. Varma. Enhanced enzymatic hydrolysis of cellulose by partial modification of its chemical Structure. *Carbohydrate Polymers*. 2011; 86(2):962-968.
10. Gyan Prakash, A.J. Varma, Asmita Prabhune, Yogesh Shouche and Mala Rao. Microbial production of xylitol from D-xylose and sugarcane bagasse hemicellulose using newly isolated thermotolerant yeast *Debaryomyces hansenii*. *Bioresource Technology*. 2011;102(3):3304-8.
11. Anil H. Valekar¹, Chandrashekhar M. Malba, Mukund G. Adsul, Digambar V. Gokhale, and Anjani J. Varma. Organic solvent facilitates acid hydrolysis of pretreated sugarcane bagasse polysaccharides for production of ethanol. *Trends in Carbohydrate Research*. 2010;2(3):10-14.
12. Mala Rao, A.J. Varma and Sumedha S. Deshmukh. Production of single cell protein, essential amino acids and xylanase by *penicillium janthinellum*. *BioResources*. 2010;5(4):2470-2477.
13. M.S. Singhvi, M.G. Adsul, A.J. Varma, and D. V. Gokhale. D(-)Lactic acid production from cellobiose and cellulose by *Lactobacillus lactis* mutant RM2-24. *Green Chemistry*. 2010;12:1106-1109.
14. M. G. Adsul, A. P. Terwadkar, A. J. Varma, and D. V. Gokhale. Cellulases from *penicillium janthinellum* mutants: solid-state production and their stability in ionic liquids. *Bioresources*. 2009; 4(4):1669-1680.
15. Rajkumar Singh, A.J. Varma, R. Seeta Laxman and Mala Rao. Hydrolysis of cellulose derived from steam exploded bagasse by *Penicillium* cellulases: Comparison with commercial cellulose. *Bioresource Technology*. 2009; 100(24):6679-6681.
16. A.J. Varma. Pretreatment of plant biomass carbohydrates for ethanol production: An overview. *Trends in Carbohydrate Research*. 2009;1(2):10-15.

17. K.D. Trimukhe and A.J. Varma. Metal complexes of crosslinked chitosans: correlations between metal ion complexation values and thermal properties. *Carbohydrate Polymers*. 2009;75(1):63-70.
18. H.M. Shaikh, K.V. Pandare, G. Nair, and A.J. Varma. Utilization of sugarcane bagasse cellulose for producing cellulose acetates: Novel use of residual hemicellulose as plasticizer. *Carbohydrate Polymers*. 2009;76:23-29.
19. K.D. Trimukhe, N. Mahadik, D.V. Gokhale and A. J.Varma. Environment friendly crosslinked chitosan as a matrix for selective adsorption and purification of lipase of *Aspergillus niger*. *Int. J. Bio. Macromol*. 2008;43:422-425.
20. K.D. Trimukhe and A.J. Varma. A morphological study of heavy metal complexes of chitosan and crosslinked chitosans by SEM and WAXRD. *Carbohydrate Polymers*. 2008;71:698-702.
21. K.D. Trimukhe and A.J. Varma. Complexation of heavy metals by crosslinked chitin and its deacetylated derivatives. *Carbohydrate Polym*. 2008;71:66-73.
22. K.D.Trimukhe, S.Bachate, D.V.Gokhale and A.J. Varma. Metal complexes of crosslinked chitosans: Part II - An investigation of their hydrolysis to chito oligosaccharides using chitosanase. *Int. J. Bio. Macromol*. 2007;41:491-496.
23. P. Galgali, M. Agashe and A.J. Varma. Sugar-linked biodegradable polymers: regio-specific ester bonds of glucose hydroxyls in their reaction with maleic anhydride functionalized polystyrene and elucidation of the polymer structures formed. *Carbohydrate Polym*. 2007;67(4):576-585.
24. M.G.Adsul, A.J. Varma and D.V.Gokhale. Lactic acid production from waste sugarcanebagasse derived cellulose. *Green Chemistry*. 2007; 9:58-62.
25. Mukund G. Adsul, Kulbhushan B. Bastawde, Anjani J.Varma, Digambar V. Gokhale. Strain improvement of *Penicillium janthinellum* NCIM 1171for cellulase production. *Biores. Tech*. 2007;98:1467-1473.
26. A.J. Varma. Carbohydrates – the future reservoirs of chemicals. *Chemical Industry Digest*, Blockdale, Mumbai. June 2006;42-46.
27. M.G. Adsul, J.E. Ghule, R. Singh, H. Shaikh, K.B. Bastawde, D.V. Gokhale, and A.J. Varma. Enzymatic hydrolysis of delignified bagasse polysaccharides. *Carbohydr. Polym*. 2005;62(1):6-10.
28. R. Singh, S. Singh, K. D. Trimukhe, K. V. Pandare, K.B. Bastawade, D. V. Gokhale, and A.J. Varma. Lignin-carbohydrate complexes from sugarcanebagasse: preparation, purification, and characterization. *Carbohydr. Polym*. 2005;62(1):57-66.
29. A.J. Varma, S.V. Deshpande and J.F. Kennedy. Metal Complexation by Chitosan and its Derivatives: A Review. *Carbohydr. Polym*. 2004;55(1):77-93.
30. A.J. Varma, P. Galgali, and J.F. Kennedy. Synthetic Polymers Functionalized by Carbohydrates: A Review. *Carbohydr. Polym*. 2004;56(4):429-446.
31. P. Galgali, U.S. Puntambekar, D. V. Gokhale, and A. J. Varma. Fungal degradation of carbohydrate-linked polystyrenes. *Carbohydr. Polym*. 2004;55(4):393-399.
32. M. G. Adsul, J.E. Ghule, R. Singh, H. Shaikh, K.B. Bastawde, D.V. Gokhale, A.J. Varma. Polysaccharides from Bagasse: Applications in Cellulase and Xylanase Production. *Carbohydr. Polym*. 2004;57(1):67-72.
33. A.J. Varma. Biodegradable Polymers from Sugars. Chapter 7 in "Industrial Applications of Biodegradable Polymers", Ray Smith, Ed. CRC & Woodhead Publishers, UK. 2005.
34. A.J. Varma. Developing Biodegradable Polymers for Future Generations. *Chemical Industry Digest*, Blockdale Publishers, Mumbai, India. July-August Issue. 2003;67-73.
35. P. Galgali, A.J. Varma, U.S. Puntambekar, and D.V. Gokhale. Towards biodegradable polyolefins: strategy of anchoring minute quantities of monosaccharides and disaccharides onto functionalized polystyrene, and their effect on facilitating polymer biodegradation. *JCS Chem Comm*. 2002;23:2884-2885.
36. K. M. Sureshan, M. S. Shashidhar and A.J. Varma. Cyclitol based Neutral Complexing Agents. Effect of the Relative Orientation of oxygen atoms in the Ionophoric ring on the Cation binding ability of Myo-inositol based Crown ethers. *J. Org. Chem*. 2002;67:6884-6888.

37. V.B. Chavan, B.D. Sarwade, and A.J. Varma. Morphology of cellulose and oxidised cellulose in powder form. *Carbohydrate Polymers*. 2002;50(1):41-45.
38. A.J. Varma and M.P. Kulkarni. Periodate oxidation of cellulose under controlled conditions. *Polymer Degradation & Stability*. 2002;77(1):25-27.
39. A.J. Varma, P. Galgali, D.V. Gokhale, U. Puntambekar and J.V. Khire. Carbohydrate-linked Polystyrene : Biodegradability Studies. 77th. World Conference on Biodegradable Polymers & Plastics, Pisa, Italy. June 4-8. 2002.
40. A.J. Varma, S.V. Deshpande and K.D. Trimukhe. Heavy metal complexation by natural polymers. 7th. World Conference on Biodegradable Polymers & Plastics, Pisa, Italy. June 4-8. 2002.
41. S.V. Deshpande, K.D. Trimukhe, and A.J. Varma. Metal complexation by polysaccharides : strategy to improve selectivity by linking new ligands. Fourth National Symposium in Chemistry, Pune, India. Feb.1-3. 2002.
42. A.J. Varma and V.B. Chavan. Calcium complexation by low molecular weight dicarboxycellulose in aqueous solution. *Carbohydrate Polymers*. 2001;45:101.
43. K.M. Sureshan, M.S. Shashidhar, and A.J. Varma. Neutral complexing agents with acyclitol core. Effect of the relative orientation of the sidearms and endgroups on the cation binding ability of myo-inositol based podands. *JCS Perkin Transactions 2*. 2001;12:2298-2302.
44. A.J. Varma. Prospects for biodegradable plastics based on utilization of renewable resource polymers. Chapter 6.2 in "Plastic Waste Management and Environment", International Conference Proceedings, Ed.V.P.Malhotra, Shriram Inst. Of Industrial Rsearch, New Delhi. March 15 – 16. 2001.
45. S.V. Deshpande and A.J. Varma. Studies on chemical modification of chitin/chitosan. TUE-NCL Workshop on Polymer Science, held at NCL, Pune, India. Feb. 19. 2001.
46. P. Galgali and A.J. Varma. Semi-synthetic biodegradable polymers Symposium on Polymer Science and Engineering, Society of Polymer Science & Engineering, Pune Chapter. Dec. 2001.
47. K.D. Trimukhe and A.J. Varma. Crosslinking and Functionalization of Chitin, a Natural Polysaccharide. Symposium by Society of Polymer Science & Engineering, Pune Chapter, Dec. 2001.
48. A.J. Varma. Cellulose powder as a component of thermosetresins: characterization, functionalization, and curing studies. Conference on "Wood and Cellulose: Building Blocks for Chemicals, Fuels, and Advanced Materials", SUNY-ESF, Syracuse, N.Y. April 9-11. 2000.
49. A.J. Varma, PKondapalli, S V Deshpande and S P Kokane. Effect of single-step chlorosulfonation of HDPE in a sealed pressure reactor on its thermal properties. *Polym. Degrad. & Stab*. 1999;63(1):5-9.
50. A.J. Varma, SV Deshpande and P Kondapalli. A comparative study of the thermal behavior of PVC, a series of synthesized chlorinated polyethylenes and HDPE. *Polym. Degrad. & Stab*. 1999;63(1):1-3.
51. A.J. Varma. Overview of the technical developments in bioplastic materials. Proceedings of International Symposium on Bioplastic Materials, Bonn, Germany. June 23-24. 1999.
52. A.J. Varma. Methodology for applications of renewable resources as reaction incorporated components of engineering polymers Proceedings of International Symposium on Bonn, Germany. June 23-24. 1999.
53. K.M. Sureshan, A.J. Varma, M S Shashidhar and S V Deshpande. Synthesis and alkali metal binding studies with ether derivatives of myo-inositol Proceedings of National Symp. in Chemistry, I I Sc Bangalore, Jan.27-30. 1999.
54. A.J. Varma. Biodegradable polymer materials in India: Strategy for the future. IICS-UNIDO Workshop on "Environmentally Degradable Polymers: Environmental and Biomedical Aspects", Antalya. Turkey. Sept. 12-19. 1998.
55. A.J. Varma, S.P. Kokane and I.M. Sutar. Applications development studies of oxidised polysaccharides: biodegradability studies. Proceedings of 5th International Scientific. Workshop on "Biodegradable Plastics and Polymers", Stockholm. Sweden). June 9-13. 1998.

56. N. Singh, J.P. Jog, K. Kosaka, and A.J. Varma. Wood flour-Noryl composites. June. 1998. Technical. Report, No.98-CRD/NCL-008, June 1998. NCL-GE (USA). Proprietary.
57. S. Sivaram, A.J. Varma, and S. Miertus, Editors, S.Sivaram, A.J.Varma, and S.Miertus. Environmentally Degradable Polymers – Proceedings of ICS-UNIDO Workshop, Pune, India. Editors. Nov. 10-15. 1997.
58. A.J. Varma, S.P. Kokane, G. Pathak and S.D. Pradhan. Thermal behaviour of galactomannan guar gum and its periodate oxidation products. Carbohydrate Polym. 1997;32(7):111-114.
59. A.J. Varma, V.B. Chavan, P.R. Rajmohan and S. Ganapathy. Some observations on the high resolution solid-state CP-MAS ¹³C-NMR spectra of periodate-oxidised cellulose. Polym. Degrad. & Stab. 1997;58 (3):257-260.
60. A.J. Varma, M.S. Shashidhar, K.R. Shah, and S.P. Kokane. Inositol based neutral complexing agents. XII Carbohydrate Conf. Lucknow. India. Nov20-21. 1997.
61. A.J. Varma. Studies on renewable resources as major components of polymeric materials. Proceedings of UNIDO-ICS International Scientific Workshop on “Environmentally Degradable Polymers”. Pune. India. Nov. 10-15. 1997.
62. P.R. Rajmohan, A.J. Varma, V.B. Chavan and S. Ganapathy. Inversion recovery cross polarisation (IRCP) in oxidised forms of cellulose. Proceedings of 3rd National Symposium on Magnetic Resonance. IIT. New Delhi. Feb 9-7. 1997.
63. A.J. Varma and S P Kokane. Investigations in periodate oxidation of chitin. Proceedings of XI Carbohydrate Conf. Jadavpur. Calcutta. Nov. 21-22. 1996.
64. A.J. Varma and S.P. Kokane. Characterization of sodium dicarboxylate galactomannan by thermal analysis. Proceedings of XI Carbohydrate Conf. Jadavpur. Calcutta. Nov. 21-22. 1996.
65. A.J. Varma and S.P. Kokane. Thermal behaviour of oxidised TKP. Proceedings of XI Carbohydrate Conf. Jadavpur. Calcutta. Nov. 21-22. 1996.
66. K.R. Shah, S.P. Kokane, G. Pathak, M.S. Shashidhar and A.J. Varma. Synthesis and thermal properties of polymers of polymers of myo-inositol derivatives. Proceedings of XI Carbohydrate Conf. Jadavpur. Calcutta. Nov. 21-22. 1996.
67. A.J. Varma and S P Kokane. Oxidation products of guar gum: thermal behaviour. Proceedings of XI Carbohydrate Conf. Jadavpur. Calcutta. Nov. 21-22. 1996.
68. A.J. Varma and V.B. Chavan. A study of crystallinity changes in oxidised celluloses. Polym. Degrad. & Stab. 1995;49(2):245-250.
69. A.J. Varma and V.B. Chavan. Some preliminary studies on polyelectrolyte and rheological properties of sodium 2,3- dicarboxycellulose. Carbohydrate Polym. 1995;27(1):63-68.
70. A.J. Varma and V.B. Chavan. Thermal properties of oxidised cellulose. Cellulose. 1995;2:41-49.
71. A.J. Varma. Castor-oil based monomers and their biodegradable polymers Technical Report. Hindustan Lever. June. 1995.
72. A.J. Varma, A.K. Lele and R.A. Mashelkar. Separations based on chemically selective polymer gels. Chem. Eng. Sci. 1995;50(23):3835-3838.
73. A.J. Varma and V.B. Chavan. Cellulosic diamines as reaction-incorporated filler in epoxy composites. Cellulose. 1994;1:215-219.
74. A.J. Varma. Structural characterization of bagasse lignin. Technical Consultancy Report. Pudumjee Pulp & Paper Mills. Sept. 1992.
75. V.B. Chavan and A.J. Varma. Polyelectrolyte behaviour of sodium 2,3 dicarboxycellulose- an industrially important nature-derived polymer. Proceedings of Indian Chemical Engineering Congress. Madras. Dec. 18-2. 1991.
76. A.J. Varma and S.A. Vaidya. Polyelectrolytes as stabilizers for emulsions of chlorosulfonated polyethylene in carbontetrachloride /water systems. J. Surf. Sci. & Technol. 1991;7(2):177-184.
77. A.J. Varma, S.B. Chavan, P.R. Rajmohan and S. Ganapathy. High resolution solid state C-¹³ NMR study of cellulose and its oxidised derivatives. Proceedings of All India Conference on “New Dimensions in Science & Technology” at BHU. Varanasi. Feb 7. 1991.

78. A.J. Varma. Preparation of a special membrane device for the controlled release of sulfur-dioxide gas for fumigation of grapes and other horticulture produce. Report submitted to M/s Rallis India. Bombay. 1990.
79. A.J. Varma, and S.A. Vaidya. Polyelectrolytes as stabilizers for emulsions of chlorosulfonated polyethylene in Carbontetrachloride / water systems. Proceedings of 8th International Symposium on Surfactants in Solution, Florida, USA. June 10-15. 1990.
80. A.J. Varma. Solvent separation by selective absorption in polymeric gels Proceedings of the Indian Chemical Engineering Congress. Trivandrum. Dec 15-18. 1989.
81. K.S. Balaraman, and A.J. Varma. Chlorosulfonation of polyethylene : Kinetics and microstructure. Proceedings of the 14th Rubber Conference. IRMRA. 17 Jan 1988.
82. V.S. Patwardhan, A.J. Varma, Y.K. Jamdade and R.A. Mashelkar. Evaluation of gas phase mass transfer at low reynolds number –a new model system. Chem. Eng. Commun. 1987;50:155-163.
83. A.J. Varma. ESCA features of lignins. Polym. Test. 1986;6:79-80.
84. A.J. Varma. Hydrolysis of a charged ester catalyzed by copolymers of 4- vinyl benzo-18-crown-6 and 4-vinylpyridine. Eur. Polym. J. 1986;22:111-113.
85. A.J. Varma, and Y.K. Jamdade. On the dual role of starch, cellulose and their dialdehydes as fillers and accelerators in tertiary amine catalyzed curing of epoxy resins. Carbohydr. Polym. 1985;5:309-316.
86. A.J. Varma, J.P. Jog and V.M. Nadkarni. Solvent effects on the alkali metal naphthalenide treatment of fluoropolymers and the electrical conductivity. Proceedings of the second National Conference on Fluoride Chemicals and Polymers. Kanpur. March. 1985.
87. A.J. Varma. Advanced polymer chemistry in aid of viticulture: application of polymer- polymer complex formation studies in the synthesis of grape guard paper. Proceedings of the First National Workshop on Post Harvest Management Of Grapes. Feb. 4-6. 1985.
88. A.J. Varma, Y.K. Jamdade and V.M. Nadkarni. Wide-angle x-ray diffraction study of the effect of periodate oxidation and thermal treatment on the structure of cellulose powder. Polym. Degrad. & Stab. 1985;13:91-98.
89. A.J. Varma, M.D. Deshpande and V.M. Nadkarni. Morphology and mechanical properties of silicate filled polyurethane elastomers based on castor oil and polymeric MDI Angew. Makromol. Chem. 1985;132:203-209.
90. A.J. Varma, A.B. Mandale and S. Badrinarayan. Angular-dependent XPS study of the treatment of silicate fillers with tridecylamine. Mat. Chem. and Phys. 1984;10:585-589.
91. A.J. Varma. X-ray photoelectron spectroscopic study of wood lignins. Carbohydr. Polym. 1984;4:335-338.
92. A.J. Varma. Photoelectron spectroscopic studies of cellulose, starch and their oxidation products in powdered form. Carbohydr. Polym. 1984;4: 473-480.
93. A.J. Varma, Y.K. Jamdade and V.M. Nadkarni. Curing characteristics of epoxy resins filled with cellulose and oxidised cellulose. Angew. Makromol. Chem. 1984;122:211-218.
94. A.J. Varma, J.P. Jog and V.M. Nadkarni. Electrical surface conductivity of fluorinated polymer films after chemical surface treatment. Makromol. Chem. Rapid Commun. 1983;4:715-719.
95. A.J. Varma and C. Schuerch. Synthesis of substituted 2,6-dioxabicyclo [3.1-1] heptanes 1,3-anhydro-2,4,6-tri-O-benzyl and 1,3-anhydro-2,4,6-tri-O-p-bromobenzyl –B-D-mannopyranose. J. Org. Chem. 1981;46:799-803.
96. J. Smid, A.J. Varma, and S.C. Shah. Decarboxylation of 6-nitrobenzisoxazole-3 carboxylate in benzene catalyzed by crown ethers and their polymers. J. Amer. Chem. Soc. 1979;101:5764-5469.
97. A.J. Varma, T. Majewicz and J. Smid. Polysalt complexes of poly (vinylbenzo-18-crown-6) and of poly (crown acrylates) with polyanions. J. Polym. Sci. Polym. Chem. Ed. 1979;17:1573-1581.
98. J. Smid, L. Wong, A.J. Varma and S. Shah. Some aspects of ion binding to polymers. Polym. Preprints. 1979;20(1):1063-1066.
99. J. Smid, S. Shah, R. Sinta, A.J. Varma and L. Wong. Macrocyclic ligands on polymers. Pure & Appl. Chem. 1979;51:111-122.

100. J. Smid, S. Shah, A.J. Varma and L. Wong. Solute binding and catalysis by poly (vinyl benzo-18-crown-6). *J. Polym. Sci. C Polym. Symp.* 1978;64:267–280.
101. A.J. Varma and J. Smid. Polysalt complexes of poly (crown ethers) and sodium carboxymethylcellulose. *J. Polym. Sci., Polym. Chem. Ed.* 1977;15:1189-1197.

Dr. Soma Sharma

1. Understanding Growth Kinetics of Nanorods in Microemulsion: A Combined Fluorescence Correlation Spectroscopy, Dynamic Light Scattering and Electron Microscopy Study Soma Sharma, Nibedita Pal, Pramit K. Chowdhury, Sobhan Sen and Ashok K. Ganguli; *J. Am. Chem. Soc.*; 2012, 134, 19677-19684. (Impact Factor- 11.444)
2. Design of anisotropic Co₃O₄ nanostructures: Control of particle size, assembly and aspect ratio; Soma Sharma, Neha Garg, Kandalam V. Ramanujachary, Samuel E. Lofland and Ashok K. Ganguli; *Cryst. Growth Des.* 2012, 12, 4202-4210 (Impact Factor- 4.558)
3. Spherical to cylindrical transformation of reverse micelles and their templating effect on the growth of nanostructures Soma Sharma and Ashok K. Ganguli; *J. Phys. Chem. B* 2014, 118, 4122–4131 (Impact Factor- 3.377)
Controlling the size and morphology of anisotropic nanostructures of nickel borate using microemulsions and their magnetic properties Menaka, Soma Sharma, Kandalam V. Ramanujachary, Samuel E. Lofland, Ashok K. Ganguli; *J. Colloid Interface Sci.* 2011, 360, 393-397 (Impact Factor: 3.263)
4. Controlling the Microstructure of Reverse Micelles and their Templating Effect on Shaping Nanostructures Soma Sharma, Nitin Yadav, Pramit K. Chowdhury and Ashok K. Ganguli; *J. Phys. Chem. B* 2014, DOI: 10.1021/acs.jpcc.5b03063 (just accepted) (Impact Factor- 3.377)

Dr. Atul Pratap Singh

1. Expanding the Scope of Sulfur-Centered Arbuzov Rearrangement in Diethyl/Di-n-propyl Sulfite for the Synthesis of Mixed-Ligand Di-n-butyltin Alkanesulfonates. Shankar, R.; Singh, A. P.; Upreti, S. *Inorganic Chemistry* 2006, 45, 9166. [IF: 4.6; main Author, Co-Auth: 1; Cits: 15]
2. Synthesis, characterization and structural studies of mixed-ligand di-n-butyltin alkanesulfonate derivatives, [n-Bu₂Sn(X)OS(O)₂R]₂ [R = Et, n-Pr; X = acac, 4-OMe-O₂CC₉H₅N-2, O₂CC₉H₆N-2, O₂CC₉H₆N-1]. Shankar, R.; Singh, A. P.; Hundal, G.; Butcher, R. J. *J. Organomet. Chem.* 2007, 692, 5555. [IF: 2.4; main Author, Co-Auth: 2; Cits: 9]
3. Recipe for new diorganostannates, [R₂Sn(OS(O)₂R¹)₄]²⁻, bearing alkanesulfonate groups using dialkyl sulfite as the reagent. Shankar, R.; Singh, A. P.; Mahon, M. F.; Molloy, K. C.; Hundal, G.; Biesemans, M.; Willem, R. *Inorganic Chemistry* 2008, 47, 790. [IF: 4.6; main Author, C Auth: 5; Cits: 3]
4. Synthesis, characterization and structural studies of mixed-ligand diorganotin esters, [R₂Sn(OP(O)(OH)Ph)(OS(O)₂R¹)]_n [R = n-Bu, R¹ = Me (1), n-Pr (2); R = Et, R¹ = Me (3)] with one- and three-dimensional coordination polymeric motifs. Shankar, R.; Singh, A. P.; Jain, A.; Mahon, M. F.; Molloy, K. C. *Inorganic Chemistry* 2008, 47, 5930. [IF: 4.6; main Author, C Auth: 3; Cits: 17]
5. Facile synthesis of novel 2D and 3D coordination polymers containing dialkyltin phosphonate-based tri/tetra-nuclear clusters with appended sulfonate groups. Shankar, R.; Jain, A.; Singh, A. P.; Mahon, M. F.; Molloy, K. C. *Inorganic Chemistry* 2009, 48, 3608. [IF: 4.6; C Author, C Auth: 2; Cits: 13]
6. 5,15-Bis(3,5-di-tert-butylphenyl)-10,20-bis(phenylethynyl)porphyrin. Kim, H. J.; Singh, A. P.; Kim, H. –J. *Acta Cryst.* 2009, E65, o3004. [IF: 0.4; main Author, C Auth: 1; Cits: 1]

7. Synthesis and crystal structure of 5,15-bis(3,5-di-tert-butylphenyl)-10-(phenylethyynyl)-20-(trimethylsilylethynyl)porphyrin. Singh, A. P.; Kim, H. -J. X-ray Structure Analysis Online 2010, 26, 23. [IF: 0.0; main Author, C Auth: 0; Cits: 0]
8. Diorganotin sulfonate and phosphonate-based coordination polymers. Shankar, R.; Jain, A., Singh, A. P. Phosphorous, Sulfur and Silicon and the Related Elements 2011, 186, 1375. [IF: 0.72; C Author, C Auth: 0; Cits: 5]
9. Metal-free intermolecular C_{fur}-N_{succ} bond coupling of highly substituted 3-furancarbaldehydes and their use in meso-substituted BODIPY synthesis. Singh, A. P.; Lee, K. M.; Kim, K.; Jun, T.; Churchill, D. G. Eur. J. Org. Chem. 2012, 5, 931. [IF: 3.3; main Author, C Auth: 3; Cits: 2]
10. Synthesis and characterization of di-/triorgano stannates bearing tin-sulfonates bonds. Shankar, R.; Singh, A. P.; Jain, A.; Kociok-Kohn, G.; Molloy, K. C. Inorg. Chem. Acta. 2012, 387, 420. [IF: 2.0; main Author, C Auth: 3; Cits: 3]
11. Bis(methansulfonato)(5,10,15,20-tetraphenylporphyrinato)tin(IV) chloroform trosolvate. Singh, A. P.; Kim, H.-J. Acta Cryst, 2012, E68, m626. [IF: 0.4; main Author, C Auth: 0; Cits: 0]
12. Novel sulfur-rich BODIPY systems that enable stepwise fluorescent O-atom turn-on and H₂O₂ neuronal system probing. Singh, A. P.; Lee, K. M.; Murale, D. P.; Jun, T.; Liew, H.; Suh, Y.-Hun, Churchill, D. G. Chem. Comm. 2012, 48, 7298. [IF: 6.2; main Author, C Auth: 5; Cits: 9]
13. The inorganic DMSO/POCl₃ reaction with BODIPY: wide product formation and implications for biological ROS sensing and neurodegenerative disease research. Jun, T.; Kim, K.; Lee, K. M.; Murale, D. P.; Singh, A. P.; Natsagdorj, A.; Liew, H.; Suh, Y.-H.; Churchill, D. G. J. Porphyrins Phthalocyanines 2012, 16, 1. [IF: 1.3; C Author, C Auth: 6; Cits: 0]
14. A Novel, selective, and extremely responsive thienyl-based dual fluorogenic probe for tandem superoxide AND Hg²⁺ Chemosensing. Singh, A. P.; Murale, D. P.; Ha, Y.; Liew, H.; Lee, K. M.; Segev, A.; Suh, Y.-H.; Churchill, D. G. Dalton Trans. 2013, 42, 3285. [IF: 3.8; main Author, C Auth: 6; Cits: 8]
15. Facile C-C bond cleavage of β-diketones by tin(IV) porphyrin complex. Singh, A. P.; Park, B. B.; Kim, H.-J. Tetrahedron Letters 2012, 53, 6456. [IF: 2.6; main Author, C Auth: 1; Cits: 0]
16. Extremely selective fluorescence turn-on detection for hypochlorite confirmed by proof-of principle neurological studies via esterage action in living cells, Singh, A. P.; Tsay, O. G.; Murale, D. P.; Jun, T.; Liew, H.; Suh, Y.-H.; Churchill, D. G. Analyst 2013, 138, 2829. [IF: 4.23; main author, C Author: 5; Cits: 6].
17. Novel molecular tools to discriminate Fe³⁺ and Fe²⁺ by fluorescence via turn on responses within neuronal cells. Murale, Dhiraj P.; Singh, Atul P.; Lavoie, J.; Liew, H.; Cho, J.; Lee, H.-I.; Suh, Y.-H.; Churchill, David G. Sensors and Actuators B 2013, 185, 755. [IF: 3.8; C author, C author: 7; Cits: 2].

Dr. Anurag Kr Sunda

1. Ammonium-based Protic Ionic Liquid Doped Nafion Membrane as Anhydrous Fuel Cell Electrolyte, A. P. Sunda*, J. Mater. Chem. A, 2015, 3, 12905-12912.
2. Atomistic Simulations of Ammonium-based Protic Ionic Liquids: Steric Effects on Structure, Low Frequency Vibrational Modes and Electrical Conductivity, A. P. Sunda*, A. Mondal, and S. Balasubramanian*, Phys. Chem. Chem. Phys., 2015, 17, 4625-4633.
3. Structure and Dynamics of Benzyl-NX₃ (X=Me, Et) Trifluoromethanesulfonate Ionic Liquids, A. P. Sunda, V. M. Dhavale, K. Sreekumar and A. Venkatnathan, J. Phys. Chem. B, 2014, 118, 1831-1838.
4. Polymer Chain Length, Phosphoric Acid Doping and Temperature Dependence on Structure and Dynamics of ABPBI [poly(2,5-benzimidazole)] Polymer Electrolyte Membrane, M. More, A. P. Sunda, and A. Venkatnathan, RSC Advances, 2014, 4, 19746-19755.
5. Molecular Dynamics Simulations of Side Chain Pendant of Perfluorosulfonic Acid Polymer Electrolyte Membrane, A. P. Sunda and A. Venkatnathan, J. Mater. Chem. A, 2013, 1, 557-569.

6. Parametric Dependence on Shear Viscosity of SPC/E Water From Equilibrium and Non-Equilibrium Molecular Dynamics Simulations, A.P. Sunda and A. Venkatnathan, *Molecular Simulation*, 2013, 39, 728-733.
7. A Molecular Investigation of Nanostructure and Dynamics of Phosphoric/Triflic Acid Blends of Hydrated ABPBI [poly(2,5-benzimidazole)] Polymer Electrolyte Membrane, A. P. Sunda, M. More and A. Venkatnathan, *Soft Matter*, 2013, 9, 1122-1131.
8. Atomistic Simulations of Structure and Dynamics of Hydrated Aciplex Polymer Electrolyte Membrane, A.P. Sunda, and A. Venkatnathan, *Soft Matter*, 2012, 8, 10827-10836.
9. Molecular Dynamics Simulations of Triflic acid and Triflate Ions/Water Mixtures: A Potential Electrolyte Component in Fuel Cells, A.P. Sunda, and A. Venkatnathan, *J. Comput. Chem.* 2011, 32, 3319-3328.[Featured on the JCC cover]

Dr. Vandna Nishal

1. Enhanced Red Emission From Europium doped Yttrium Oxide Nano Phosphor
Devender Singh, Pratap S. Kadyan, Vijeta Tanwar, Vandna Nishal, Sang-Do Han and Ishwar Singh.
Asian Journal of Chemistry, Vol. 24, No. 12, 2012, Pages 5873-5875. ISSN: 0970-7077.
2. Synthesis, Characterization, and Electroluminescent Characteristics of Mixed-Ligand Zinc(II) Complexes
Vandna Nishal, Amit Kumar, Partap S. Kadyan, Devender Singh, Ritu Srivastava, Ishwar Singh and Modeeparampil N. Kamalasanan.
Journal of ELECTRONIC MATERIALS, Vol. 42, No. 6, 2013, Pages 973-978. ISSN: 0361-5235.
3. Ternary zinc complexes as electron transport and electroluminescent materials
Amit Kumar, Ritu Srivastava, Arunandan Kumar, Vandna Nishal, Pratap S. Kadyan, M. N. Kamalasanan, Ishwar Singh.
Journal of Organometallic Chemistry, 740, 2013, Pages 116-122. ISSN: 0022-328X.
4. A new zinc–Schiff base complex as an electroluminescent material
Vandna Nishal, Devender Singh, Amit Kumar, Vijeta Tanwar, Ishwar Singh, Ritu Srivastava, Pratap Singh Kadyan. *Journal of Organic Semiconductors*, Vol. 2, No. 1, 2014, Pages 15–20. ISSN: 2160-6099.
5. Optoelectronic characterization of zinc complexes for display device applications
Vandna Nishal, Devender Singh, Raman Kumar Saini, Shri Bhagwan, Vijeta Tanwar, Sonika, Ritu Srivastava, Pratap Singh Kadyan. *Journal of Materials Science: Materials in Electronics*, ISSN: 0957-4522.
6. Synthesis and optical characterization of europium doped MY₂O₄ (M = Mg, Ca, Sr) nanophosphors for solid state lightening applications Devender Singh, Vijeta Tanwar, Shri Bhagwan, Vandna Nishal, Suman Sheoran, Sonika Kadyan, Anura P. Samantilleke, Pratap Singh Kadyan. *Indian Journal of Material Science*, Vol. 2015.
7. Characterization and luminescent properties of zinc-Schiff base complexes for organic white light emitting devices Vandna Nishal, Devender Singh, Raman Kumar Saini, Vijeta Tanwar, Sonika, Ritu Srivastava, Pratap Singh Kadyan. *Cogent Chemistry*, ISSN: 2331-2009.

Department of Commerce

Ms. Ravinder Kaur

1. Ravinder Kaur (2015), Causal Estimates of Company Specific Fundamental Factors for Share Price: A Case Study of Selected Sensex Stocks, MERC Global's International Journal of Social Science & Management, Vol. No. 2, Issue 4, pp. 253-259.
2. Ravinder Kaur (2015), Behaviour of Stock Price and Macroeconomic Indicators: An Application of EGARCH, MERC Global's International Journal of Management, Vol. No. 3, Issue 3, pp. 142-148.
3. Ravinder Kaur (2013), SEZs: A Step towards Development or Jeopardy in SSIJRCM, Vol. No. , (3), Issue- 4, pp. 149-159.
4. Ravinder Kaur & Manmeet Kaur, (2013), JIT Practices for Enhanced Manufacturing Efficiency in Production Processes in SSIJEM, Vol. No. 3, Issue 4, pp. 142-151.
5. Preeti Sharma & Ravinder Kaur, (2013), Inter and Intra Constituent Analysis of Intellectual Capital Constituents in IJMSS, Vol. No. 01, Issue-6, pp. 18-34.
6. Manmeet Kaur & Ravinder Kaur, (2013), Increasing and Changing Role of Management Accounting in Capturing the Voice of Customers, IJRCM, Volume No. 3, Issue No. 11, pp. 55-59.
7. Manmeet Kaur & Ravinder Kaur, (2013), Kaizen Costing Technique – A Literature Review in IJRCM, Vol. No. 4, Issue-11, pp. 84-87.
8. Manmeet Kaur & Ravinder Kaur, (2013), Adoption of Contemporary Cost Management Techniques for Better Management of Costs, IJRCAM, Vol. No. 3, Issue No. 11, pp. 74-78.
9. Ravinder Kaur & Manmeet Kaur (2013), An Approach into Commerce Education after Globalization-Challenges and Opportunities, IJRCIM, Vol. No. 3, Issue No. 11, pp. 66-69.
10. Manmeet Kaur & Ravinder Kaur, (2012), Integration of QFD and Target Costing: A Survival Strategy in Competitive Market in SSIJEM, Vol. No. 2, Issue-6, pp. 46-58.
11. Ravinder Kaur (2014), Macro Economic Variables and Impact on Share Price of selected companies in Automobile Sector, Published in a book (978-81-7844-173-3) as a proceedings of National Seminar on Application and Role of Statistics in Multidisciplinary Research Organized by Department of Management Studies, Central University of Haryana, K.K. Publications, New Delhi, pp. 239-254.
12. Ravinder Kaur (2012), Social Inclusion: A Difference between India and China, published in a book as conference proceedings of National Conference on Inclusive Democracy: People, Power and Progress organized by Central University of Haryana, Mahendergarh.

Dr. Suman Dahiya

1. Suman (June 2015), Liberalization and Performance of Micro, Small and Medium Enterprise: A comparative study, Apeejay-Journal of Management Science and Technology, Vol. 2, Issue 3.
2. Ashish Garg & Suman (Sept 2014), Stock Market Return and volatility: Study of five most emerging markets of the world, Finance India, vol. Xxviii, no.3.
3. Suman (2014), Impact of Foreign Investment on Economic Growth of India, Journal of Central University of Haryana, Vol. -01, no. 01.
4. Suman (2013), Relationship between Indian Capital Market and Foreign Institutional Investment, HSB Research Review, Vol no. 7, issue 1&2.
5. S.S.Chahal & Suman(2012), Behavior of stock market volatility in developing countries, International Journal of Research in commerce ,IT and Management, Vol no. 2, Issue 1, pp 82-88.
6. S.S.Chahal & Suman (2012) Extent and Pattern of historical stock market volatility in developing countries, KAIM journal of management and research, Vol no. 4, issue 1-2.

7. Suman & S.S. Chahal (2011) Day of the week effect in Indian stock market return and its Volatility, HSB Research Review, Vol no. 2, issue 2.
8. One paper accepted on the topic Growth & Performance of MSME in India: Prospects and Problem in the Journal of Rural and Industrial Development.

Mr Sachin

1. Conference proceeding titled 'Corporate Social Responsibility and Bottom line' at International Conference on Corporate Governance: A Paradigm Shift held on 10th-11th April, 2015 organised by Centre for Corporate Governance, Maharaja Agrasen Institute of Management Studies, Rohini, Delhi.

Department of Computer Sciences and Information Technology

Dr. Sunil Kumar

1. Sunil Kumar Bharti, Saket Kumar Choudhary, Janardan Singh, Spiking Patterns of Morris-Lecar Neuronal Model with Additive Noise: Moment Equation Based Study, Utthan: The Journal of Applied Sciences and Humanities, Vol. 1, No.1, May 2014, pg. 7-12.
2. Sunil Kumar Bharti, Saket Kumar Choudhary, Janardan Singh, Analytical Solution for Izhikevich Hybrid Spiking Neuronal Model with Distributed Delay, Utthan: The Journal of Applied Sciences and Humanities, Vol. 1, No. 2, Dec 2014, pg. 19-24.
3. Dileep Kumar Yadav, Lavanya Sharma and Sunil Kumar Bharti, Moving Object Detection in Real-Time Visual Surveillance using Background Subtraction Technique, 14th International Conference on Hybrid Intelligent Systems (HIS 2014), Gulf University for Science and Technology, Kuwait, Dec 14-16, 2014 (IEEE).
4. Lavanya Sharma, Dileep Kumar Yadav and Sunil Kumar Bharti, An Improved Method for Visual Surveillance using Background Subtraction Technique, 2nd International Conference on Signal Processing and Integrated Networks (SPIN), Amity School of Engineering and Technology, Amity University, Noida, Feb 19-20, 2015 (IEEE).
5. Saket Kumar Choudhary, Karan Singh and Sunil Kumar Bharti, Variability in Spiking Pattern of Leaky Integrate-and-Fire Neuron due to Excitatory and Inhibitory Potentials, 2nd International Conference on Computing for Sustainable Global Development (INDIACom), Bharati Vidyapeeth, New Delhi, Mar 11-13, 2015 (IEEE).

Ms Monika Gill

1. Monika, Dr. Dinesh Singh.(2014). Connectivity Enhancing Mechanisms in ZigBee Wireless Sensor Networks: Review. Proceedings of the Second International Conference on "Emerging Research in Computing, Information, Communication and Applications" ISBN:9789351072621 (pp. 90-96). Elsevier Publications 2014

Ms Sangeeta Rao

1. Yadav Sangeeta, Yadav Saurabh (2013). An Intelligent Fuzzy Based Cluster Head Selection for Wireless Sensor Networks. *International Journal of Advanced Research in Computer Science and Software Engineering* Volume-3, Issue-11.
2. Yadav Sangeeta, Yadav Saurabh (2013). A novel approach to increase lifetime of WSNs using non-uniform cluster size and sub clustering. *International Journal of Advanced Research in Computer Science and Software Engineering* Volume-3, Issue-12.

Department of Economics

Ms. Rashmi Tanwar

1. Growth of Urbanization in State Haryana: An Appraisal (2013), published in Vision International Journal of Management and Commerce, Issue: 3 & 4, ISSN: 2320-1673.
2. Health status of women in Haryana: A challenge before NRHM (2014), published in edited book Maternal and child health in India policies and challenges, ISBN: 93-80574-73-8.
3. Human Recourse Development in ASEAN Countries (2014), published in Journal of Central University of Haryana, Vol.1, No.1, pp 97-104, ISSN: 2348-3377, Co-author with Chitra Choudhary and Rashmi Tanwar, Mahendergarh, Haryana.
4. Urbanization in Haryana (2014), published in procceding Haryana School of business (GJU Hissar)

Ms. Renu

1. Indebtedness of Farmer Households: A State Analysis (2012), published in edited book Sustainable Rural Development, ISBN: 978-81-7487-761-1, Radha Publications, Darya Ganj, Delhi
2. Changing Scenario of Unemployment among Youth in India (2012), published in Asian Journal of Research in Social Science and Humanities (Peer Reviewed International Journal of Asian Research Consortium), Vol. 2, Issue: 5, pp 218-234, ISSN: 2249-7315, Yamuna Nagar, Haryana.
3. How Geography Matters for Economic Development (2012), published in Radix International Journal of Research in Social Science (Journal of Radix International Educational and Research Consortium (Peer Reviewed International Journal), Vol. 1, Issue: 8, ISSN: 2250-3994, Chandigarh, Haryana.
4. Human Resource Development in ASEAN Countries (2014), published in Journal of Central University of Haryana (International Multidisciplinary Refereed Research Journal), Vol.1, No.1, March, pp.97-104, ISSN: 2348-3377, Co-author with Chitra Choudhary and Rashmi Tanwar, Mahendergarh, Haryana.
5. Women Empowerment, Maternal Health and Child Health Care (2015), published in edited book Exploring the Engagement and Employment of Women, ISBN: 13:978-93-5125-160-6, Concept publication, New Delhi.
6. Challenges of Poverty Measurement and its Alleviation Programs in India (2015), in edited book Poverty Alleviation in India: Issues and Challenges, pp.201-213, 2015, ISBN: 978-93-82816-23-2, Manglam Publishers & Distributors, Delhi.

Mr. Manoj Kumar

1. Performance of Selected Private Sector and Public Sector Banks in India (2013), published in International Journal of Banking Policy and Finance, Vol. 1, No. 1.
2. An Empirical Study of the Phillips Curve in India (2013), published in Indian Journal of Economics, Vo. XIVC, No. 374, Part III, pp 525, ISSN: 0019-5170.
3. Political Stability and Macroeconomics Variables Volatility in India (2014), Indian Journal of Applied Research, Vol. 4, No. 10, Oct., ISSN 2249-555X.
4. Comparative Analysis of Sustainable and Inclusive Development Among Indian States (2014), AARJSH, Vol.1, No. 28, ISSN 2278- 859X.
5. An Empirical Investigation between Agriculture and Allied Sector, and Manufacturing Sector in India (2015), published in edited book Poverty Alleviation in India, Issues & Challenges, ISBN 978-93-82816-23-2, Manglam Publishers & Distributors, New Delhi.

Dr. Ranjan Aneja

1. Regional Divergence in Economic Growth of Haryana: A District Level Analysis accepted for publication in 'Journal of Income and Wealth' A CSO funded Journal.
2. Regional Divergence in Growth in India: A Post Reform Period Study Published in 'Asian Economic Review', Vol. 51, No. 2, August, 2009
3. Spatial Dimensions of Industrial Development in Haryana: A Study of Post Reform Period, 'Indian Journal of Applied Economics' Lucknow, vol. 3, no. 1, pp. 100-121, January, 2006
4. Regional Variations of Socio-economic development in Haryana: A District level Analysis, 'Indian Journal of Regional Science', Vol. XXXX, No. 2, pp. 23-40, 2008
5. A Comparative Study of Book Value Insolvency of Indian Commercial Banks: An Application of Z-Score Model Published in 'IUP Journal of Financial Risk Management', Vol. X, No. 2, p.p 19-29, June, 2013.
6. Trends in Growth and Structure of State Domestic Product of Punjab, Published in 'Southern Economists', Vol. 48, No. 12, October, 2009.
7. An Estimation of Horticulture Development Index in India: A State level analysis, Published in 'Haryana Journal of Horticulture Science', 38(1&2): 37-39, 2009
8. Inter-District Variations in Agriculture Development in Haryana, Published in 'Contemporary Research in Business Management, Vayu Publication' New Delhi, pp. 323-329, March, 2009
9. Regional Disparities and Economic growth in Haryana: Testing of Williamson Curve Hypothesis Published in 'Infrastructure Policy and Microfinance', Macmillan Publishers India Ltd, pp. 421-429. June, 2010.
10. Evaluation of the Financial Viability: A Study of Indian Commercial Banks Published in Trends in Economics, American V-King Scientific Publishing, USA. ISSN: 2372-6571.
11. Horticulture Development in India: A Multi Aspects Analysis, Published in International Research Journal of Horticulture, ISSN: 2329-9436, DOI: 12966/irjh.10.01.2014
12. Regional Industrial Development in Haryana: A Composite Analysis published in 'Indian Journal of Economics and Development', Vol. 1, p.p. 18-23, Jan 2013
13. Irregularity on Indian Stock Market: An October Effect Analysis, Published in 'Exploration of Business and Management issues' Excel Books Pvt Ltd., pp. 190-198 March, 2010.
14. An Analysis of Trends in Growth and Structure of NSDP in Haryana, Published in 'Exploration of Business and Management issues' Excel Books Pvt Ltd., pp.329-338 March, 2010.
15. Central State Financial Relationship in India: Impact of Grants Distribution and Tax Devolution Published in 'Kautilya: Haryana Economic Journal' Vol (1), Issue No. 1, p.p 68-74, November, 2011
16. Measuring the Social Disparities in Haryana: An Empirical Study, Published in 'Business and Management: Contemporary Research Issues', Macmillan Publishers India Ltd, pp. 666-676, March 2011.
17. Estimation of Socio-Economic Development in Haryana Published in 'KEGEES Journal of Social Science', Vol. 3, No. 1, January, 2011.
18. A Study of Regional Convergence in Real per Capita Income: A Case Study of India and Canada, Published in 'Business Management: Key research Issues', Excel Books Pvt Ltd., 323-337, February, 2012.
19. A Comparative Performance Analysis of Indian Commercial Banks: An Application of Camel Model & Bankometer, published in 'Kautilya: Haryana Economic Journal', Vol.- I(2)-2011, p.p. 80-88.
20. Government Expenditure and Economic Growth in India: A Causality Analysis. Published in Issues in Business and Management, Wisdom Publication, February 2014.
21. Horticulture Development in India: A Feasibility Analysis. Published in Haryana Journal of Horticulture Science', 37(3&4): 231-33, April, 2008

22. Performance Analysis of SFCs in India: A case study of Haryana Financial Corporation Published in Arthshastra Indian Journal of Economics and Research.2015
23. Tourism and its effect on Economic Growth and Environmental Deterioration in India Accepted for Publication in Kautilya: Haryana Economic Journal, 2015

Department of Education

Dr. Sarika Sharma

1. Sharma, Sarkia (2013). " Self Esteem of M.Ed. & B.Ed. Learner" Co Author Pg 99 to 101 Navodit Refereed Journal ISSN 2347 4300 Volume I Dec. 2013
2. Sharma, Sarkia (2013). " Inclusive Education: Need of an hour" Co Author Pg 20 to 22 Navodit Refereed Journal ISSN 2347 4300 Volume I Dec. 2013
3. Sharma, Sarkia (2014). "Privatization in the field of Education" Co Author Pg 13 to 15 i Educate Refereed Journal ISSN 2348 9294 Volume I April 2014.
4. Sharma, Sarkia (2014). (IJMR ISSN: 2277 9302) entitled "Higher education & challenges of Quality and excellence" Volume III Issue3 (I), June2014 pg 51.
5. Sharma, Sarkia (2014). (IJMR ISSN: 2277 9302) entitled "Role of teacher education for peace and harmony" Volume III Issue4, July2014 pg 53.
6. Sharma, Sarkia (2015). (IJBMS) (2249-7463) Impact Factor 1.3409 "Impact of leadership Behaviour and Leadership Style on Employee Performance" in the year 2015
7. Sharma, Sarkia (2014). "A Study of AIDS Awareness among the college going students of Haryana"Volume II Issue 8(V) Nov 2014 (ISSN: 2277-9294) entitled
8. Sharma, Sarkia (2013). "A Study of Peer Pressure and Behavioural Problems Among Adolescents Achievement" NAVODIT (ISSN 2947-4300) entitled

Dr. Renu Yadav

1. Research Paper "Quality School Education: Capability Approach" in Journal of the International Society for Teacher Education, Hong Kong (Peer Reviewed, International Journal), Vol. 18, No. 1, 2014, ISSN 1029-5968, 2014, Pg. 107-115
2. Sexual Harassment: Hurdle for Women in Higher Education , International Journal of Central University of Haryana (Peer Reviewed, International Journal), Vol.1(1), March 2014, pg.13-19
3. Research Paper "Sexual Harassment in Research: A Pilot Study" in International Journal of Multidisciplinary Educational Research, (Peer Reviewed, International Journal), Vol 3, 2 (5), Impact no. 2.735, Feb 2014, Pg. 149-159
4. Research Paper on "Intimate Partner Violence and Role of Alcohol" in Journal of Social Welfare and Human Rights, Published by American Research Institute for Policy Development, March 2014, Vol. 2, No. 1, ISSN: 2333-5920 (Print), 2333-5939 (Online), pg. 239-249
5. Research Paper on "Preference for Son: Cry of Unborn Girl", in International Journal of Social Sciences (Peer Reviewed, International Journal) DOI No. 10.5958/23215771.2014.00019.2, pg. 457-462.
6. Research Paper on "Saga of Discrimination of Girl Child in India" in International Journal of Women's Research, Vol.3 , No.1 , Spring & Summer 2014, pp 105 - 122

Dr. Dinesh Chahal

1. "Comparative Study of Computational Skills of Secondary School Students of Government and Public Schools", In The Journal of Advance Education (ISSN 0974-6498)
2. "Laws And Rights For Indian Women" In The Journal Shikshan Anveshika Voliv, No11 Sep2014(ISSN 22311386)
3. "Realization And Responsibility of Spiritual World" In Lokayat: Journal of Philosophy(ISSN 2249-8380)Vol. Iv, No.2,September14
4. "Use of Information Communication Technology for Effective Teacher Education" in International Journal of Multidisciplinary Research and Development, Volume 2,ISSUE 10 Part A,with Impact Factor (ISRA) 5.742[ONLINE] ISSN: 2349-4182 [PRINT] ISSN: 2349-5979
5. "Integration of ICT In Teacher Education Programme", (Chapter – Ten) Pp 98-102in The Book "Educational Technology"By Edited By Dr. R.L.Nikose,APH Publishing Corporation,Delhi ,2014 (ISBN 978-93-313-2474-0)
6. "Women Empowerment In India" (Chapter – Eight) Pp 80-85 in The Book "Women Empowerment: Perspective Concept, Problems And Prospects", Lap Lambert Academic Publishing, Germany,2014 (ISBN 978-3-659-57864-9)

Ms. Aarti Yadav

1. Constructivist Approach in Education: A Case Study published in Journal of Contemporary Educational Research and Innovations in April, 2015. ISSN 1029-5968, Global Impact Factor-0.612, International
2. Book Chapter on Measurement and Evaluation to be printed by Department of Distance Education, University of Kashmir, Srinagar.

Department of English and Foreign Languages

1. Dr. Bir Singh Yadav

1. The Solitary Reaper: Wordsworth's Music of Suffering Humanity published in Sanskriti: Shodh Patrika, Inter-disciplinary Ref. Journal 2011-12 Puranank-11 ISSN . 0974-8911.
2. William Wordsworth's Nutting: An Insight into Deep Ecology published in Sanskriti: Shodh Patrika, Inter-disciplinary Ref. Journal. 2011-12 Purnank-11, ISSN: 0974-8911.
3. Wordsworth's Realisation of The Spiritual Self in Lucy Gray and other Poems published in Oasis, Vol. 1 June, 2009. ISSN No.0975-4334.
4. Translation: An Evolutionary Philosophic Process in Language Literature, Law and Culture published in Glimpses: A Bi-Annual International Journal of Multi Disciplinary Research, Vol. 1, Dec., 2011, ISSN 2250-0561.
5. Book Review- Yajnaseni By Pratibha Ray, Trans. By Pradip Bhattacharya published in Glimpses: A Bi-Annual International Journal of Multi Disciplinary Research, Vol., 1, Dec., 2011, ISSN 2250-0561.
6. Disrupting Patriarchy: A Study of Pratiibha Ray's Yajnaseni-The Story of Draupadi published in Unheard Melody :A Refereed Research journal of English Literature. Vol VII, Dec., 2011, ISSN 2229-4236.

7. Kubla Khan: S. T. Coleridge's Psycho-Philosophic Probing into the Paradoxical Nature of Life and the World published in *Glimpses; A Peer- Reviewed Refereed International Journal*. Vol. 1 No. 3 Dec. 2013, ISSN: 2250-0561.
8. Ode To Autumn: John Keats' Pragmatic and Mature Vision of Life published in *Glimpses; A Peer- Reviewed Refereed International Journal*. Vol. 2, No. 2, June, 2013, ISSN :2250-0561.
9. Rabindranath Tagore's Epistemological Insight into The Hero: A Phenomenological Approach published in *Labyrinth: An International Refereed/Indexed Journal of Postmodern Studies*, Vol. 4/ No4 Oct. 2013, ISSN: 0976-0814.
10. William Wordsworth's Ethical Vision: The Prelude and Other Poems published in *Ruminations- A Peer-Reviewed Bi-Annual International Journal for Analysis and Research in Humanities and Social Sciences*, Vol.2, June, 2012, ISSN: 2229-6751.
11. Ode TO Duty: Wordsworth's Vision of the Universal Creed published in *Glimpses-A Peer-Reviewed Bi-Annual Refereed International Journal of Multi Disciplinary Research*, Vol. – 2, June 2012, ISSN 2250-0561.
12. Book Review: Postcolonial Ecocriticism by Graham Huggan and Helen Tiffin published in *Labyrinth-An International Refereed Journal of Postmodern Studies*, Vol.3 /No3- July 2012, ISSN 0976-0814.
13. Spiritual and Ethical Value Integrated Education: A Need for Technical Students published in *Proceedings of International Conference on Role and Responsibilities of Humanities and Social Sciences in Technical Education*, 16-17 March, 2012 organised by SRM University, Ghaziabad(U.P.) ISBN 978-93-81465-79-0.
14. A Philosophic Perspective on Dalit and Dalitism in Literature published in *National Seminar on Dalit Literature Challenges and Potentialities* organised by Govt. College, Ateli on March 16-17, 2009. ISBN 81-8043-066-9.
15. Translation Praxis: A Philosophic Reflection published in *National Seminar on Translation, Bilingualism and Pedagogy* organised by Govt. College, Ateli on Jan. 14-15, 2012. ISBN:978-93-8043-095-2.
16. Progress and Happiness of Mother Earth in all Inclusive Democratic System published in *National Seminar on Inclusive Democracy: People, Power and Progress* organised by CUH, Mahendergarh on May 30-31, 2012.
17. Integrated Vision of Spirituality and Science: A Reflection of Divine Culture on the Earth published in *IOSR Journal of Humanities and social science* Vol.:1, Issue:2, Sep-Oct. 2012. (ISSN: 2279-0845)
18. Spiritual and Ethical Ascendancy in William Wordsworth's Tintern Abbey published in *Ars Artium An International Peer-Reviewed-cum-Refereed Research Journal Of Humanities And Social Sciences*, New Delhi . Vol. 1, Jan., 2013. ISSN: 2319-7889.
19. Building and Breaking Illusions In the Patriarchal Universe: An Explorative Insight Into Chitra Banerjee Divakaruni's *The Palace of Illusions* published in *Labyrinth: An International Refereed/Indexed Journal of Postmodern Studies*. Vol. 4/No,1 Jan. 2013. ISSN:0976-0814.
20. Ingrained Spirituality in Femininity: A Study of Chitra Banerjee Divakaruni's *The Palace of Illusions* published in *Ruminations: An International Journal of Humanities and Social Sciences* Vol. 3 No 1 Dec. 2012. ISSN: 2229-6751.
21. Spirituality Across Cultures: A Study of World Literature published in *Ruminations: An International Journal of Humanities and Social Sciences* Vol. 3 No 2 Dec. 2012. ISSN: 2229-6751.
22. Immortality Ode: William Wordsworth's Insight Beyond Life published in *Glimpses: A Peer-Reviewed Refereed International Journal of Multidisciplinary Research*. Vol. 1 No. 2 Dec.,

2012. ISSN: 2250-0561.
23. Translation in Literature: A Creative and Truth Pursuing Process published in Labyrinth: An International Refereed/Indexed Journal of Postmodern Studies. Vol. 5 / No. 1 Jan. 2014. ISSN: 0976-0814.
 24. Burning and Balmy Impact of British Rule on Indian Psyche: A Pragmatic Reflection published in Journal of Rajasthan Association for Studies in English. Vol. 9. 2013. ISSN: 0975-3419.
 25. Unified Vision of Truth and Beauty in John Keats' Ode on a Grecian Urn published in Ars Artium: An International Peer-Reviewed-Cum-Refereed Research Journal Vol. II January 2014. ISSN: 2319-7889.
 26. Travelogues and Creative Literature: Focus on William Wordsworth and S. T. Coleridge published in Ruminations: A Peer Reviewed Bi-Annual International Journal for Analysis and Research Vol.4 No. 1 Dec.2013. ISSN: 2229-6751.
 27. Ecocriticism As a Praxis: An Explorative Insight to Save the Earth published in Exploring Modern / Postmodern Critical Theory National Seminar March 23-24,2013 Govt. College Ateli. ISBN: 978-81-8455-486-1.
 28. Dreams Within Dream in Chitra Banerjee Divakaruni's Queen of Dreams: Psycho analytic Approach as Interpretive Tool published in Labyrinth: An International Referred/Indexed Journal of Postmodern Studies Vol. 5 No.2/April,2014. ISSN:0976-0814.
 29. Law, Literature, Language and Justice in Shakespeare's The Merchant of Venice published in Journal of Central University of Haryana. March, 2014. ISSN: 2348-3377.
 30. Reality and Imagination in Pratibha Ray's Yajnaseni published in Oasis: Jun 2014 Vol 6. ISSN: 0975-4334
 31. S. T. Coleridge's Psycho-Philosophic and Metaphysical Exploration in The Ancient Mariner published in Labyrinth: An International Referred/Indexed Journal of Postmodern Studies Vol.5 No.4 ,Oct.2014. ISSN: 0976-0814.
 32. Peace Promoting Power of Literature: A Reflection on Mahabharata published in Glimpses: A Peer- Reviewed Refereed International Journal of Multidisciplinary Research. Vol. 2 No. 3 June., 2014. ISSN: 2250-0561.
 33. William Wordsworth's Epistemological Vision: Empiricism V/S Rationalism published in Ruminations: A Peer Reviewed Bi-Annual International Journal for Analysis and Research Vol. 4 No.2 June, 2014 Abstracted & Indexed at Ulrich USA. ISSN: 2229-6751.
 34. Representation of Women in Literature, Law and Culture published in Gnosis: An International Journal of English Language and Literature. Vol. 1/ No 1-Oct., 2014. ISSN 2394-0131.
 35. A Philosophical Perspective on Dalit and Dalitism in Literature published in Dalit Literature Challenges and Potentialities. Ed. Karan Singh published by Creative Books, New Delhi in 2009. (ISBN 81-8043-066-9)
 36. Spiritual and Ethical Value Integrated Education: A Need for Technical Students published in Role and Responsibilities of Humanities and Social Sciences in Technical Education. Ed. Vijay Roy published by Alfa Publication, New Delhi in 2012. (ISBN 978-93-81465-79-0)
 37. Translation Praxis: A Philosophical Reflection published in Translation Bilingualism and Pedagogy. Ed. Karan Singh published by Creative Books, New Delhi in 2012. (ISBN: 978-93-8043-095-2)
 38. Spiritual and Ethical Value Integrated Education: A Need for Technical Students published in Value Education and Professional Ethics: An Anthology. Ed. Vijay Kumar Roy & Vijaya Lakshmi published by Jnanada Prakashan, New Delhi in 2013. (ISBN: 978-81-7139-555-2)
 39. Ecocriticism as a Praxis: An Explorative Insight to Save the Earth published in Exploring Modern and Postmodern Critical Theory. Ed. Karan Singh. Published by Omega Publication,

- New Delhi in 2013. (ISBN: 978-81-8455-486-1)
40. *Spirituality Across Cultures: A Study of World Literature* published in *A Comparative Literature: Critical Responses*. Ed. Tribhuwan & Roy published by Paragon International Pub., New Delhi in 2014. (ISBN: 978- 93- 83292-41-7)
41. *Translation in Literature: A Creative and Truth Pursuing Process* published in *Yking Concise Encyclopaedia of Language, Literature and Culture*. Ed. Satendra Kumar and Manoj Kumar published by Yking Books, Jaipur in 2014. (ISBN: 978-9382532-48-4)

Dr. Sanjiv Kumar

1. *Evolutionary Paradigms of Culture and Culture Studies: An Overview*. *The Vedic Path*. Vol. LXXXV, No. 1&2, 2011. ISSN 0970-1443. pp. 48-57.
2. *Excruciating Portrayal of Humanity in Upamanyu Chatterjee's Way to Go*. *The Vedic Path*, Vol. LXXXV, No. 3&4, 2011, ISSN 0970-1443. pp. 144-154.
3. *Indian English Fiction Today*. *Indexed International Journal The Vedic Path*, Vol. LXXXV, No. 3&4, 2011. ISSN 0970-1443. pp. 36-47.
4. *Badal Sircar's Experiments towards Decolonisation*. *Writers Editors Critics (WEC)* (March 2012), ISSN 2231-198X. pp. 149-56.
5. *Redefining Intertextuality, Labyrinth*, *An International Indexed Refereed Journal of Postmodern Studies*, ISSN 0976-0814.
6. *Inclusivity in a Multilingual Country: A Paradoxical Vision*. *The Vedic Path*, Vol. LXXXVIII, No.3&4, Jul-Sept./ Oct.-Dec. 2014, ISSN- 0970-1443.
7. *Emerging Global Scenario and English Language Teaching in India*. *Language in India*. Volume 12: 1 January 2012. ISSN 1930-2940.
8. *Bhabha's notion of 'mimicry' and 'ambivalence' in V.S. Naipaul's A Bend in the River*. *Researchers World* Volume 2, Issue 4, Oct., 2011. (Online ISSN: 2229-4686, Print ISSN: 2231-4172). pp. 118-122
9. *Transforming Realities vis-à-vis Postmodern Indian English Fiction*, *The Criterion: An International Journal in English*. Vol. II. Issue. IV December 2011. ISSN (0976-8165).
10. *Colonial Attitude towards English vis-à-vis Glocal Trends in ELT*. *ELT Weekly* Volume 3, Issue 92, July 17, 2011. ISSN 0975-3036.
11. *Contextualizing Dalit Aesthetics in Dalit Autobiographies*. *International Journal of English: Literature, Language and Skills (IJELLS)*, Vol.1, Issue I, ISSN 2278-0742. pp. 15-23.
12. *Language and Culture in Translation*. *Dialogue, A Refereed Journal*. ISSN 0974-5556
13. *Dynamics of Multiculturalism in V.S. Naipaul's Guerillas and A Bend in the River*. *Oasis*, Radha Publications, New Delhi. ISSN 0975-4394. pp. 50-57.
14. *Enigma of Expatriate Indians in V.S. Naipaul's Fiction: A Study of A House for Mr. Biswas and The Mystic Masseur*. *Oasis*, Radha Publications, New Delhi. ISSN 0975-4394.
15. *University Education in India: Rethinking Priorities*. *University News Journal*, Vol. 52, No. 15, April 14-20, 2014. ISSN 0566-2257.
16. *Social Media in the Multicultural Context—Marginalising the Marginals*. *Journal of Rajasthan Association for Studies in English (RASE)*. ISSN 0975-3419.
17. *Locating the Aesthetics of Dalit Life Writings*. *Creative Forum*. ISSN 0975-6396.
18. *Locating Culture, Acculturation and Multiculturalism in Bharti Mukherjee's Desirable Daughters*. Published in the proceedings of UGC sponsored National Seminar organised at Govt. College Ateli from March 26-27, 2010 with the title *Ethnicity/Multiculturalism: Identity Politics and Cosmopolitanism in Literature*, eds. Jyoti Yadav, Karan Singh and Amod Rai,

- Creative Publications, New Delhi, 2010. pp. 90-100, ISBN: 81-8043-075-8.
19. Interrogating 'Subaltern': A Critique of Can the Subaltern Speak. Published in the proceedings of UGC sponsored National Seminar organised at Govt. College Ateli from March 16-17, 2009 with the title Dalit Literature: Challenges and Potentialities, eds. Jyoti Yadav, Karan Singh and Amod Rai, Creative Publications, New Delhi, 2009. ISBN: 81-8043-066-9.
 20. Higher Education in India: Problems and Perspectives. Published in the Proceedings of a NAAC Sponsored North Regional National Seminar on the theme Developing Best Practices for Quality Assurance in Govt. Colleges organised by Govt. Ranbir College Sangrur (Punjab) from Feb. 25-26, 2005. pp. 41-49
 21. English Language Teaching in Transforming Indian Scenario. Published in the Proceedings of a National Conference on the theme Teaching English to Socially and Culturally Marginalised Learners organised Jain Vishva Bharati Institute, Ladnun, Rajasthan from March 3-4, 2013, ISBN No. 93-83634-00-2.
 22. Global Choices Versus Unheard Voices: Opportunities And Challenges For Indian Women. Feminine Fragrance, Ed. Dr. Arvind Nawale, Gnosis Press, New Delhi, 2011. ISBN 978-81-7273-656-9.
 23. Translation as a Unifying Force. Rethinking Translation, Ed. Sanjay Goyal, Publisher: Jain Vishva Bharti Institute, Ladnun, Rajasthan, 2012. ISBN No. 93-83634-02-6.
 24. Enigma of Indian Women. Monograph published by Central University of Haryana titled Women Empowerment: Towards a New Dawn, 2012

Dr. Manoj Kumar

1. Behind the wedding veil: Child marriage as a form of Exploitation of Girls: A Study of R. K. Narayan's Grandmother's Tale published in Literary Discourses: A Peer-reviewed International Research Journal of Literature and Art Vol. III (No. 01) May 2012, (ISSN: 0976 2035)
2. Cosmopolitanism in Rohinton Mistry's Family Matters published in The Vedic Path December 2011 (Index Journal, ISSN: 0970-1443, Registration No. 29063/76)
3. Application of Kuntaka's Vakrokti Siddhanta in Rohinton Mistry's Fiction published in Literary Discourses: A Peer-reviewed International Research Journal of Literature and Art Vol. II (No. 01) May 2011, (ISSN: 0976 2035)
4. Family as Value: An Assessment of Three Canadian Short Stories published in The Vedic Path Vol. LXIII (No.03) Sep. 2005 (Index Journal, ISSN: 0970-1443, Registration No. 29063/76)
5. Indian Diaspora in Canada: An Overview published in The Vedic Path Vol. LXIX (No.02) Apr-June 2006 (Index Journal, ISSN: 0970-1443, Registration No. 29063/76)
6. The Persian Culture in the Fiction of Rohinton Mistry published in Kala Saurabh A University Research Journal
7. Political Consciousness in Rohinton Mistry's Such a Long Journey published in Research Vol. 6, No.02 Autumn 2006 (ISSN: 0972-7663)
8. Historical Consciousness in Rohinton Mistry's A Fine Balance published in Kala Vaibhav Vol. XVIII 2011(ISSN: 0975 5756)
9. Novel as History: A Study of Rohinton Mistry's Such a Long Journey published in -Kala Vaibhav Vol. XVII 2007-08 (ISSN: 0975 5756)

10. Kiran Desai's *The Inheritance of Loss: An Expression of Hypocrisy* published in *English Literature: Voices of Indian Diaspora* (ISBN: 978-81-269-1048-9) (II Co-author)
11. *The Vowels of English Language: A Diagrammatic Presentation* published in *A Holistic Approach to Communication* (ISBN: 978-81-8435-129-3) (I Co-author)
12. *Economic Hardships and Exploitation of Lower Caste Woman in the Fiction of Rohinton Mistry* published in an anthology entitled *Studies in Contemporary Canadian Literature* published by Sarup Book Publishers Pvt. Ltd., New Delhi, India. (ISBN: 978-81-7625-634-6)
13. *New Woman in Namita Gokhale's Paro: Dreams of Passion* published in an anthology entitled *Perspectives on Women Empowerment* published by Yking Books, Jaipur, India (978-93-80930-09-1)
14. *Samskara: A Rite for a Dead Man: A Rite for Birth of a New Person.* published in an anthology entitled *Yking Concise Encyclopaedia of Language, Literature and Culture* published by Yking Books, Jaipur, India (ISBN: 978-93-82532-48-4)

Mr. Sudeep Kumar

1. Kumar, Sudeep. Rev. of *Towards an Aesthetics of Dalit Literature* by Sarankumar Limbale. *Journal of Central University of Haryana*. Vol. 01, Issue 01 (March 2014) ISSN 2348- 3377
2. Kumar, Sudeep. *Nativism: A cultural Theory and Conceptual Divergence*. *Dialog*, No.22 (Spring 2012). ISSN 0975-4881. [National, Referred journal, single author].
3. Kumar, Sudeep. *Value-concerns and Contemporary Indian Drama: A Study of Gurcharan Das' 9 Jakhoo Hills*. *The Criterion: An International Journal in English*, Vol. 4, Issue ii (April, 2013). ISSN 0976-8165. [International, Refereed e-journal, Single author].

Ms. Rinu

1. *ELT in Rural Areas: A Challenging Opportunity* published in *Journal of Central University of Haryana*. March, 2014. ISSN: 2348-3377.

Dr. Snehsata

1. *Albert Camus and Capital Punishment: A Review of Reflections on the Guillotine*. *Ruminations* (International, Peer- Reviewed), Vol.3-No.1 December 2012. ISSN. 2229-6751. Pp. 88-96.
2. *The Myth of Sisyphus: A Philosophical Journey through the Realms of Absurd*. *The Labyrinth* (International, Peer- Reviewed). Vol.4-No.3 July 2013. ISSN. 0976-0814. Pp. 126-132.
3. *The Algerian Camus: A Reassessment of Albert Camus's Affairs with Algeria*. *Glimpses* (International, Peer- Reviewed), Vol.2-No.2 June 2013. ISSN. 2220-0561. Pp. 78-90.
4. *Existentialism: A Way of Life*. *Journal of Central University of Haryana*. (International, Peer- Reviewed). Vol.1-No.1 March 2014. ISSN. 2348-3377. Pp. 49-55.

Department of Environment Science

Dr. Mohini Singh

1. Singh, M. and Srivastava, R.K. 2015. Feasibility of using tuberose (*P. tuberosa* L.) in horizontal subsurface flow constructed wetland for heavy metal removal from domestic wastewater. *Environmental Progress and Sustainable energy*. DOI: 10.1002/ep.12214

2. Singh, M. and Srivastava, R.K. 2014. Treatment efficacy of short rotation woody species and their economic appraisal in vegetation filter system. *Annals of Plant and Soil Research*, 16(4): 289-293.
3. Pandey, A., Singh, M., Srivastava, R.K., Vasudevan, P. 2011. Pollutant removal potential, growth and nutritional characteristics of short rotation woody crops in grey water vegetation filter system, *Journal of Scientific and Industrial Research* 70: 610-615.
4. Singh, M. and Srivastava, R.K. 2011. Sequencing batch reactor technology for biological wastewater treatment: a review, *Asia-Pacific Journal of Chemical Engineering* 6 (1): 3-13.
5. Singh, M., & Srivastava, R. (2015). Vegetation Filters: The Potential of Short Rotation Woody Crops for the Treatment of Municipal Wastewater. In S. Singh, & K. Srivastava (Eds.) *Handbook of Research on Uncovering New Methods for Ecosystem Management through Bioremediation* (pp. 196-221). Hershey, PA: Information Science Reference. doi:10.4018/978-1-4666-8682-3.ch009.
6. Srivastava, R.K. and Singh, M. (2014). Gandhian principles of waste utilization for environmental sustainability. In: Proc. of future of rural chemical industries in India. Rural Chemical Industry Division, Wardha, Jan 16-17, 2014, pp.25-35.
7. Singh, M. and Srivastava, R.K. (2009). Performance study of a fixed-bed biofilm sequencing batch reactor under different operational conditions. 4th Uttarakhand State Science & Technology Congress, G.B.P.U.A.&T., Pantnagar, Uttarakhand, India, pp.91-99.

Dr. Mona Sharma

1. Mona, S., Kaushik, A. 2015. Chromium and Cobalt Sequestration using Exopolysaccharides Produced by Freshwater Cyanobacterium *Nostoc linckia*, *Ecological Engineering* doi:10.1016/j.ecoleng.2015.04.037
2. Mona, S. and Kaushik, A. 2015. Screening metal-dye-tolerant photoautotrophic microbes from textile wastewaters for biohydrogen production. *Journal of Applied Phycology* 27: 1185-1194
3. Bansal, D., Narsi R. Bishnoi, and *Mona, S. 2015. Challenges and benefits of implementing an Environmental Management System: A review. *International Journal of Advanced Scientific and Technical Research* 5 (2), 159-180
4. Mona, S., Kaushik, A. Kaushik, C.P. 2013. Prolonged hydrogen production by *Nostoc* in photobioreactor and multi-stage use of the biological waste for column biosorption of some dyes and metals. *Biomass & Bioenergy* 50, 27-35
5. Anjana, K., Kiran, B., Mona, S., and Kaushik, A., 2012. Biological photohydrogen production by cyanobacteria: future prospects as a fuel, *Journal of Environmental Research and Development* 6 (3A), 779-783
6. Mona, S., Kaushik, A. and Kaushik, C.P. 2011, Hydrogen Production and metal-dye bioremoval by a *Nostoc linckia* strain isolated from textile mill oxidation pond. *Bioresource Technology* 102, 3200-3205
7. Kaushik A., *Mona, S. and Kaushik, C.P. 2011. Integrating photobiological hydrogen production with dye-metal bioremoval from simulated textile wastewater, *Bioresource Technology* 102, 9957-9964
8. Mona, S., Kaushik, A. and Kaushik, C.P. 2011. Biosorption of Reactive Dye by Waste Biomass of *Nostoc linckia*, *Ecological Engineering* 37, 1589-1594.
9. Mona, S., Kaushik, A. and Kaushik, C.P. 2011, Biosorption of Chromium(VI) by Spent Cyanobacterial Biomass from a Hydrogen Fermentor using Box-Behnken Model. *International Biodeterioration & Biodegradation* 65, 656-663

10. Mona, S., Kaushik, A. and Kaushik, C.P. 2011. Sequestration of Co(II) from aqueous solution using immobilized biomass of Nostoc linckia waste from a hydrogen bioreactor. *Desalination* 276, 408–415.
11. Mona, S., Kaushik, A. and Kaushik, C.P. 2011, Waste biomass of Nostoc linckia as adsorbent of crystal violet dye: Optimization based on statistical model. *International Biodeterioration & Biodegradation* 65, 513-521
12. Sharma, M., Rani, N., Kamra, A., Bala, K. and Kaushik, A. 2009, Growth, Exopolymer Production and Metal Bioremoval by Nostoc Punctiforme in Na⁺ and Cr(VI) Spiked Medium. *Journal of Environmental Research and Development*. 4 (2), 372-379
13. Sharma, M., Kaushik, A., Somvir, Bala, K. and Kamra, A., 2008, Sequestration of Chromium by exopolysaccharides of Nostoc and Gloeocapsa from dilute aqueous solutions. *Journal of Hazardous Materials* 157, 315-318.
14. Mona, S., Kaushik, A. and C.P. Kaushik, 2012, Potential of exopolysaccharides of a cyanobacterial consortium for sequestration of metal-dye from aqueous solution Published in proceeding of National Seminar on “Strategies for Mitigation of Environmental Degradation and Climate Change” (ISBN No. 978-93-80872-61-2/ Arihant Publications) pp.101-104.
15. Anjana, K., Kiran, B., Mona, S., and Kaushik, A., 2008, Heavy Metal Tolerance and Biosorptive Potential in Microalgae and Cyanobacteria Isolated from Contaminated Sites. In: Proceedings of National Seminar on “Environment (ISBN No. 978-81-906518-5-1/ Vayu Education of India Publications)” pp. 331-336.

Dr. Anoop Yadav

1. Yadav A. Suthar S. and Garg, V. K. (2015) Dynamics of microbiological parameters, enzymatic activities and worm biomass production during vermicomposting of effluent treatment plant sludge of bakery industry, *Environmental Science and Pollution Research*, Accepted (in press). DOI:10.1007/s11356-015-4672-7.
2. Mehta J., Dilbaghi N., Dudeja S S., Yadav A. and Sharma P. (2015) Decolourization of simulated dye in aqueous medium using bacterial strains, *European Journal of Advances in Engineering and Technology*, 2015, 2(3): 9-18
3. Mehta J., Sharma P. and Yadav A. (2014) Screening and identification of bacterial strains for removal of COD from pulp and paper mill effluent, *Advances in Life Sciences and Health*, Vol. 1(1), 34-42.
4. Yadav A. and Garg, V. K. (2014) Effect of poultry waste on vermicomposting of anaerobically digested cattle dung slurry, *International Journal of Environmental Technology and Management (IJETM)*, Vol. 17, Nos. 2/3/4. 154- 164
5. Mehta J, Yadav A, Dilbaghi N and Sharma P (2014) Physico-chemical characterization of distillery effluent and COD reduction by using *Bacillus badius* and *Lysinibacillus fusiformis*, *International Journal of Emerging Trends in Science and Technology*, Vol. 1(3), 340-346.
6. Garg V. K., Yadav A, Singh K, Singh M, Bishnoi M and Pulhani V. (2014) Uranium distribution in groundwater in Hisar city, India and health risk assessment, *The International Journal of Occupational and Environmental medicine*. 5(2), 112-114.
7. Gupta, R., Yadav, A. and Garg, V. K. (2014). Influence of vermicompost application in potting media on growth and yield of marigold crop, *International Journal of Recycling of Organic Waste in Agriculture*. 3:47

8. Yadav, A. Gupta, R and Garg, V.K. (2013). Organic manure production at commercial scale from Cow Dung and Biogas Plant Slurry by vermicomposting, *International Journal of Recycling of Organic Waste in Agriculture*. 2:21 1-7 (<http://www.ijrowa.com/content/2/1/21>)
9. Yadav A. and Garg, V. K. (2013) Nutrients recycling from industrial solid sludges and weeds by vermiprocessing, *Pedosphere*, Volume 23, Issue 5, 668–677
10. Garg, V.K., Suthar, S., and Yadav, A. (2012) Management of food industry waste employing vermicomposting technology, *Bioresource Technology*, 126 437–444.
11. Yadav A. and Garg, V. K. (2011) Vermicomposting – An effective tool for the management of invasive weed *Parthenium hysterophorus*, *Bioresource Technology*, 102, 5891–5895.
12. Yadav, A. and Garg, V.K. (2011) Industrial wastes and sludges management by vermicomposting, *Reviews in Environmental Science and Biotechnology*, 10, 243-276
13. Yadav, A. and Garg, V.K. (2011) Recycling of organic wastes by employing *Eisenia fetida*, *Bioresource Technology*, 102, 2874–2880.
14. Yadav, A. and Garg, V.K. (2010) Bioconversion of Food Industry Sludge into value-added product (vermicompost) using epigeic earthworm *Eisenia fetida*, *World Review of Science, Technology and Sustainable Development*, Vol. 7, No. 3, 225-238.
15. Yadav, A., Mudhoo, A. and Garg, V.K. (2009) Growth and fecundity *Eisenia fetida* earthworm during vermicomposting of food industry sludge *International Journal of Process Wastes Treatment*, Vol. I, No. I, pp. 71-81.
16. Yadav, A. and Garg, V.K. (2009) Feasibility of nutrient recovery from industrial sludge by vermitechnology, *Journal of Hazardous Materials*, 168 262–268.

Department of Geography

Dr. Aneesh Kumar Mishra

1. 'Infrastructure Development in Mau District, Uttar Pradesh (2014)', *Jambudweep Shodh Patrika*, Vol. 6, No. 04, Dec. 2014, pp. 30-40 (ISSN 2249-3859).
2. 'Use and Determinants of Maternal and Child Health Care among Currently Married Women in Rajasthan', *Geographical Review of India*, Vol. 75, No. 3, Sept. 2013, pp. 236-248 (ISSN 0375- 6386).
3. 'Urban Master Plans in Rajasthan, India: The Case of Alwar', *Management Research and Practice*, Vol. 4, Issue 1, March 2012, pp. 31-44 (ISSN: 2067-2462).
4. 'Histogenesis and Growth of Urban Landscape of Alwar', *National Geographical Journal of India*, Vol. 57 Pt (4), December 2011, pp. 11-18 (ISSN-0027-9374).
5. 'Spatio-Temporal Dimension of Female Literacy in Hanumangarh District (Rajasthan)', *Bhartiya Samajik Vigyan Shodh Patrika*, Vol. 21, No.1, Dec. 2011, pp. 199-204 (ISSN: 0974-0694).
6. 'Trend of Population Growth in Alwar City', *The North Indian Geographical Journal*, Vol. 41, No. 4, December 2011, pp. 79-84 (ISSN: 0042-1618).
7. 'An Appraisal of Spatial Characteristics and Changes in Land Use of Alwar City', *National Geographical Journal of India*, Vol.57, Pt. 1, March, 2011 pp. 1-18 (ISSN-0027-9374).
8. 'An Appraisal of Growth and Spatial Distribution of Housing in Alwar City of Rajasthan', *Magadh Geographical Review*, Vol. X, No.1, 2010, pp. 204-216 (ISSN: 0975-489X).
9. 'Spatial Characteristics of Commercial Land Use of Alwar City, Rajasthan', *National Geographical Journal of India*, Vol. 55 Pt (4), December 2009, pp. 1-12 (ISSN-0027-9374).

Dr. Naresh Kumar Verma

1. Political and Economic Dimensions of Sustainable Development, World Affairs, Vol. 12, No. 2, Summer 2008.
2. Iran's Energy Geopolitics, Sambhashya, Vol. III, No. 1, 2011.
3. Energy Considerations as the Driver of Nuclear Proliferation, Deccan Geographer, Vol. 50, No. 2, December 2012.
4. The Importance of Maritime Transport and Security, Abhikalp, Vol. 2, No. 1, 2013.
5. Efforts towards Sustainable Development: A Comparative study of Rio 1992 and Rio+10, Sambhashya, Vol. V, No. 1, 2013.
6. Problems and Prospects in the North Korean Denuclearisation Process, Proliferation and Arms Control, December 2007, with Sameer S. Patil.

Dr. Kheraz

1. 'Loneliness among elderly persons: a case study of Rajasthan, International Journal of Multidisciplinary Research and Development, Vol.2, Issue 2, pp. 01-04, ISSN 2349-5979, Impact factor- 3.762.
2. 'The differently abled population: a spatial analysis from socio regional perspective in India', International Journal of Multidisciplinary Research and Development, Vol.2, Issue 3, pp. 338-345, ISSN 2349-5979, Impact factor- 3.672
3. 'Child labour: social status does matter!' in Perspectives in Social Exclusion, Anmol Publications, New Delhi.
4. 'The relation of economic independence and socio-economic and health aspects of the elderly persons: a study of Rajasthan' Issues and Concerns of Elderly People in India, Book Age Publications, New Delhi.
5. 'Socio-Economic and Demographic Analysis of Elderly of South Asia', Issues and Concerns of Elderly People in India, Book Age Publications, New Delhi .

Department of Hindi and Indian Languages

Dr. Arvind Singh Tejawat

1. Meeran kaa Jeevan Sangharsh, Tadbhav, Vol.: 30, Page No.: 27

Dr. Siddharth Shanker Rai

1. Article entitled Ganth Gyi Hai Vah Jameen Meri Atma Main Published in LOKCHETNA (VOL.1) (ISSN2277-5013) from Ranchi in 2011,pp:47-48.
2. Article entitled Sab Seekhate Hain Hamse Andaz Guftagu Ka Published in AKLAN,VOL.II (ISSN-0976-1616) from , Varanasi Uttar, SEPT.2011 ,pp:114-117.
3. Article entitled Kavita Katyayni ki in AABHA (VOL.15) from Jahanabad Jila Hindi Sahitya Sammelan, Bihar, March 2009,pp:28-31.
4. Article entitled Adhunik Hindi Kavita Aur Aalochana ka Marxwadi Path in SHEETAL VAN I(VOL.II), from Saharanpur, U.P. in 2011,pp:76-79.
5. Review entitled Rajnitivihin Daur Main Rajniti Ka Sahas in VASUDHA ,(VOL.87) from Pragatisheel Lekhak Sangh, Bhopal, Oct-Dec 2010,pp:293- 295.

6. Article entitled Jab-Jab Yah Rat Barasti Hai in SHAKHI, (VOL.20) from Premchand Sahitya Sansthan, Varanasi, April 2010,pp:204-207.
7. Article entitled Jiski Kavita Main Ishwar Ki Koi Jagah Nahi in PRASANG (VOL.16) from Hazaribag, Zharkand in 2011,pp:380-383.
8. Article entitled Itihas Drshiti Ke Bahane Bahut Kuch Published in SAMKALEEN ABHIVYAKTI (VOL.40) from New Delhi in 2011,pp:62-63.
9. Article entitled Samkleen Kavita Aur Stri Mukti Published in SAMBHASHYA (VOL.1)(ISSN 2229-4066) from Varanasi in July-Dec.2012,pp33-39.
10. Article entitled Stri Vimarsh: Upalabadi Evam Seemayen Published in LOKCHETNA (VOL.2-3) (ISSN-2277-5013) from Ranchi in 2013,pp:128-146.
11. Article entitled Samkaleen Kavita Ka Stri Swar in VIKSHA (ISSN-0975- 3788)VOL.1 , from Varanasi, JAN-JUNE 2009,pp:42-46.

Dr. Amit Kumar

1. Kraj Sath-Sath chalta hai kisan Published in HARIGANDHA, Feb-March 2009.
2. Vaishikaran : samrajyawadi Shoshan ka Dusra nam Published in PANCHSHEEL SHODH SAMEEKSHA, Oct-Dec. 2009.
3. Kisan se Majdoor banana ki Katha: Poos ke Rat Published in VAGARTHA, Barteeya Bhasha Parishad, Kolkata, May 2010.
4. Hariyana Ke Hindi Sahitya me Kisan Published in HARYANA JOURNAL, KUK, NOV 2011.
5. Karj Ke Andhere me Kisan Published in VAGARTHA, Barteeya Bhasha Parishad, Kolkata, FEB. 2011.
6. Upekshit Varg Ki Peeda ko Abhivyakt Karti Tolstoy Ki Khaniyan Published in PANCHSHEEL SHODH SAMEEKSHA, Apr-June. 2012.
7. Saadat Hasan Manto Ki Kahaniyon Me Ashlita Published in PANCHSHEEL SHODH SAMEEKSHA, Oct-Dec. 2012.
8. Hindi: Vartmaan Sandarbh Published in BHASHA AUR ABHIVYAKTI, CUH, Feb 2014.
9. Vaishikaran me Kisan Aur Kisani Published in CUH Journal (ISSN 2348-3377), CUH, March 2014.
10. Kaid Se Bhagi Ladkiyon Ki Dayari Published in VAGARTHA, Barteeya Bhasha Parishad, Kolkata, May 2014.
11. Samkaleen Hindi Kahani Me Stri Kisan Published in JANPATH (ISSN 2277-6583), Ara, July-Aug 2014.
12. Hriyanvi Krishi Lokgeeton me Stri Kisan Published in MADAI (ISSN 2278-8352), 2014.

Department of History & Archaeology

Dr Abhiranjan Kumar

1. Government Initiatives, Judiciary and the Issue of Women in Post Independent India: A Perusal, Social Vision, Special Issue: Women in India, vol-2, Issue-2, July-Sep, 2015, Vishakhapatnam,.
2. Historiography in Europe: From Herodotus to William of Tyre, Ideal Research Review, Vol-18, No-IV, June 2008.
3. The Barai Caste Association of Bihar and the Quest for Social Reform during the Colonial Rule: 1916-1947, in the Hindustan Review, Vol-37, No-35, Jan –March 2009.
4. The Issue of Heritage and the Common sense View of History: the Indian Context, Published in the seminar Proceedings, Aug 2015, Dept. of History, JVM College, Dadri, Haryana

Dr Narender Parmar

1. Parmar, Narender 2008-09. Recent Explorations in the Bhiwani Block, District Bhiwani (Haryana). Bulletin of Deccan College Post Graduate and Research Institute 68-69:95-112.
2. Parmar, Narender 2009. Settlement Patterns of the Harappan Culture in Bhiwani Block, District Bhiwani (Haryana), Kosala 2: 201-210.
3. Parmar, Narender 2011. Archaeological Investigations in Southern Haryana. Man and Environment XXXVI (2): 58-65.
4. Parmar, Narender 2012-13. Economic Sustainability of the Harappan Civilization beyond the Saraswati-Drasdwati Valley. Bharati 37: 47-56.
5. Parmar Narender 2014. Origin, Development and Decline of the First Urbanization in the Upper Saraswati Basin. Heritage: Journal of Multidisciplinary Studies in Archaeology 2: 862-882
6. Parmar, Narender and Vikas Pawar 2011-12. Protohistoric Settlement Pattern in the Bawani Khera Block, District Bhiwani, Haryana. Bharati 35: 117-122.
7. Pawar, Vikas and Narender Parmar 2009-10. Joint Coins Issue of Kushana and Derivatives (with Special Reference to North India), Bharati 34: 54-64.
8. Shinde, Vasant, P.B.S. Senger, Nilesh Jadhav, Aftab Hussain, Narender Parmar, Kanti Pawar, P.D. Sable, Nilanshu Kaushik 2011-12. The Late Harappan Culture at Karsola in the Ghaggar basin. Bulletin of Deccan college Post Graduate and Research Institute 70-71: 15-35.
9. Shinde, Vasant, Adam Green, Narender Parmar and P. D. Sable 2013. Rakhigarhi and Harappan Civilization Recent work and new Challenges. Explore Rural India:16-21. (Popular Article)
10. Thakran, R. C., Amar Singh, Narender, Vikas 2010. Excavation on Manheru (2009) and Explorations in its Environs, District Bhiwani, Haryana, Aitihya I: 128-159.
11. Thakran, R. C., Amar Singh, Yaspal, Vikas Pawar, Narender Parmar 2010. Further Excavations at Badali (2009-10), District Jhajjar, Haryana. Puratattva 40: 208-213.
12. Thakran, R. C., Amar Singh, Yaspal, Vikas, Narender Parmar 2011-12. Excavation on Harappan Site Manheru (2009) District Bhiwani, Haryana. Bulletin of Deccan College Post Graduate and Research Institute 70-71: 1-14.
13. Thakran, R. C., Amar Singh, Yaspal, Vikas Pawar, Narender Parmar 2013. Excavations at Khera near Meham (2009-10), District Rohtak, Haryana. Puratattva 43: 158-163.
14. Parmar, Narender. Explorations in the Vicinity of Tosham Hill Complex, Bhiwani District, Haryana (ManiMukta).
15. Parmar Narender and Vasant Shinde 2015. Subsistence Economy of the Harappan Civilization in the Upper Saraswati Basin. A Bouquet of Indian Heritage, Research and Management, Volume 1 (Eds. P.Srivastava and S. K. Mahapatra), pp. 229-246. Delhi: Swati Publications.
16. Parmar Narender and Vasant Shinde 2015. Eastern Hakra Phase: the First Agricultural Community in the Upper Saraswati Basin. A Bouquet of Indian Heritage, Research and Management, Volume 1 (Eds. P.Srivastava and S. K. Mahapatra), pp. 247-260. Delhi: Swati Publications.
17. Sharan, Appu and Narender Parmar 2013. The Cultural Transformation in the Julana Block, District Jind, Haryana. Pracyabodha vol. 2 (Eds. B.R.Mani), pp. 213-222. Delhi: B.R.Cooperation

Mr. Ishwar Pardia

1. Conference Proceedings: "Print as an Agent of Social Change," South Indian History Congress Proceedings, published in 2014.

Department of Journalism, Media and Mass Communication

Dr. Pankaj Kumar

1. Use of Statistical Methods in Media Research. Adhyayan Multidisciplinary Research Journal, Aug. 2015, ISBN 2321-3914
2. Non Verbal Communication: Teacher's Training Model. Wisdom Herald Vol.- VI, NO.-2, Apr-Jun, 2015, 2231-1483
3. Development of Simplified Readability Formula. Wisdom Herald Vol.- III, NO.-3 July-Sep 2012, 2231-1483
4. How Oral Contraceptive Tablets Brochures are Readable. Shodh Samiksha Aur Mulyankan Vol.- IV, NO.-41, June 2012, 0974-2832.
5. Media Siksha Me Shodh Ki Jarurat, Media Mimansa Year III, NO.-02, Oct.-Dec. ,2009. 2229-5593

Mr. Naveen Kumar

1. Social Media: A Virtual Global Community Hall. Indian Streams Research Journal, Vol-2, Issue-10. November 2012, 2230-7850.
2. Vibhinn Madhmo Par Di Jane Wali Tambaku Sevan se Sambandhit Vadhanik Chetavani ka logo par Parbhav, Coherence, Vol-5, No.1, June 2014. 0976-5301
3. A Comparative Study of Media Coverage of Prime Minister Narendra Modi's Visit to US, Mass Media, January 2015. 2277-7369.
4. Violence in Punjabi Music Videos: A Content Analysis, Asian Communication Research, Accepted.

Ms. Rachna Saini

1. Danik Bhaskar K samadikiya ki pathniyata ka adhyan, Today Communication, National.
2. The Historic perspective of Community Radio in India, IJIFR. International.
3. Governance in the times of new Media: Empowered Bourgeois public sphere and contemporary socio-political protests in india, ACEME multidisciplinary research, International.
4. Nootan Media ki chaunitya, Media vimarsh, National.
5. A Comparison of Media Education Imparted at Haryana Universities Departments, Addiscent, and International.
6. Operational Position Differentials of Educational Institution CRS and NGO Maintained Community Radio Station of NCR, Quest Multidisciplinary Research Journal, International.
7. CR as A Participatory Grassroot Communication Tool: A Case Study of Alfaz-E-Mewat Community Radio Station, Indian Streams Research Journal, International.

Department of Law

Dr. Pardeep Singh

1. Pardeep Singh, Alternative Dispute Resolution (ADR) System in India: Problems and Prospects JNSS-An International Research Journal, June, 2013. ISSN No. 2320-8767.
2. Pardeep Singh, A Journey from Takrar to Karar on the Wheels of ADR (3 R's) in India: Promises and Perils, ICA Arbitration Quarterly—July-September, 2013.

3. Pardeep Singh, Violence against Women in India: Position, Promises and Perils, An International Multidisciplinary Refereed Research Journal of Central University of Haryana, Vol-1 No. 1 March 2014, ISSN No.2348-3377
4. Pardeep Singh, Access to Justice for all through Alternative Dispute Resolution: Need of Hour, ICA Arbitration Quarterly— Vol. 183, Oct. - December, 2014.
5. Pardeep Singh, Realizing 'Access to Justice for all' through Alternative Dispute Resolution: An Imperative for Social, Economic & Political Justice, NLU Law & Policy Review, July, 2015.
6. Pardeep Singh, National Green Tribunal: Towards Realizing Access to Environmental Justice in India, The Law, August, 2015 (ISSN: 2319-3735)
7. Pardeep Singh, Takrar Se Karar: Vaikalpik Vivad Niptara Jeevan-Mulya Sanrakshan News, May, 2013, R.N.I No. DELHIN/2008/26183
8. Pardeep Singh, Inclusive Democracy: Challenge of Access to Justice in the Volume Book, Inclusive Democracy: People, Power & Progress published by Central University of Haryana, May 2012.
9. Pardeep Singh, Women and Property Rights with special reference to her Coparcenary Rights before and after Hindu Succession (Amendment) Act, 2005: A Progressive Journey in the study material published by the University in Workshop on Addressing Discrimination Against Women: Walk the Talk (May 18-20, 2011)
10. Pardeep Singh, Women as Minority and the agenda of Inclusive Growth in India in an International Seminar on Minorities Entrepreneurship and Empowerment organized by Department of History, Kurukshetra University, Kurukshetra. (March 23–25, 2012)
11. Pardeep Singh, Statistical Challenges in Policy Making and Law in India, Application and Role of Statistics in Multidisciplinary Research, K.K. Publication.
12. Pardeep Singh et. al. Historical Background and Implementation of RTE Act, 2009 in Dr. Mool Chand Sharma. (ed.) Right to Education—Imperative for Change, Universal Law Pub. Co., 2012. ISBN No. 978-93-5035-298-4
13. Pardeep Singh Addressing Socio-Legal Problems Concerning Women: An Imperative for Inclusive Growth in an Edited Book on Women Empowerment, 2015.
14. Pardeep Singh, Amicable Settlement of Disputes: A Journey from Takrar to Karar via Indian Judicial System in Monograph, Legal Aid: Inclusive Judicial Process, Released by Mr. Justice S.K. Mittal, Judge, Punjab & Haryana High Court cum Executive Chairperson, HALSA, published by Central University of Haryana, Feb., 2012.

Dr. Anju

1. Freedom of press vis-à-vis responsible journalism, some disturbing trends: need for balancing in indian streams research journal today, V. 3, Issue 11, Dec. 2013, p. no.- 1-8
2. Increasing Crime Against Women : Judicial Response Through Some Path breaking Judgments in YUGSHILPI, V.4, Dec.2013
3. Country without women : female infanticide and declining sex ratio, INDIAN JOURNAL OF SOCIAL CONCERNS, V.3, May to Oct. 2013, 2231-5837
4. Judicial Activism – Need of Hour: Requirement of Checks and Balances, THE LEX- WARRIER , E-journal, Nov. 2013, 2319 – 8338
5. Cost Of Women Pride, YUGSHILPI, V.3, May to Oct. 2013, 0975-4644

Dr. Samiksha Godara

1. Role of Intermediaries in Cyber World: A Comparative Study of the Legislative Policies & Recent Judicial Trends in the international refereed research journal for Law 'Justice', Issue 2-4, April-Dec. 2013, pp. 8-15. [ISSN: 2320-1665]

2. Indecent Representation of Women in Media: Legislative & Judicial Response in the research quarterly law journal 'Mahila Vidhi Bharti', Issue-77, Oct-Dec. 2013, pp. 255-260. [ISSN: 0976-0024]
3. Khap Panchayts: Role & Relevance in the Present Scenario in the international refereed journal 'Yugshilpi', Issue-16, Sep. 2013 – Feb. 2014, pp. 289-297. [ISSN: 0975-4644]
4. Sexual Harassment of Women at Workplace: Legislative Response in the international refereed research journal 'Chintan', Issue-13, Jan.-Mar. 2014, pp. 281-290. [ISSN: 2229-7227]
5. Cyber Stalking: Are You Being Tracked Online? in the 'Indian Socio-Legal Journal', Vol. XLI, Nos. 1& 2, 2015, pp. 83-88 published by Indian Institute of Comparative Law, Jaipur, Rajasthan, India. [ISSN: 0970-7972]

Department of Library and Information Science

Dr. Narinder Kumar

1. Intellectual Property Rights in Digital Environment. In Managing Libraries in Information technology Era. Edited by Rupesh Gaur. pp 157-163.
2. Managing Digital Libraries and Challenges. In Managing Libraries in Information technology Era. Edited by Rupesh Gaur. pp 207-216.
3. Status of Library and Information Science Education in India with Special Reference to Haryana. In Changing Scenario of Library and Information Science Education in India. Edited by R. K. Sharma. pp 379-392.
4. Obsolescence of political science literature cited in the doctoral dissertations of Kurukshetra University. Journal of Advances and Scholarly Researches in Allied Education, Vol. 4(8), October, 2012.
5. Authorship pattern in history literature cited in doctoral dissertations accepted by Kurukshetra University and Panjab University: An analysis. Journal of Advances and Scholarly Researches in Allied Education, Vol. 5(9), January, 2013.
6. Application of Bradford's law to citation data of history doctoral dissertations accepted by Kurukshetra University: An analytical approach. Journal of Advances and Scholarly Researches in Allied Education, Vol. 5(10), April, 2013.
7. A survey of information literacy skills of faculty and students of Government and Government Aided Polytechnic Institutions in Haryana. Journal of Advances and Scholarly Researches in Allied Education, Vol. 6(11), July, 2013.
8. Use of library resources and services: A case study of KVA DAV College for Women Library, Karnal (Haryana). Journal of Advances and Scholarly Researches in Allied Education, Vol. 6(12), October-2013.

Dr. Pawan Kumar Saini

1. Growth and Development of Open Access Movement: An Evaluation, International Journal of Information Technology and Library Science (IJITLS)2349-235XVolume 3 Number 1 (2014)
2. Application of Scientometric Analysis in Library Network: A Comprehensive Study, International Journal of Emerging Research in Management &Technology ISSN: 2278-9359 (Volume-3, Issue-9) September, 2014
3. User Satisfaction of the Students of Engineering College: a Case Study of Engineering College Libraries of Jaipur, Rajasthan, International Journal of Emerging Research in Management &Technology ISSN: 2278-9359 (Volume-3, Issue-9) September, 2014

4. A Review on Cloud Computing in Library Services, International Journal of Multidisciplinary Educational Research, Volume 3, Issue 2(2), May 2014
5. Search Engine Optimization Using Query Parsing, International Journal of Multidisciplinary Educational Research, Volume 3, Issue 2(2), February 2014
6. Paper presented titled "Knowledge Management in Digital Libraries" at National Conference on Contemporary Social Issues: Media and libraries held, on 05 March 2012, at Jiwaji University, Gwalior.
7. Information need and Information Seeking Behaviour of Research scholar in Commerce and Business management in University of Rajasthan : A Survey , SAARC Conference for Library & Information Professionals on Trends and Development in Library and information science at BIMTECH, 01 and 02 December, 2012, at Greater Nodia.
8. A study on information seeking behavior of teachers of Commerce and Business Management in Universities with special reference to Rajasthan, International Journal of Library and Information Systems, Vol. 2, Issue 2, April –June 2012.

Mr Dalip Singh

1. Information Needs of Differently Abled - New Challenge for LIS Professional. I-KOAL 2015, January 2015.
2. Total Quality Management in Academic Library, NCITE-15, August 2015.

Department of Management

Dr. Anand Sharma

1. A Study of Pattern in Trading Volume of Different Derivative Instruments in Indian Stock Market (Page No.4-10) Published in 8 M Journal of Management Published by JIMS(ISSN No. 0973-9343)
2. Profitability and Non-Performing Assets: Indian Perspective (Page No.25-31) Published in TIJ Research Journal of Social Sciences and Management (ISSN No.2251-1571)
3. Mapping the Efficiency of Indian Banking Sector: A Post Deregulation Period (Page No.34-43) Published in BHU Management Review (ISSN No 2231-0142)
4. Study of the market efficiency of Indian Commodity Market With reference to future Market of Gold (Page No.53-60) Published in Tecnia Journal of Management Studies (ISSN No 0975-7104)
5. A study of Relationship between cash and Derivative segment in Indian Stock Market (Page No.74-78) Published in View Point-International Journal of Management and Technology (ISSN No 2229-3825)
6. Risk Management Through Derivative Instruments in India in the times of Global Recession and Uncertainty (Page No.05-12) Published in Vimarsh- An Endeavour to share Knowledge (ISSN No 0976-5174)
7. Derivative Trading in India :with special reference to Indian Stock Market (Page no. 66-76) Published in Productivity Promotion : Management Journal of Delhi Productivity Council (ISSN No.65544 -96)
8. Study of Convergence of Spot and future prices in commodity market with reference to Zeera, Channa, Zink and natural Gas (for 2005-2010)(Page no. 101-113) Published in Zenith: International Journal of Multidisciplinary research(ISSN No. 2231-5780)
9. Mobile Banking : A tool of Financial Inclusion (Page No. 21-30) Published in Educator -The FIMT Journal (ISSN No.2277-9736)

10. Factors determining service quality aspects of banking sector in India (with reference to Delhi NCR -A pilot study) (page no. 55-62) Published in International Journal of Trade and commerce(ISSN NO.2277 5811)
11. Public Private Partnership in India : Prospects and Challenges (page no 56-65) Published in Journal of Constitutional and Parliamentary studies (ISSN No.0022 -0043)
12. Study of Investors' Behavior in Derivative Segment of Stock Market Published in Tecnia Journal of Management Studies (ISSN No.0975-7104)
13. Problems of women at Indian corporate workplace (Page No 14-16) Published in Suryaprabha :Journal of Literature, Culture,Society and Research (ISSN No. 2348 -4179)
14. Corporate Governance Practice in Indian Boards (Page No 10-13) Published in International journal of Engineering, Management and Sciences(ISSN No. 2348 -3733)
15. Financial Inclusion in rural Haryana : A Special reference to Mahendergarh District(Page No20-34) published in Scholar's View International Journal of Media and Management(ISSN No.2319-1210)
16. Does Pornography challenge the social status of women in India, (Page No 46-50) published in Alive for Go ahead men(ISSN No.0971-0639)
17. Study of Customer Behavioral Nuances in Banking Sector : A Study of Delhi NCR (Page No 63-66) published by Tecnia Journal of Management Studies (ISSN No.0975-7104)
18. Achieving Social Impact in Health and Hygiene Through Social Entrepreneurship Published in Contemporary Practices in Business Management(Page No 01-12) (Published by Virudhnagar Hindu Nadars Shantikumar Nadar College) (ISBN No.978 93 81723 227)
19. Industry and Commerce (Page No.31-42)published in Business Studies Published by National Institute of Open Schooling (No.215 Sec co)
20. Outsourcing (Page No.170-179) Published in Business Studies Published by National Institute of Open Schooling (No.215 Sec co)
21. Sales Promotion and Personal Selling (Page No. 240-255) Published in Business Studies Published by National Institute of Open Schooling (No.215 Sec co)
22. Project Work(Page No.305-314) Published in Business Studies Published by National Institute of Open Schooling (No.215 Sec co)
23. Model Corporate Governance : Learning Infosys Way (Page No 451-456) Proceedings of National Seminar on Case Studies in Management (ISBN No.978-93-5051-643-0)
24. A study of emerging Islamic stock Market Volatility using Garch family modelpublished in Conference Proceedings of International Research Conference on Innovation Based Sustainable practices of Organizations(ISBN No.978-93-83003-01-3)
25. Cloud Computing Revolution in India(page no 351-356) published in proceedings of National Seminar on IC and CN (ISSN No.978-93-83334-85-8)
26. Role of Social Media in Business (page no 236-245) published in Proceedings of National Seminar on Democratization of Communication (ISSN No.978-93-83334-84-1)
27. Innovative Academic Leadership for Nation Building: A case study of Central University of Haryana published in Proceedings of National Seminar on education for Nation Development 978-93-83334-83-2
28. Facets of Corporate Social Responsibility: Challenges and Opportunities published in Proceedings of National Seminar on Corporate Social Responsibility (ISSN No. 978-93-83334-83-3)
29. Challenges to women in corporate sector published in proceedings of National Seminar on Social Justice : A historical Study organized by Mihir Bhoj P G College, Ghaziabad
30. A study of shareholding pattern and corporate governance in selected Indian companies (page no 351-356) published in Proceedings of National Seminar on Future of Financial Markets

Centre for Management Studies, Jamia Millia Islamia (Central University), New Delhi (ISSN No.978-81-922331-0-9)

31. Ethical Corporate Governance for Sustainable Corporations in India (page no 565-573) published in Proceedings of International Conference on Role of Management and Technology in shaping India as a developed nation by 2020 (ISBN No.978-81-8465-596-4)

Dr Sunita Tanwar

1. "Job Stressors and Productivity issues– A case of IT Industry" in "Lingaya's Journal of Professional Studies" in the Vol-8, No.2. ISSN : 0975-539X
2. "Social Entrepreneurship - :An initiative from Academics" in "IUJ-Journal of Management" Vol. 2, No.2, November 2014, ISSN: 2347-5080
3. "Stress Management And Organizational Growth" in "Pramana Research Journal" Issue 13, ISSN : 2249-2976
4. "Psychosocial well being of the individual" in "International Journal of Library and Information Management" in Volume 5, No.2, ISSN: 0975-878X
5. "Emotional Intelligence and its relationship with stress" in "Pacific Business Review International Journal" Vol. 7, Issue 3, ISSN: 0974 -438X
6. "Workplace stress and organizational Productivity- A case study of IT Industry" in the "International Journal of Research in Management and Social Science" in Vol. 2 Issue 3(IV), ISSN: 2322-0899
7. "E-Recruitment- A Tool of Competitive Advantage" in the "International Journal of Human Resource and Industrial Research" in Volume 1, Issue 4, ISSN: 2349-3593
8. "The changing Paradigm and expansion of Knowledge with knowledge Management" in the "The IUJ Journal of Management" in Vol. 2, Issue 1, ISSN: 2347-5080
9. "Self efficacy, Depression and Individual Behaviour" in online "Journal of Advances and Scholarly Researches in Allied Education" in Vol. VII, Issue XIV, ISSN : 2230-7540,
10. "Employer Branding- A way to realign Talent Management" in "Synergy, Journal of IT & Management" in volume 11, No. 2, ISSN: 0972-7361
11. "Modelling Effectiveness of Employer Branding: An ISM Modelling" in international Journal "Pacific Business Review" Volume 5 Issue 11, ISSN : 0974-438X
12. "A study of five factors Of personality in Relation to depression scores among adolescents" in "International Journal of Library And Information Management" Vol.2, Issue1, ISSN: 0975-878X.
13. "An Exploratory Analysis On usage of E- job Portals as a tool for E-recruitment" in "International journal of Library and Information Management" Vol. 2, Issue 1, ISSN: 0975-878X
14. "Correlates of self efficacy With depression moods In adolescence" in "National Journal of Positive Psychology" Vol. 2, No. 2, ISSN: 2229-4937.
15. "Investors Behaviour and Investment Avenues In Global Downturn: A Case study of Millenium City" in "Asia- Pacific Business Review" Vol. VI, No. 2, ISSN: 0973-2470
16. "A study of depression in Relation to emotional intelligence and personality among adolescents" in "Amity Management Review, Jaipur", Vol.5, No. 2, ISSN: 2230-7230
17. "Attrition Rate Management: Challenge to Indian BPOs" in "Southern Economist" in Vol. 1, ISSN: 0038-046
18. "Tapping of talent in pharmaceutical sector Through HR Practices" in "Lingaya's Journal of professional Studies" Vol. 5, No. 2, ISSN: 0975-539X
19. "A study of impact of parenting styles on Depression among adolescence" in "Journal of Education and and Management Studies" Vol.1, No. 1. ISSN: 2231-5632.
20. "Repercussions of Structural Change and its impact on Organizational Effectiveness" in "Pacific Business Review" Vol. 1, No.1. ISSN: 0974-438X.

21. "Impact of Task Related Dimensions of change on Organizations overall Work Efficiency" in "Indian Journal of Commerce Association" Vol. 1.
22. "Mapping the mind sets of People of Millenium City about Internet Advertisement" in "AIMS - A Journal of Management Science" No. 1, ISSN: 0974-2581.
23. "Exit Interview: A key to Employee Retention" in the book titled " Role of Statistics in Multidisciplinary Research" published by K.K.Publications, New Delhi, with ISBN : 978-81-7844-173-3.
24. "Internet Advertising: An Impact on user Mindset" in the book titled "Advances in Technology and Innovation in Marketing" by Macmillan Advance research Series with ISBN : 978-93-8093-009-1.
25. "Life stress and behavioural Dysfunction of Married Women: A case study of Working women and Housewives in NCR" in "Exploring the engagement and empowerment of women: Multidisciplinary Perspectivess" by cocept Publishing Company Ltd. with ISBN : 978-93-5125-160-6

Dr. AP Sharma

1. Emerging Business Opportunities in Packaged Food Industry in Conference Proceedings with ISBN 978-93-84869-51-9 of National Conference on Make in India: Emerging Trends in Trade & Innovations for Effective Entrepreneurship conducted on 17-18 Apr 2015 by Rukmini Devi Institute of Advanced Studies (Affiliated to GGS IP University) New Delhi.
2. PURA: A Syndicated Approach to Rural Urban Linkages Kurukshetra - A Journal on Rural Development, Vol. 61 No. 10, Apr 2015, ISSN: 0021-5660
3. Window-shopping to Show-rooming: A Study of Paradigm Shift in Shopping Patterns of Consumers in the Conference Proceedings of 2014 International Conference on Marketing: Concepts to Applications organized by DAV Centenary College, Faridabad from 12-13 September 2014.
4. Perceptual Study of Rural Consumers for Evaluating and Selecting Banking Services in the edited book on Application and Role of Statistics in Multidisciplinary Research published and released by Central University of Haryana, Mahendergarh as an outcome of National Seminar organized from 23-24 October 2013.
5. Market Forces and the Changing Behaviour of Media Houses in Contemporary Scenario: An Analytical Study Vol. 12 No. 1 January-June of Bi-Annual Journal Effulgence by Rukmani Devi Institute of Advanced Studies (affiliated to GGS IP University) Delhi.
6. Indian Higher Education at Crossroads: An Analysis in University News - A Journal of Higher Education, Association of Indian Universities, Vol. 51 No. 48, December 02-08, 2013. ISSN: 0566-2257
7. Rural Women Empowerment: An Analytical View Kurukshetra - A Journal on Rural Development, Vol. 61 No. 10, Aug 2013, ISSN: 0021-5660
8. Gram Sabha Empowerment through Social Audit Kurukshetra - A Journal on Rural Development, Vol. 60 No. 10, May 2013, ISSN: 0021-5660
9. The Art and Science of Leadership in Turbulent Times presented at National Conference on 20thApr 2013conducted by Rukmini Devi Institute of Advanced Studies (Affiliated to GGS IP University) New Delhi and published as conference proceedings with ISBN 978-93-82122-14-2.
10. Virtual Merchandising: Breaking the Barrier of Traditional Marketing, An Empirical Study presented at National Conference on 10thOct 2012conducted by Jamia Milia Islamia

- University, New Delhi and published as conference proceedings with ISBN 978-93-81505-42-7.
11. Rural Health Scenario in India published in Kurukshetra-A Journal on Rural Development, Vol. 60 No. 10, August 2012, ISSN: 0021-5660
 12. Managing Organizational Change: A Critical Issue for Leadership published in CPJ Global Review: An International Journal of CPJ-CHS & School of Law (affiliated to GGS IP University), Vol. V, No. 1 Jul 2013.
 13. An Empirical Study of Sales Promotion and Customer Service Practices in Rural Markets with Specific Reference to South Haryana published in SDIMT PATH: A Journal of Management & Technology, Vol. 1 No. 1 July-September 2012, ISSN 2277-8662
 14. Food Grain Storage Management in India: Some Implications and Suggestion published in Academic Discourse (A Multi-disciplinary Refereed Research Journal: ISSN 2278-3296) (July 2013) by Shri Atmanand Jain College, Ambala.
 15. Role of ICTs in Empowering Rural India: A Critical Analysis Effulgence, A Refereed Management Journal By Rukmani Devi Institute of Advanced Studies, Vol. 10 No. 2, Jul-Dec 2012, ISSN: 0972-8058
 16. Scope and Challenges of E-Learning in Rural Areas of Haryana in TECNIA Journal of Management Studies, Vol. 3, No. 2, Oct 2008 – Mar 2009, ISSN: 0975-7104
 17. Followership: An Unforgettable Issue published on 16th Jun 2010 in International Web Journal 'associated content.com'.
 18. Agile Leadership and Organization Development: An Empirical Study paper published by ASBM Journal of Management-Bhubaneswar, Vol. IV, No. 1, 2011, refereed journal.
 19. Communication Network Control of Indian Railways: A Case Study of RAILTEL published in Indian Media Studies Journal, Vol. 1, No. 4, Mar 2011, with ISSN: 0972-9348.
 20. An Empirical Study on Customer-Retailer Relationship in Rural Markets published by IITM Journal of Management and IT, Vol. 3 Issue January-Jun 2012 with ISSN: 0976-8629.
 21. Uses and Misuses of Web Technology presented at National Conference sponsored by AICTE on 30th Apr 2011 conducted by Tecnia Institute of Advanced Studies, GGSIP University and published as conference proceedings with ISBN 978-81-288-3426-4.
 22. Analysis of E-Governance: An Effective Tool for Good Governance published by Central University of Haryana under its proceedings for National Seminar on Inclusive Democracy: People. Power & Progress organized from May 30-31, 2012.
 23. A Study of Retail Outlet Assortments for Customer Retention published in The Journal of BLS Institute of Technology Management 'SYNTHESIS' vide Vol. 8, No. 1, June 2011, International Journal with ISSN 0973-2357.

Dr. Ajay Kumar

1. Assessment of Brand Personality and its Relationship with Human Personality: A Case of Motor Bikes in Haryana, HSB Research Review, ISSN 0976 1179, 2014, Vol. 8, No. 1, pp. 65-71
2. Understanding Multidimensionality of Brand Personality, Global Journal of Finance and Management, ISSN 0975 6477, 2014, Vol. 6, No. 9, pp. 907-910.
3. Impact of Durables on Consumer's Mind: An Empirical Study of Rural Haryana, Apeejay Journal of Management, ISSN 0974-3294, July-Dec 2012, Vol. 7, No. 2, pp. 31-45.
4. Segmenting Two Wheeler Market in India: A Study of Rural Haryana, Pragya-Journal of Management, ISSN 0975-9603, January-June 2011, Vol. 2, No.1, pp. 43-52.

5. Influence of Durable Possession on Rural Consumers: A Study of Haryana, AMITY Management Analyst, ISSN 0975-1440, July-December, 2010, Vol. V, No. II, pp. 48-56.
6. Case study entitled Designing an effective promotional campaign for a new brand-A Case Study of OxiCash published in Conference Proceedings Contemporary Researches in Business Management.
7. Readiness for Mobile Phone Technologies in India: A Consumer Perspective Business Management – Key Research Issues, ISBN 9789350620014, Excel Books, New Delhi, 2012, pp 541-562
8. SERVQUL Measurement in Hypermarkets. Business Management – Key Research Issues, ISBN 9789350620014, Excel Books, New Delhi, 2012, pp 660-674
9. Impact of Advertising on Children - A Perspective of Adults in Haryana Business and Management Contemporary Research Issues (Edited Book), ISBN 023032185-2, Macmillan Publishers India Ltd., New Delhi, 2011, pp 369-377

Ms. Divya

1. International Conference Proceedings ICCB 2012 at IIT Delhi Paper in conference preceeding – Divya & Mishra (2012), Attractive Succession Planning :A Mantra for retaining Human Asset. Souvenir 6th international Conference on Contemporary Business 2012. ICCB-PS4/02, pp. 88
2. Divya & Mishra(2014), Measuring Personality Traits with ‘Big Five’ Model: A Scale of Development study Business Researcher, Vol II issue I, pp. 2-13. ISSN-2321-2659.

Department of Mathematics

Dr. Virendra Kumar

1. S. Sivaprasad Kumar, Virendra Kumar, V. Ravichandran and N. E. Cho, Sufficient conditions for starlike functions associated with the lemniscate of Bernoulli, Journal of Inequalities and Applications 2013(2013), Art. 176, 13pp.
2. S. Sivaprasad Kumar, Virendra Kumar and V. Ravichandran, Subordination and superordination for multivalent functions defined by linear operators, Tamsui Oxford Journal of Information and Mathematical Sciences 29(3) (2013) 361–387.
3. S. Sivaprasad Kumar and Virendra Kumar, Some sandwich results associated with a generalized linear operator, ROMAI J., v.9, no. 2(2013), 107–118.
4. S. Sivaprasad Kumar and Virendra Kumar, Fekete-Szegö problem for a class of analytic functions defined by convolution, Tamkang Journal of Mathematics, 44(2013), no. 2, 187–195.
5. S. Sivaprasad Kumar and Virendra Kumar, Fekete-Szegö problem for a class of analytic functions, Stud. Univ. Babeş-Bolyai Math. 58(2013), no. 2, 181–188.
6. S. Sivaprasad Kumar and Virendra Kumar, On the Fekete-Szegö inequality for class of analytic functions, Acta Universitatis Apulensis, no. 37/2014, 211–222.
7. S. Sivaprasad Kumar, Virendra Kumar and V. Ravichandran, Estimates for the Initial Coefficients of Bi-univalent Functions, Tamsui Oxford Journal of Information and Mathematical Sciences, 29(4) (2013) 487–504

Dr. Sharanjeet Dhawan

1. S. Dhawan, D. Grover, S. Kumar, Some traveling wave solutions of soliton family, *Int. J. Industrial Mathematics*, 2013, 25-339.
2. S. Dhawan, S.Arora, S.Kumar, Numerical approximation of heat equation using Haar wavelets, *International Journal of Pure and Applied Mathematics*, 2013, 55-63.
3. S. Dhawan, S. Kumar, Wavelet based numerical scheme for differential equations, *International Journal of Differential equations*, 2013, 85-94.
4. S.Dhawan, R.Kumar, S.Kumar, Multiquadratic quasi interpolation for Burger-Fisher equation, *International Journal of Applied Mathematics and Mechanics*, 2013, 41-50.
5. S.Dhawan, S.Kapoor, Sheo Kumar, Numerical method for advection diffusion equation using FEM and B-splines, *Journal of Computational Science*, 2012, 429-437.
6. S.Dhawan, S.Kapoor, S.Kumar, S.Rawat, Contemporary review of distinguish simulation process for the solution of nonlinear Burgers' equation, *Journal of Computational Science*, 2012, 405-419.
8. S.Kapoor, S.Rawat, S.Dhawan, Numerical Investigation of Separated Solitary Waves Solution for KDV Equation through Finite Element Technique, *International Journal of Computer Applications*, 2012, 27-33.
9. S.Dhawan, S.Kumar, S.Kapoor, Approximation of Burgers' equation using B-spline Finite Element Method, *International Journal of Applied Mathematics and Mechanics*, 2011, 61-86.
10. S. Dhawan, S. Kapoor, Numerical Simulation of Advection-Diffusion Equation, *International Journal of Mathematical Modelling and Numerical Optimization*, 2011, 13-27.
11. S.Kapoor, S.Dhawan, B-Spline Finite Element Technique for Advection-Diffusion Equation, *International Journal of Applied Mathematics and Mechanics*, 2010, 75-94.
12. S.Kapoor, S.Dhawan, A Computational Technique for the Solution of Burgers Equation, *International Journal of Applied Mathematics and Mechanics*, 2010, 84-95.
13. S. Dhawan, Sheo Kumar, Approximation of Temperature Distribution in a Solid Body using Semi-Finite Element Technique, *Indian Journal of Biomechanics: Special Issue*, 2009, 246-250.
14. S. Dhawan, S.Kumar, An application of wavelet matrices for solving differential equations, 2nd International Conference on Biomedical Engineering and Assistive Technologies - BEATS 2012, NIT Jalandhar (Pb.) , India.
15. S. Dhawan, S.Rawat, S.Kumar, S.Kapoor, Solution of Advection diffusion equation using Finite Element Method, *IEEE conference: 4th International conference on Modeling , Simulation and Applied Optimization (ICMSAO-2011)*, Kula-Lumpur, Malaysia, (19-21 April, 2011).
16. V. Dabral, S. Kapoor, S.Dhawan, Mathematical study of separated solitary Wave solution for KDV equation: B-spline FEM Approach, *IEEE conference: 4th International conference on Modeling , Simulation and Applied Optimization (ICMSAO-2011)*, Kula-Lumpur, Malaysia, (19-21 April, 2011).
17. S. Kapoor, S. Dhawan, R. Gupta, S. Agarwal, Numerical solution of burgers' equation using B-spline technique, *International conference and Workshop-Applied Mathematics (CMIC-2011)*, Chiang mai University, Chiang Mai, Thailand (06-07 January, 2011).
18. V.Dabral, S.Kapoor, S.Dhawan, S.Rawat, Finite element based solution of modified equal width equation(MEW) with homogeneous boundary condition using B-spline basis function, *International conference and Workshop- Applied Mathematics (CMIC-2011)*, Chiang mai University, Chiang Mai, Thailand (06-07 January,2011).
19. S.Dhawan, S.Kumar, Finite element method for Burgers equation using cubic B-spline

20. approximation, 13th IASME/WSEAS International Conference on Mathematical Methods and Computational Techniques in Electrical Engineering (MMACTEE '11) Angers, France, (November 17-19, 2011).
21. S.Dhawan, S.Kumar, S.Kapoor, A Numerical Approach to Advection-Diffusion Equation using B-Spline Finite Element Method National conference on Advanced Mathematics and Its application, D.A.V College, Bathinda (Pb.) , India (25-26 Feb 2011).
22. S.Dhawan, S.Kumar, Solution of advection-diffusion equation based on cubic B-spline finite element method, National Conference on Mathematical Modeling and Computer Simulation, (MMCS - 2011), BHU, India.
23. S.Kapoor, S.Dhawan, S.Kumar, S.Rawat, Temperature variation in heated tube filled with molten polymer using FEM, 2nd International conference on Industrial and Production Engineering NIT Jalandhar (Pb.), India (03- 05 Dec,2010).

Department of Microbiology

Prof R C Kuhad

1. Gupta, R., Mehta, G., Kuhad, R.C. (2015) Scale-up of abatement of fermentation inhibitors from acid hydrolysates for efficient conversion to ethanol as biofuel. Journal of Chemical technology and Biotechnology. DOI 10.1002/jctb.4775
2. Kumar, S., Jain, K.K., Singh, A., Panda, A.K., Kuhad, R.C. (2015) Characterization of recombinant pectate lyase refolded from inclusion bodies generated in *E. coli* BL21(DE3). Protein Expression and Purification. 110: 43–51.
3. Jain, K.K., Dey, T.B., Kumar, S., Kuhad, R.C. (2015) Production of thermostable hydrolases (cellulases and xylanase) from *Thermoascus aurantiacus* RCKK: a potential fungus. Bioprocess and Biosystem Engineering. 38:787–796.
4. Dey, T.B., Kuhad, R.C. (2014) Enhanced production and extraction of phenolic compounds from wheat by solid-state fermentation with *Rhizopus oryzae* RCK2012. *Biotechnology Reports*. Doi.org/10.1016/j.btre.2014.09.006
5. Sharma, A., Shrivastava, B., Kuhad R.C. (2014). Reduced toxicity of decolorized malachite green by laccase produced from *Ganoderma* sp. rckk02 under solid-state fermentation. *3Biotech*. 5:621–631.
6. Chandna, P., Gupta, S., Rajam, M.V., Kuhad, R.C. (2014). Molecular identification and in vitro screening of antagonistic bacteria from agricultural byproduct compost: Effect of compost on development and photosynthetic efficiency of tomato plant. *Annals of Microbiology*. 64:571–580.
7. Shrivastava, B., Jain, K.K., Kalra, A., Kuhad R.C. (2014). Bioprocessing of wheat straw into nutritionally rich and digested cattle feed. *Scientific Reports*. (Accepted)
8. Dey, T.B., Kuhad, R.C. (2014) Upgrading the antioxidant potential of cereals by their fungal fermentation under solid-state cultivation conditions. *Letters in applied Microbiology* (Accepted)
9. Sharma, A., Thakur, V.V., Shrivastava, A., Jain, R.K., Mathur, R.M., Gupta, R., Kuhad R.C. (2014) Xylanase and laccase based enzymatic kraft pulp bleaching reduces adsorbable organic halogen (AOX) in bleach effluents: A pilot scale study. *Bioresource Technology*. <http://dx.doi.org/10.1016/j.biortech.2014.06.066>

10. Antil, P., Gupta, R., Kuhad, R.C. (2014) Simultaneous saccharification and fermentation of pretreated sugarcane bagasse to ethanol using new thermotolerant yeast. *Annals of Microbiology*. DOI 10.1007/s13213-014-0875-2
11. Raghuwanshi, S., Deswal, D., Karp, M., Kuhad, R.C. (2014) Bioprocessing of enhanced cellulase production from a mutant of *Trichoderma asperellum* RCK2011 and its application in hydrolysis of cellulose. *Fuel* 124: 183–189.
12. Sharma S, Sharma KK and Kuhad RC (2013). An efficient and economical method for extraction of DNA amenable to biotechnological manipulations, from diverse soils and sediments. *Journal of Applied Microbiology*. 116: 923-33.
13. Kumar S, Shrivastava N, Gupta BS, Kuhad RC and Gomes J. (2013). Lovastatin production by *Aspergillus terreus* using lignocellulose biomass in large scale packed bed reactor. *Food and Bioproducts Processing*. Doi.org/10.1016/j.fbp.2013.10.007
14. Kidwai M, Jain A, Sharma A and Kuhad RC. (2013). Laccase catalyzed reaction between Meldrum's acid and catechols/hydroquinones- An investigation. *Comptes Rendus Chimie* 16:728-735
15. Upadhyay, M., Shrivastava, B., Jain, A., Kidwai, M., Kumar, S., Gomes, J., Goswami, DG., Panda, A.K., Kuhad, RC., (2014) Production of ganoderic acid by *Ganoderma lucidum* RCKB-2010 and its therapeutic potential. *Annals of Microbiology*. 64: 839–846
16. Deswal, D., Gupta, R., Nandal, P., Kuhad RC. (2014) Fungal pretreatment improves amenability of lignocellulosic material for its saccharification to sugars. *Carbohydrate Polymers* 99:264-269.
17. Kumar, L., Kumar, D., Nagar, S., Gupta, R., Garg, R., Kuhad, RC., Gupta, VK. (2013). Modulation of xylanase production from alkaliphilic *Bacillus pumilus* VLK-1 through process optimization and temperature shift operation. *3 Biotech*. DOI 10.1007/s13205-013-0160-2
18. Chandna, P., Mayil R. Kuhad, RC. (2013). *Bacillus paraflexus* sp. nov., isolated from compost. *Int J Syst Evol Microbiol*. PMID:23990650
19. Varma A.J., Kuhad RC, Singh R, Gupta R, Adsul M, Gokhale D. (2013). Biodegradation of Styrene-Butadiene-Styrene Copolymer via sugars attached to the polymer chain. *Advances in Materials Physics and Chemistry*. 3: 112-118.
20. Nandal P, Ravella SR. Kuhad RC (2013). Laccase production by *Corioloopsis caperata* RCK2011: Optimization under solid state fermentation by Taguchi DOE methodology. *Scientific Reports*. 3:1386
21. Sharma KK, Shrivastava B, Sastry VRB, Sehgal N and Kuhad RC (2013). Middle redox potential laccase from *Ganoderma* sp: its application in improvement of feed from monogastric animals. *Scientific Reports*. 3:1299
22. Kumar S., Gupta R., Kumar G., Sahoo D. And Kuhad R.C. (2013). Bioethanol production from *Gracilaria verrucosa*, a red alga, in a biorefinery approach. *Bioresource Technology*. 135: 150–156

23. Chandna P., Mallik S. and Kuhad R. C. (2012). Assessment of bacterial diversity in agricultural by-product compost by sequencing of cultivated isolates and amplified rDNA restriction analysis. *Applied Microbiology and Biotechnology*. 97: 6991-7003.
24. Gupta R., Mehta G and Kuhad R.C. (2012). Fermentation of pentose and hexose sugars from corncob, a low cost feedstock into ethanol. *Biomass and Bioenergy*. 47:334-341.
25. Deswal D., Gupta R., and Kuhad R.C. (2012). Enhanced exoglucanase production by brown rot fungus *Fomitopsis* sp. RCK2010 and its application for cellulose saccharification. *Applied Biochemistry and Biotechnology*. 168:2004-2016.
26. Kidwai, M., Jain, A., Sharma, A. and Kuhad, R.C. (2012) Ecofriendly approach for detection of phenols in water using laccase from different fungi. *Water Science and Technology* 66:385-393.
27. Sharma KK, Sharma S, Karp M and Kuhad RC (2012). Ligninolytic enzymes improve soil DNA purity: Solution to methodological challenges of soil metagenomics. *Journal of Molecular Catalysis B: Enzymatic*. 83: 73-79
28. Gupta R, Kumar S., Gomes J. and Kuhad R.C. (2012). Kinetic study of batch and fed-batch enzymatic saccharification of pretreated substrate and their subsequent fermentation to ethanol. *Biotechnology for Biofuels* 5:16
29. Singh S, Kumar P, Gopalan N, Shrivastava B., Kuhad RC and Chaudhary HS (2012). Isolation and partial characterization of actinomycetes with antimicrobial activity against multidrug resistant bacteria. *Asian Pacific Journal of Tropical Biomedicine*.2:1147-1150
30. Pundir C.S., Rawal R., Chawla S., Renuka, Kuhad R.C. (2012). Development of an amperometric polyphenol biosensor based on fungal laccase immobilized on nitrocellulose membrane. *Artificial Cells, Blood Substitutes, and Biotechnology*.40:163-70.
31. Kumar A., Gupta R., Shrivastava B., Khosa Y.P. and Kuhad R.C. (2012). Xylanase production from an alkalophilic actinomycete isolate *Streptomyces* sp. RCK-2010, its characterization and application in saccharification of second generation biomass. *Journal of Molecular Catalysis B: Enzymatic*. 74:170-177.
32. Shrivastava B., Nandal P., Sharma A., Jain K.K., Khosa Y.P., Das T.K., Mani V., Kewalramani N.J., Kundu S.S. and Kuhad R.C. (2012) Solid state bioconversion of wheat straw into digestible and nutritive ruminant feed by *Ganoderma* sp. rck02. *Bioresource Technology*. 107:347-351.
33. Sharma K.K., Shrivastava B., Nandal P., Sehgal N., Sastry V.R.B., Kalra A. and Kuhad R.C. (2011). Nutritional and toxicological assessment of white-rot fermented animal feed. *Indian Journal of Microbiology*. 52:185-190.
34. Kidwai M., Jain A., Sharma A. and Kuhad R.C. (2012). First time reported enzymatic synthesis of new series of quinoxalines-A green approach. *Journal of Molecular Catalysis B: Enzymatic*. 74:236-240.

35. Deswal D., Sharma A., Gupta R. and Kuhad R.C. (2012). Application of lignocellulytic enzymes produced under solid state cultivation conditions. *Bioresource Technology*. 115:249-254.
36. Diwaniyan S., Sharma K.K. and Kuhad R.C. (2011). Laccase from an alkali tolerant Basidiomycetes *Crinipellis* sp RCK-1: Production optimization by response surface methodology. *Journal of Basic Microbiology*. 51:1-11.
37. Deswal D., Khasa Y.P. and Kuhad R.C. (2011). Optimization of cellulase production by a brown rot fungus *Fomitopsis* sp. RCK2010 under solid state fermentation. *Bioresource Technology*. 102: 6065-72
38. Nagar S., Mittal A, Kumar D., Kumar L., Kuhad R.C. and Gupta V.K. (2011). Hyper production of alkali stable xylanase in lesser duration by *Bacillus pumilus* SV-855 using wheat bran under solid state fermentation. *New Biotechnology* 28: 581-7
39. Kumar S., Dagar S.S., Mohanty A.K., Sirohi S.K., Puniya M., Kuhad R.C., Sangu KPS, Griffith GW, Puniya AK (2011). Enumeration of methanogens with a focus on fluorescence in situ hybridization. *Naturwissenschaften*. 98: 457-72.
40. Gupta, R., Khasa, Y.P. and Kuhad, R.C. (2011). Evaluation of pretreatment methods in improving the enzymatic saccharification of cellulosic materials. *Carbohydrate Polymers*. 84: 1103-1109
41. Chawla, S., Rawat, R., Shabnam, Kuhad, R.C. and Pundir C.S. (2010) An Amperometric polyphenol biosensor based on laccase immobilized on epoxy-resin membrane. *Analytical Methods*. 3: 709-714
42. Reddy, P.V.M., Reddy, K.K., Kuhad, R.C., Kumar, M.S. and Prakash, M.G. (2010). Effect of supplementation of enzymes and probiotics on performance of broiler chicken. *Indian Journal of Poultry Science*. 45:61-63.
43. Sharma KK and Kuhad R.C. (2010). Genetic translocation of lignin degrading fungi facilitated by *Agrobacterium tumefaciens*. *BMC Biotechnology*. Doi:10.1186/1472-6750-10-67.
44. Gupta, R., Mehta, G., Khasa, Y.P. and Kuhad, R.C. (2011). Fungal delignification of lignocellulosic biomass improves the saccharification of celluloses. *Biodegradation*. 22:797-804.
45. Shrivastava, B., Thakur, S., Khasa, Y.P., Gupte, A., Puniya, A.K. and Kuhad, R.C. (2010). White rot fungal conversion of wheat straw to energy rich cattle feed. *Biodegradation*. 22:823-31
46. Kuhad, R.C., Gupta, R., Khasa Y.P. and Singh A. (2010). Bioethanol production from *Lantana camara* (red sage): Pretreatment, saccharification and fermentation. *Bioresource technology* 101: 8348-8354.
47. Kuhad, R.C., Mehta, G., Gupta, R., and Sharma, K.K. (2010). Fed batch enzymatic saccharification of newspaper celluloses improves the sugar content in the hydrolysates and eventually the ethanol fermentation by *Saccharomyces cerevisiae*. *Biomass and Bioenergy*. 34: 1189-1194.
48. Kidwai, M., Poddar, R., Diwanian S. and Kuhad, R. C. (2011). Laccase from basidiomycetous fungus catalyzed synthesis of substituted Benzopyranocoumarins via Domino reaction. *Synthetic Communications* 41:695-706.

49. Sanghi, A., Garg, N., Gupta, V.K., Mittal, A. and Kuhad, R.C. (2010). One-step purification and characterization of cellulase-free xylanase produced by alkalophilic *Bacillus subtilis* ASH. *Brazilian Journal of Microbiology*. 41: 467-476.
50. Nagar, S., Gupta, V.K., Kumar, D., Kumar, L. and Kuhad, R.C. (2010). Production and optimization of cellulase-free, alkali-stable xylanase by *Bacillus pumilus* SV-85S in submerged fermentation. *Journal of Industrial Microbiology and Bioetchnology*. 37:71-83.
51. Diwanian, S., Kharb, D., Raghukumar C. and Kuhad R.C. (2010). Decolorization of synthetic dyes and textile effluents by basidiomycetous fungi. *Water, Air and Soil Pollution*. 210: 409-419.
52. Sanghi, A., Garg, N., Kuhar, K., Kuhad, R.C. and Gupta, V.K. (2009). Enhanced production of cellulase-free xylanase by alkalophilic *Bacillus subtilis* ASH and its application in Biobleaching of Kraft pulp. *Bioresources* 4:1109-1129.
53. Sharma, K.K., and Kuhad R. C. (2009). An evidence of laccase in Archaea. *Indian Journal of Microbiology*. 49:142-150.
54. Kidwai, M., Poddar, R., Diwanian S. and Kuhad, R. C. (2009). Laccase from basidiomycetous fungus catalyzed synthesis of substituted 5-deaza-10-oxaflavin via Domino reaction. *Advance Synthesis and Catalysis*. 351:589-595.
55. Gupta, R., Sharma, K. K. and Kuhad, R. C. (2009). Separate hydrolysis and fermentation (SHF) of *Prosopis juliflora*, a woody substrate, for the production of cellulosic ethanol by *Saccharomyces cerevisiae* and *Pichia stipitis*-NCIM 3498. *Bioresource Technology*. 100:1214-20.
56. Sanghi, A., Garg, N., Sharma, J., Kuhar, K., Kuhad, R. C. and Gupta, V. K. (2008). Optimization of xylanase production using inexpensive agro-residue by alkalophilic *Bacillus subtilis* ASH in solid-state fermentation. *World Journal of Microbiology and Biotechnology*. 24:633-640.
57. Kuhar, S., Nair, L. M. and Kuhad, R. C. (2008). Pretreatment of lignocellulosic material with fungi capable of higher lignin degradation and lower carbohydrate degradation improves substrate acid hydrolysis and the eventual conversion to ethanol. *Canadian Journal of Microbiology*. 54:305-13.
58. Pasha C, Thabit, H. M, Kuhad, R. C., and Rao, L. V. (2008). Bioethanol production from *Prosopis juliflora* using termotolerant *Saccharomyces cerevisiae* VS3 strain. *Biobased Material Bioenergy*. 2: 204-209.
59. Sharma, K.K. and Kuhad, R. C. (2008). Laccase: Enzyme revisited and function 224emicellu. *Indian Journal of Microbiology*. 48:309-316
60. Kapoor, M., Nair L. M., and Kuhad R. C. (2008) Cost-effective xylanase production from free and immobilized *Bacillus pumilus* strain MK001 and its application in saccharification of *Prosopis juliflora*. *Biochemical Engineering Journal*. 38: 88-97.
61. Ninawe, S., Kapoor, M. and Kuhad, R.C. (2008). Purification and Characterization of extracellular xylanase from *Streptomyces cyaneus* SN32. *Bioresource Technology*. 99:1252-1258.

62. Chandel A.K. Singh A., and Kuhad, R. C. (2007). Detoxification of sugarcane bagasse hydrolysate improves ethanol production by *Candida shehatae* NCIM 3501. *Bioresource Technology*. 98: 1947-1950.
63. Battan, B., Sharma, J., Dhiman S. S., and Kuhad, R. C. (2007). Enhanced production of cellulase-free thermostable xylanase by *Bacillus pumilus* ASH and its potential application in paper industry. *Enzyme and Microbial technology*. 41:733-739.
64. Pasha, C., Kuhad R.C. and Rao, L. V. (2007). Strain improvement of thermotolerant *Saccharomyces cerevisiae* VS3 strain for better utilization of lignocellulosic substrates. *Journal of Applied Microbiology*. 103:1480-1489.
65. Kapoor, M. and Kuhad, R. C. (2007). Immobilization of xylanase from *Bacillus pumilus* strain MK001 and its application in production of xylo-oligosaccharides. *Applied Biochemistry and Biotechnology*. 142: 125-138.
66. Kapoor, R. K, and Kuhad, R. C. (2007). Differential and synergistic effects of xylanase and laccase mediator system (LMS) in bleaching of soda and waste pulps. *Journal of Applied Microbiology*. 103: 305-317.
67. Chandel, A. K., Kapoor, R. K., Narasu, M. L., Viswadevan, V., Kumaran S. G. S., Rudravaram, R., Rao, L. V., Tripathi, K.K., Lal, B., Kuhad, R. C. (2007). Economic evaluation and environmental benefits of biofuel: an Indian perspective. *International Journal of Global Energy Issues*. 28: 357-381.
68. Prakash, O., Kumar, R., Kumar, R., Tyagi P., and Kuhad, R. C. (2007) Organoiodine(III) mediated synthesis of 3,9-diaryl- and 3,9-difuryl-bis-1,2,4-triazolo[4,3-a][4,3-c]pyrimidines as antibacterial agents. *European Journal of Medicinal Chemistry*. 42: 868-872.
69. Gupta, S., Kapoor, M., Sharma, K. K. and Kuhad, R. C. (2007). Production and recovery of an alkaline exo-polygalacturonase from *Bacillus subtilis* RCK under solid-state fermentation using statistical approach. *Bioresource Technology*. 99:937-945.
70. Khurana, S., Kapoor, M., Gupta, S., and Kuhad, R. C. (2007). Statistical optimization of alkaline xylanase production from *Streptomyces violaceoruber* under submerged fermentation using response surface methodology. *Indian Journal of Microbiology*. 47: 144-152.
71. Kothamas, I, S., Bhattacharyya, A., Kuhad, R.C., Babu, C.R. (2006). Arbuscular mycorrhizae and phosphate solubilizing bacteria of the mangrove ecosystem of Great Nicobar island, India. *Biology and Fertility of Soils* 42:358-361.
72. Ninawe, S., Lal R. and Kuhad, R. C. (2006). Isolation of three xylanase producing strains of actinomycetes and their identification using molecular methods. *Current Microbiology*. 53: 78-182.
73. Battan, B, Sharma, J, and Kuhad, R. C. (2006). High level xylanase production by alkaliphilic *Bacillus pumilus* ASH under solid state fermentation. *World Journal of Microbiology and Biotechnology*. 22: 1281-1287.

74. Kuhad, R C., Chopra P, Battan B, Kapoor M and Kuhar S. (2006) Production and partial purification and characterization of a thermo-alkali stable xylanase from *Bacillus* sp. RPP-1 *Indian Journal of Microbiology*. 46: 13-23.
75. Kuhad, R. C., Kapoor M, and Chaudhary K (2006) Production of xylanase from *Streptomyces* sp. M-83 using cost-effective substrates and its application in improving digestibility of monogastric animal feed. *Indian Journal of Microbiology*. 46: 109-119.
76. Sharma, K. K., Gupta S. and Kuhad R. C. (2006) *Agrobacterium*-mediated delivery of marker genes to *Phanerochaete chrysosporium* 226emicel pellets: a model transformation system for white-rot fungi. *Biotechnology and Applied Biochemistry* 49:181–186.
77. Ninawe, S. and Kuhad, R. C. (2005). Bleaching of wheat straw using xylanase from thermoalkaliphilic *streptomyces cyaneus* SN32. *Bioresource Technology*. 97: 2291-2295.
78. Ninawe, S. and Kuhad, R. C. (2005). Use of xylan rich cost effective agroresidues in the production of xylanase by *streptomyces cyaneus* SN32. *Journal of Applied Microbiology*. 99: 1141–1148.
79. Kuhad, R. C., Sood, N., Tripathi, K. K., Singh, A., Ward, O. P. (2004). Developments in microbial methods for the treatment of dye effluents. *Advances in applied microbiology*. 50: 185-213.
80. Sharma K. K., Kapoor, M., and Kuhad R. C. (2005). *In-vivo* enzymatic digestion (IVED), *In-vitro* xylanase digestion (IVXD), metabolic analogues, surfactants and polyethylene glycol ameliorate laccase production from *Ganoderma* sp. kk-02. *Letters in Applied Microbiology* . 41: 24-31.
81. Vasdev, K., Dhawan, S., Kapoor, K. R. and Kuhad, R. C. (2005). Biochemical characterization and molecular evidence of a laccase from the birds nest fungus *Cyathus bulleri*. *Fungal Genetics Biology* 42: 684-693.
82. Dhawan, S., Lal, R. and Kuhad, R. C. (2005) Effect of antibiotics on growth and laccase production from *Cyathus bulleri* and *Pycnoporus cinnabarinus*. *Bioresource Technology*. 96:1415-8.
83. Kuhad, R. C., Kapoor, R. K. and Lal, R. (2004) Improving the yield and quality of DNA isolated from white-rot fungi. *Folia Microbiology*. 49: 112-116.
84. Kuhad, R. C., Kapoor, M. and Rustagi, R. (2004). Enhanced production of an alkaline pectinase from *Streptomyces* sp. RCK-SC by whole-cell immobilization and solid state cultivation. *World journal of microbiology and biotechnology*. 20: 257-263.
85. Dhawan, S. and Kuhad, R. C. (2003). Ethidium bromide stimulated hyper laccase production from bird's nest fungus *Cyathus bulleri*. *Letters in Applied Microbiology*. 36:1 1-3.
86. Taneja, K., Gupta, S. and Kuhad, R. C. (2002). Properties and application of a partially purified alkaline xylanase from an alkalophilic fungus *Aspergillus nidulans* KK-99. *Bioresource Technology* 85: 39-42.
87. Kapoor, M. and Kuhad, R. C. (2002). Improved polygalacturonase production from *Bacillus* sp. MG-cp-2 using amino acids, vitamins and surfactants under submerged

- (SmF) and solid state(SSF) fermentation. *Letters in Applied Microbiology*. 34: 317-322.
88. Dhawan, S. and Kuhad, R. C. (2002). Effect of amino acids and vitamins on laccase production by the bird's nest fungus. *Cyathus bulleri*. *Bioresource Technology* 84: 35-38.
 89. Mishra, S., Jyot, J., Kuhad, R. C. and Lal, B. (2001). In situ Bioremediation potential of an oil sludge degrading bacterial consortium. *Current Microbiology*. 43: 328-335.
 90. Mishra, S., Jyot, J., Kuhad, R. C. and Lal, B. (2001). Evaluation of Inoculum addition to stimulated In situ Bioremediation of oily-sludge- contaminated soil. *Applied and Environmental Microbiology*. 67: 1675-1681.
 91. Gupta, S., Kuhad, R. C. Bhushan, B., and Hoondal, G. S. (2001) Improved xylanase production from a haloalkalophilic *Staphylococcus* sp. SG-13 using inexpensive agricultural residues. *World Journal of Microbiology and Biotechnology*. 17: 5-8.
 92. Gupta, A., Gopal, M. and Kuhad, R. C. (2000). Production of Lignolytic enzymes and degradation of paddy husk by *Cyathus* spp. *Indian Journal of Agricultural Sciences*. 70: 331-333.
 93. Singh, B. K., Kuhad, R. C., Singh, A., Tripathi, K. K. (2000). Microbial Degradation of the Pesticide Lindane (γ -Hexachloro-cyclohexane). *Advances in Applied Microbiology*. 47: 269-298.
 94. Singh, B. K. and Kuhad R. C., (2000). Degradation of Insecticides Lindane (γ -HCH) by white-rot fungi *Cyathus bulleri* and *Phanerochaete sordida*. *Pest Management Science*. 56: 142-146.
 95. Singh, B. K. and Kuhad, R. C. 1999). Biodegradation of Lindane (γ -hexachlorocyclohexane) by the white-rot fungus *Trametes hirsutus*. *Letters in Applied Microbiology*. 28: 238-241.
 96. Kuhad, R. C., Manchanda, M. and Singh, A. (1999). Hydrolytic potential of cellulolytic enzymes from a mutant strain of *Fusarium oxysporum*. *Bioprocess Engineering*. 20: 133-135.
 97. Kuhad, R. C., Manchanda, M. and Singh, A. (1998). Optimization of xylanase production by hyper xylanolytic mutant and strain of *Fusarium oxysporum*. *Process Biochemistry*. 33: 641-647.
 98. Bajpai, U., Kuhad, R. C. and Khanna, S. (1998). Mineralization of (C₁₄) octadecane by *Acinetobacter calcoaceticus* S19. *Canadian Journal of Microbiology*. 44: 681-686.
 99. Abbi, M., Kuhad, R. C. and Singh, A. (1996). Fermentation of xylose and rice straw hydrolysate by *Candida Sehatae* NCL-3501. *Journal of Industrial Microbiology*. 17: 30-33.
 100. Abbi, M., Kuhad, R. C. and Singh, A. (1995). Bioconversion of pentose sugars to ethanol by free and immobilized cells of *Candida sehatae* NCL-3501: Fermentation Behaviour. *Process Biochemistry*. 31: 555-560.
 101. Singh, A., Kuhad, R. C. and Kumar, M. (1995). Xylanase production by a hyper xylanolytic mutant of *Fusarium oxysporum*. *Enzyme and Microbial Technology*. 17: 551-553.

102. Vasdev, K., Kuhad, R. C. and Saxena, R. K. (1995). Decolorization of Triphenylmethane dyes by *Cyathus bulleri*. *Current Microbiology*. 30: 269-272.
103. Vasev, K. and Kuhad, R. C. (1994). Induction of Laccase production in *Cyathus bulleri* under shaking and static conditions. *Folia Microbiologica*. 39:326-330.
104. Gupta, R., Singal, R., Shanker, A. B., Kuhad, R. C. and Saxena, R. K. (1994). A modified plate assay for screening phosphate solubilizing microorganisms. *Journal of General and Applied Microbiology*. 40: 255-260.
105. Kuhad, R. C., Kumar, M. and Singh, A. (1994). A hyper cellulolytic mutant of *Fusarium oxysporum*. *Letters in Applied Microbiology*. 19: 397-400.
106. Saxena, A., Kuhad, R. C., Saxena, R. K. and Gupta, R. (1994). Production and characterization of xylanase from *Cyathus stercoreus*. *World Journal of Microbiology and Biotechnology*. 10: 293-295.
107. Vasdev, K. and Kuhad, R. C. (1994). Decolorization of poly R-478 (Polyvinylamine sulphonate Anthrapyridone) by *Cyathus bulleri*. *Folia Microbiologica*. 39: 61-64.
108. Khurana, N., Saxena, R. K., Gupta, R. and Kuhad, R. C. (1993). Light independent conidiation in *Trichoderma* spp. A novel approach to microcycle conidiation. *World Journal of Microbiology and Biotechnology*. 9: 353-356.
109. Kuhad, R. C., and Singh A. (1993). Enhanced Production of cellulases by *Penicillium citrinum* in solid state fermentation of cellulosic residues. *World Journal of Microbiology and Biotechnology*. 9: 100-101.
110. Khurana, N., Gupta, R., Kuhad, R. C., and Saxena, R. K. (1992). Effect of protein synthesis and respiratory inhibitors on microcycle conidiation of *Aspergillus tamari*. *Journal of General and Applied Microbiology*. 38: 617-622.
111. Kuhad, R. C. and Johri, B. N. (1992). Fungal decomposition of Paddy straw: Light and scanning electron microscopic study. *Indian Journal of Microbiology*. 32: 255-258.
112. Saxena, R. K., Khurana, Kuhad, R. C. and Gupta, R. (1992). D-glucose soluble starch, a novel medium for inducing microcycle conidiation in *Aspergillus*. *Mycological Research*. 96: 490-494.
113. Kuhad, R. C. and Johri, B. N. (1991). Degradation of byproducts by *Cyathus helenae*. *Indian Journal of Microbiology*. 31: 291-296.
114. Singal, R., Gupta, R., Kuhad, R. C. and Saxena, R. K. (1991). Solubilization of inorganic phosphate by a Basidiomyceteous fungus *Cyathus*. *Indian Journal of Microbiology*. 31: 397-401.
115. Audholia, S., Saxena, R. K., Gupta R. and Kuhad, R. C. (1989). Modulation of Cyanobacterial Metabolism after *Cyanophage Infection*. *Phykos*. 28: 201-209.
116. Kuhad, R. C. and Johri, B. N. (1989). Bird's Nest Fungus *Cyathus*, a record from Bhopal. *Advances in Biosciences*. 8: 67-69.
117. Kuhad, R. C. (1988). Keratinophilic fungi from Kanha National Park (M.P.). India. *Bionature* 8: 75-77.

118. Kuhad, R. C. and Johri, B. N. (1987). Decomposition of sugarcane bagasse by the Bird's Nest Fungus *Cyathus*. *Current Science*. 56: 609-611.
119. Moore, D., Liu, M. and Kuhad, R. C. (1987). Karyogamy dependent enzyme depression in the basidiomycete *Coprinus*. *Cell Biology International Reports*. 11: 335-341.
120. Kuhad, R. C., Rosin, I. V. and Moore, D. (1987). A possible relation between cyclic-AMP levels and glycogen mobilization in *Coprinus cinereus*. *Transactions of the British Mycological Society (Now known as Mycological Research)*. 88: 229-236.
121. Rohatagi, K., Kuhad, R. C. and Johri, B. N. (1986). Enrichment of ash and silica in paddy straw by *Cyathus*, *Pleurotus* and *Sporotrichum*. *Journal of Microbial Biotechnology*. 1:91-96.
122. Kuhad, R. C. (1984): Lignocellulolytic enzymes of Bird's Nest Fungi. *Indian Journal of Microbiology*. 24: 137.
123. Kuhad, R. C. and Johri, B. N. (1984). Production of *Cyathus stercoreus* fruit bodies in cultures. *Indian Journal of Microbiology*. 24: 45-56
124. Kuhad, R. C. (1984). Preliminary observations on the decomposition of Paddy straw by species of white-rot fungus *Cyathus*. *Journal of Scientific Research*. 6: 81-84.
125. Kuhad, R. C. (1983). Isolation of Mycoflora of Rice Straw. *Journal of Scientific Research*. 5: 189-190.
126. Kuhad, R. C. and Johri, B. N. (1983). Fermentative degradation of plant wastes by white-rot fungus *Cyathus* and its ability to release cellulase enzyme. *Journal of Microbial Biotechnology*. 1: 81-84.
127. Das T.K., Banerjee D., Chakarborty D., Pakhira M.C., Shrivastava B. and Kuhad R.C. (2012). Saponin: role in Animal System. *Veterinary World* 5:248-254.
128. Kuhad R.C., Gupta R., Khasa Y.P. and Singh A. (2011). Bioconversion of pentose sugars to ethanol: Current and Future prospects. *Renewable and Sustainable Energy Reviews*. 15:4950-4962.
129. Kuhad R.C., Gupta R., and Singh A. (2011). Microbial Cellulases and their industrial applications. *Enzyme Research*. Doi:10.4061/2011/280696
130. Kothamasi, D., Kuhad, R. C. and Babu, C. R. (2001). Arbuscular Mycorrhizae in plant survival strategies. *Tropical Ecology*. 42: 1-13, 2001.
131. Singh, B. K., Kuhad, R. C., Singh, A., Lal, R. and Tripathi, K. K. (1999). Biochemical and Molecular Basis of Pesticides Degradation of microorganisms. *Critical Reviews in Biotechnology*. 19: 197-225.
132. Kuhad, R. C., Singh, A., Tripathi, K. K. Saxena, R. K. and Eriksson, K. E. L. (1997). Microorganisms as an alternative source of protein. *Nutrition Reviews*. 55: 65-75.
133. Kuhad, R. C., Singh, A. and Eriksson, K. E. L., (1997). Microorganisms and enzymes involved in the degradation of the plant fibre cell walls. Special issue on 'Biotechnology in pulp and paper industry' for *Advances in Biochemical Engineering/Biotechnology*. 57: 45-125.

134. Singh, A., Kuhad, R. C., Sahai, V. and Ghosh, P. (1994). Evaluation of Biomass. *Advances in Biochemical Engineering/Biotechnology*. 51:47-70.
135. Kuhad, R. C. and Singh, A. (1993). Lignocellulose Biotechnology: Current and Future Prospects. *Critical Reviews in Biotechnology*. 13: 151-172.
136. Singh, A., Kuhad, R. C. and Saxena, R. K. (1990). Microbial Enzymes and Food Industry. *Microbiology Today*. 1: 19-27.
137. Kuhad, R. C., Rohatagi, K. and Johri, B. N. (1985). Agrowastes from paddy and sugarcane cultivation as a resource for materials. *Journal of Scientific and Industrial Research*. 4: 607-612.
138. Kuhad, R. C. and Belsare, D. K. (1985). Incidence of Nematodes in Air. *Pollution Research*. 4: 45-56.
139. Gupta, R., Mukherjee, K. G., Kuhad, R. C. and Saxena, R. K. (1996). Plant Surface Mycoflora-Its Role in Decomposition and Soil Fertility. In: *Concepts in Applied Microbiology and Biotechnology*, Mukerji, K.G., Singh, V.P. and Dwivedi, S. (eds). Aditya Books Pvt. Ltd., New Delhi. 120-137.
140. Kuhad, R. C., Gupta, R. and Saxena, R. K. (1996). Cyclic-AMP and Fungal differentiation. In: *Concepts in Applied Microbiology and Biotechnology*. Mukerji, K.G., Singh, V.P. and Dwivedi, S. (eds). Aditya Books Pvt. Ltd., New Delhi. 281-300.
141. Singh, B. K., Arora, S., Kuhad, R. C. and Mukerji, K.G. (1999). Use of Fungi in the Control of Plant Pathogens. (eds). In: *Ethnomycology to Fungal Biotechnology: Exploiting fungi from Natural Resources for Novel Products*. Singh, J. and Aneja, K.R. Kluwer Academic/Plenum Press, New York. 153-162.
142. Mishra, S., Lal, B., Jyot, J., Rajan, S., Khanna, S. And Kuhad, R. C. (1999). Field study: *In Situ* Bioremediation of Oily sludge contaminated land using "OILZAPPER". Hazardous and Industrial Wastes 31st Mid-Atlantic Industrial & Hazardous Waste conference. Technomic Publishing Co., Inc. Lancaster. 174-183.
143. Kuhad, R. C., Kothamasi, D., Tripathi, K. K. and Singh, A. (2004). Diversity and functions of soil microflora in development of plants. In: *Plant surface microbiology*. Eds Verma, A., Abbott, L., Werner, D. and Hampp, R. Springer-Verlag, Germany. 71-98.
144. Kuhad RC., Johri AK., Ward OP. (2004) Bioremediation of pesticide-contaminated soils. In: *Biodegradation and Bioremediation*. (Editors) A. Singh and OP Ward. Springer Verlag, Germany.
145. Singh A., Kuhad RC., Shareefdeen Z., Ward OP. (2004) Methods for monitoring and assessment of bioremediation process. In: *Biodegradation and Bioremediation*. (Editors) A. Singh and OP Ward. Springer Verlag, Germany.
146. Singh A., Ward, O. P. and Kuhad, R. C. (2005). Feasibility studies for microbial remediation of hydrocarbons. In: *Methods for monitoring and assessing soil bioremediation*. (eds) Margesin, R. and Schinner, F. Springer-Verlag, Germany. 5: 131-153.
147. Singh A., Kuhad RC., Ward OP. (2007) Industrial applications of microbial cellulases. In: *Lignocellulose Biotechnology: Future Prospects* (Editors) RC Kuhad and A. Singh. IK International Pvt Ltd, New Delhi, India

148. Sharma KK., Kuhar S., Kuhad RC. Bhat PN (2007) Combinatorial approaches to improve plant cell wall digestion: Possible solution for cattle feed problems. In: Lignocellulose Bitoechnology: Future Prospects (Editors) RC Kuhad and A. Singh. IK International Pvt Ltd, New Delhi, India
149. Kapoor RK., Chandel AK., Kuhar S., Gupta R., Kuhad RC. (2007) Bioethanol from crop residues, production forecasting and economics: An Indian Perspective. In: Lignocellulose Bitoechnology: Future Prospects (Editors) RC Kuhad and A. Singh. IK International Pvt Ltd, New Delhi, India
150. Kuhar K, Ninawe S., Gupta VK., Tripathi KK., Kuhad RC. (2007) Methods of purification and characterization fo xylanases. In: Lignocellulose Bitoechnology: Future Prospects (Editors) RC Kuhad and A. Singh. IK International Pvt Ltd, New Delhi, India
151. Rao R., Kuhad RC. (2007) Palo Podrido Feed: A Pivotal trigger for biodegradation research round the globe. In: Lignocellulose Bitoechnology: Future Prospects (Editors) RC Kuhad and A. Singh. IK International Pvt Ltd, New Delhi, India
152. Battan B., Kuhar S., Sharma J., Kuhad RC. (2007) Biodiversity of hemicellulose degrading microorganisms and their enzymes. In: Lignocellulose Bitoechnology: Future Prospects (Editors) RC Kuhad and A. Singh. IK International Pvt Ltd, New Delhi, India
153. Kapoor M., Singh A., Kuhad RC. (2007) Application fo xylanases in the pulp and paper industry: An appraisal. In: Lignocellulose Bitoechnology: Future Prospects (Editors) RC Kuhad and A. Singh. IK International Pvt Ltd, New Delhi, India
154. Kuhar S., Kapoor M., Kapoor RK., Sharma KK., Singh A., Kuhad RC., (2007). Biodiversity of Lignnolytic Fungi. In: Lignocellulose Bitoechnology: Future Prospects (Editors) RC Kuhad and A. Singh. IK International Pvt Ltd, New Delhi, India
155. Kuhar S., Kapoor M., Kapoor RK., Sharma KK., Singh A., Kuhad RC., (2007). Biodiversity of Lignnolytic Fungi. In: Lignocellulose Bitoechnology: Future Prospects (Editors) RC Kuhad and A. Singh. IK International Pvt Ltd, New Delhi, India
156. Kuhad RC., Kuhar S., Kapoor M., Sharma KK., Singh A. (2007). Lignocellulolytic Microorganisms, their enzymes and possible biotechnologies based on lignocellulolytic microorganisms and their enzymes. In: Lignocellulose Bitoechnology: Future Prospects (Editors) RC Kuhad and A. Singh. IK International Pvt Ltd, New Delhi, India
157. Singh, A., Kuhad R. C. and. Ward, O. P (2009). Biological remediation of soil – An overview of global Market and available technologies. In: Advances in Applied Bioremediation Soil Biology Series Vol. 17. (Editors) Dr. Ajay Singh, Dr. Ramesh C. Kuhad and Dr. O. P. Ward. Springer Verlag, Germany. 17: 1-19.
158. Kuhad, R. C. and Gupta, R. (2009). Biological remediation of Petroleum contaminants. In: Advances in Applied Bioremediation. In: Soil Biology Series Vol. 17. (Editors) Dr. Ajay Singh, Dr. Ramesh C. Kuhad and Dr. O. P. Ward. Springer Verlag, Germany. 17: 173-187.
159. Kuhad, R.C., Chandna, P., Lata and Singh, A. (2010). Composting of lignocellulosic waste material for soil amendment. . In. Soil Biology Series (Editors) Dr. Ajay Singh, Nagina Parmar and Dr. R. C. Kuhad. Springer Verlag, Germany. 108: 107-128.

160. Kuhad R.C., Gupta R. and Khasa Y.P. (2010). Bioethanol production from lignocellulosics: an overview. In: Waste from Wealth (Editors) Dr. Banwari Lal, and **Priyanshu M Sharma** TERI Press Delhi. Pp. 53-106.
161. Singh A., Parmar N., Kuhad RC., Ward OP (2011) Bioaugmentation, Biostimulation and Biocontrol in soil biology. In: Bioaugmentation, Biostimulation and Biocontrol. (Editors) A. Singh et al. Springer Verlag, Germany.
162. Kuhad RC., Singh S., Lata, Singh A. (2011) Phosphate-Solubilizing Microorganisms. In: Bioaugmentation, Biostimulation and Biocontrol. (Editors) A. Singh et al. Springer Verlag, Germany.
163. Kuhad, R.C., Gupta, R., Khasa, Y.P. (2012) Microbial Decolorization of Colored Industrial Effluents. In: Microorganisms in Environmental Management: Microbes and Environment. (Editors) T. Satyanarayan et al. Springer Sciences, Germany.
164. Sharma A., Shrivastava A., Sharma S., Gupta R. and Kuhad R.C. (2013). Microbial pectinases and their applications. In: Biotechnology of Environmental Management and Resource Recovery. (Editors) Kuhad, R.C. and Singh A. Springer Verlag, Germany. Pp 107-124.
165. Shukla P., Nigam V., Gupta R., Kuhad R.C. and Singh A. (2013). Sustainable enzyme technology for environment: biosensors for monitoring of pollutants and toxic compounds. In: Biotechnology of Environmental Management and Resource Recovery. (Editors) Kuhad, R.C. and Singh A. Springer Verlag, Germany. Pp 69-76.
166. Gupta R., Bhardwaj K.N., Choudhary C., Chandna P., Jain K.K., Kaur A., Kumar S., Shrivastava B., Ninawe S., Singh A., Kuhad R.C. (2013). Biofuels: the environment friendly energy carriers. In: Biotechnology of Environmental Management and Resource Recovery. (Editors) Kuhad, R.C. and Singh A. Springer Verlag, Germany. 125-150.
167. Gupta R, Mehta G, Deswal D, Sharma S, Jain KK, Devi N, Khasa YP and Kuhad RC. (2013). Cellulases and their biotechnological applications. In: Biotechnology of Environmental Management and Resource Recovery. (Editors) Kuhad, R.C. and Singh A. Springer Verlag, Germany. Pp 89-106.
168. Kapoor, R.K., Gupta, R., Singh, A., Kuhad, R.C. (2013) Patenting trends in Bioremediation Technologies for Oil-Contaminated Sites. In: Biotechnology for Environmental Management and Resource Recovery. (Editors) R.C. Kuhad and A. Singh. Springer India
169. Dey, T.B., Rathore. I.S., Kuhad R.C. (2014). Solid-State fermentation for microbial production of potent antioxidant phenolics from cereals-An emerging Biotechnology. In: Emerging trends in microbial Biotechnology (Editors) Sobti RC, Sharma P and Puri, S. Narendra Publishing House, Delhi, India. Pp 11-34
170. Singh, A., Hamme, JDV., Kuhad RC., Parmar N., Ward OP (2014). Subsurface Petroleum Microbiology. In: Geomicrobiology and Biogeochemistry, Soil Biology 39 (Editors) N. Parma and A. Singh. Springer Verlag Germany.
171. Shrivastava, B., Jain, K.K., Kumar, R., Prusty, S., Kumar, S., Chakraborty, S., Chaudhary, H.S., Puniya, M., Kuhad, R. C. (2015). 'Omics' Approaches to Understand and Manipulate Rumen Microbial Function. In: Rumen Microbiology: From Evolution to Revolution. (Editor) A.K. Puniya. Springer India. Pp 213-220.

Dr. Deepika Mehta

1. Mehta, D. and Satyanarayana, T. (2013) Biochemical and molecular characteristics of recombinant acidic and thermostable raw starch hydrolyzing α -amylase from an extreme thermophile *Geobacillus thermoleovorans*. *Journal of Molecular Catalysis B. Enzymatic*, 85–86: 229–238. [Impact factor 2.823]
2. Mehta, D. and Satyanarayana, T. (2013) Dimerization mediates thermo-adaptation, substrate affinity and transglycosylation in a highly thermostable maltogenic amylase of *Geobacillus thermoleovorans*. *PLoS One*. 8(9): 1-13. [Impact factor 3.73]
3. Mehta, D. and Satyanarayana, T. (2014) Domain C of thermostable α -amylase of *Geobacillus thermoleovorans* mediates raw starch adsorption. *Applied Microbiology Biotechnology*. 98: 4503–4519. [Impact factor 3.689]
4. Mehta, D. and Satyanarayana, T. (2015) Structural elements of thermostability in the maltogenic amylase of *Geobacillus thermoleovorans*. *International Journal of Biological Macromolecules*. 79: 570-576. [Impact factor 2.858]
5. Satyanarayana, T., Sharma, A., Mehta, D., Puri, A.K., Kumar, V., Nisha, M. and Joshi, S. (2012). Biotechnological application of biocatalysts from Firmicutes *Bacillus* and *Geobacillus* species. In: Satyanarayana T, Johri BN, Prakash A (eds) 'Microorganisms in Sustainable Agriculture and Biotechnology'. Springer, Netherlands, pp. 343-379.
6. Mehta, D. and Satyanarayana, T. (2012). Diversity of hot environments and thermophilic microbes. In: Satyanarayana T, Littlechild J, Kawarabayasi Y (eds) 'Thermophilic Microorganisms in Environmental and Industrial Biotechnology' Springer, Netherlands, pp 3-60.

Dr. Richa Sharma

1. Gupta R., Rajput R., Sharma R. and Gupta N. (2013) Biotechnological applications and prospective market of microbial keratinases. *Applied Microbiology and Biotechnology*.
2. Gupta R., Sharma R. and Beg Q. (2012) Revisiting microbial keratinases: Next generation proteases for sustainable biotechnology. *Critical Reviews in Biotechnology* (DOI: 10.3109/07388551.2012.685051).
3. Sharma R., Verma V.V. and Gupta R. (2013) Functional characterization of an extracellular keratinolytic protease, Ker AP from *Pseudomonas aeruginosa* KS-1: A putative aminopeptidase with PA domain. *Journal of Molecular Catalysis B: Enzymatic* 91: 8-16.
4. Sharma R. and Gupta R. (2012) Coupled action of γ -glutamyl transpeptidase-glutathione and keratinase effectively degrades feather keratin and surrogate prion protein, Sup 35NM. *Bioresource Technology* (<http://dx.doi.org/10.1016/j.biortech.2012.06.038>).
5. Sharma R., Murty N.A.R. and Gupta R. (2011) Molecular Characterization of N-Terminal Pro-sequence of Keratinase Ker P from *Pseudomonas aeruginosa*: Identification of Region with Chaperone Activity. *Applied Biochemistry and Biotechnology* (DOI: 10.1007/s12010-011-9306-z).
6. Sharma R. and Gupta R. (2010) Extracellular expression of keratinase Ker P from *Pseudomonas aeruginosa* in *E. coli*. *Biotechnology Letters*, 32:1863-1868.
7. Sharma R. and Gupta R. (2010) Substrate specificity characterization of a thermostable keratinase from *Pseudomonas aeruginosa* KS-1. *Journal of Industrial Microbiology and Biotechnology*, 37:785–792.
8. Sharma R. and Gupta R. (2010) Thermostable, thiol activated keratinase from *Pseudomonas aeruginosa* KS-1 for prospective applications in prion decontamination. *Research Journal of Microbiology* 5 (10): 954-965.
9. Rajput R., Tiwary E., Sharma R. and Gupta R. (2012) Swapping of pro-sequences between keratinases of *Bacillus licheniformis* and *Bacillus pumilus*: Altered substrate specificity and thermostability. *Enzyme and Microbial Technology* 51: 131-138.

10. Murty N.A.R., Tiwary E., Sharma R., Nair N. and Gupta R. (2012) γ -glutamyl transpeptidase from *Bacillus pumilus* KS 12: Decoupling autoprocesing from catalysis and molecular characterization of N-terminal region. *Enzyme and Microbial Technology* 50 159– 164.
11. Rajput R., Sharma R. and Gupta R. (2010) Cloning and characterization of a thermostable, detergent-compatible recombinant keratinase from *Bacillus pumilus* KS12. *Biotechnology and Applied Biochemistry* 58: 109-118.
12. Rajput R., Sharma R. and Gupta R. (2010) Biochemical characterization of a thiol activated, oxidation stable keratinase from *Bacillus pumilus* KS12. *Enzyme Research* (DOI:10.4061/2010/132148).
13. Gupta R., Tiwary E., Sharma R., Rajput R. and Nair N. (2013) *Microbial keratinases: Diversity and Applications; Thermophilic Microbes in Environmental and Industrial Biotechnology: Biotechnology of Thermophiles*, DOI 10.1007/978-94-007-5899-5_33, Springer Science.
14. Sharma R. (2013) *Bacterial culturing techniques; Virtual learning environment; Institute of Life Long Learning* (<http://vle.du.ac.in/mod/book/view.php?id=9251>).

Department of Political Science

Dr. Chanchal Kumar Sharma

1. Intergovernmental coordination mechanisms in India, *South Asian Journal of Socio-Political Studies* 15 (2), 40-48
2. Exploring the Frontiers of Collaborative Federal Architecture in India. *Asia-Pacific Social Science Review* 15 (1): 1-25. <http://escholarship.org/uc/item/48k2w4xr>
3. Rise and Demise of Nehruvian Consensus: A Historical Review, *South Asian Journal of Socio-Political Studies (SAJOSPS)* 15 (1), 16-23
4. Beyond Gaps and Imbalances: Restructuring the Debate on Intergovernmental Fiscal Relations. *Public Administration: An International Quarterly (Wiley-Blackwell, Oxford)* 90 (1): 99-128. [2012 Rank 4/24; impact factor 1.27
5. A Discursive Dominance Theory of Economic Reform Sustainability: The Case of India. *India Review (Routledge)* 10 (2): 126-184.
6. Multilevel Fiscal Governance in a Balanced Policy Environment. *India Economy Review* 8 (1): 90-97.
7. Towards a Modern Federal Construct in India: The Urgency of an Institutional Response to the Ideational Turn. *Journal of Political Science (GCU, Lahore, Pakistan)* 28 (1): 3-32.
8. Emerging Dimensions of Decentralisation Debate in the Age of Globalisation. *Indian Journal of Federal Studies* 10 (1): 47-65.
9. Decentralization Dilemma: Measuring the Degree and Evaluating the Outcomes', *Indian Journal of Political Science* 67 (1): 49-64.
10. The Federal Approach to Fiscal Decentralisation: Conceptual Contours for Policy Makers. *Loyola Journal of Social Sciences* 19 (2): 169-188.
11. Tourism Policy Innovations of an Indian state (Haryana) and their implications. *Tourism: An International Interdisciplinary Journal (Institute of Tourism, Zagreb, Croatia)* 53 (1): 67-76.
12. When does Decentralization Deliver? The Dilemma of Design. *South Asian Journal of Socio-Political Studies* 6 (1): 38-45. Reprinted in a book entitled by Mootheril Raghavan Biju]
13. Implementing VAT in India: Implications for Federal Polity. *Indian Journal of Political Science* 66 (4): 915-934.
14. The political economy of global outsourcing. *South Asian Journal of Socio-Political Studies (SAJOSPS)*, 5(2): 76-82. [Reprinted in a book entitled *Good Governance and Administrative Practices* by Mootheril Raghavan Biju].
15. Why decentralization? The puzzle of causation. *Synthesis* 3 (1): 1-17.
16. BPO Tide: Political, Economic and Moral Overtones. *M-World, The Journal of Ludhiana Management Association, Punjab College of Technical Education, Vol.2, issue 3.*

17. Sharma, C.K. 2006, "Decentralized Tourism Governance in Haryana," in M R Biju (ed.) Sustainable Dimensions of Tourism Management, pp.23-40 (New Delhi: Mittal Publications) ISBN 81-8324-129-8
18. Sharma, C.K. 2012, "Economic Dimensions of Coalition Politics in India: Institutions, Incentives and Interactions," in Ranpal Singh and Tejvir Singh (ed.) Dynamics of Party System and Coalition Governments in India, pp.66-74. (New Delhi: Alpha Publications) ISBN 978-93-81465
19. Sharma, C.K. 2008, "Emerging Dimensions of Decentralization Debate in the Age of Glocalization," in Gopalakrishnan P S (ed.) Glocalization - Thinking Global, Acting Local ICFAI University Press, pp. 23-44 (Hyderabad: ICFAI University Press). ISBN 978-81-314-1656-3
20. Sharma, C.K. 2015, "Parliamentary Representation of Women in India: Problems, Pitfalls and Areas of Reform," in U.P.Sinha (ed.) Exploring the Engagement and Empowerment of Women , pp 59-74 (Concept Publisher). ISBN 973-93-5125-160-

Dr. Raghvendra Pratap Singh

1. Geo-Political Position of Nepal and Its Impact on Indian Security published in Indian Journal of Political Science (The Quarterly Journal of the Indian Political Science Association). ISSN No. – 0019-5510. VOI .LXXI, No-4.Oct-Dec.2010.
2. Bhartiya samvidhan ka anuchhed 21 aur 'Vidhi ki uchit prakriya' published in 'Loktantra samiksha', the institute of constitutional and parliamentary studies, New Delhi. (R. N. 17575/69).Part 41, Vol-(3-4) Jul-Dec, 2009.
3. Judicial Self-restraint and Judicial Activism, Published in 'IPSA Half Yearly Research Journal, Jan-Dec 2010, Vol. I & II (Politics and PublicReasoning", published in 'Warima', [A journal of Humanities and Literature] ISSN No, 0976-8548 Vol.2, Oct.2011.
4. Gandhi Aur Hind Swaraj published in Vikas Paricharcha. Vyavharic Sodh Avam Vikas Sansthan Lucknow. ISSN No. – 0971-4650.Vol.35, Jul-Dec-2010.
5. Bharat me Sansadiya Loktantra ka Bhavishya: Dr. Bhim Rao Ambedkar published in 'Indian Research Journal of Social Sciences', ISSN No. – 0974-0694, Vol.19, No.1, December 2010.
6. Sarvotch Nyayalaya ke Abhinirnaya aur Uske Rajnitik Aayam published in Anusilana Research Journal of Indian Cultural, Social & Philosophical stream, Faculty of Arts ,Banaras Hindu University,Varanasi. ISSN No. – 0973-8762, Vol.XV, 2009.
7. Paper intituled, Naksalvadi Andolan ki Manosamajik Pristhibhumi published in 'Samaj Vigyan shodh patrika', ISSN No. – 0973-7626, Vol. 1 No. –XIII, April-Sept 2011.
8. Paryavarniya Sanrakshan Par Adhunik Rajnaitik Avom Nayayik Dristikon, published in 'Anusilana', Department of Philosophy and Religion, Banaras Hindu University, Varanasi. ISSN No. –0973-8762.Vol. XXIX, December2010.
9. Sarvotch Nyayalaya Aur Bhartiya Rajnitik Pranali ka Anushasan published in Vikas Paricharcha, Vavharik Sodh Avam Vikas Sansthan Lucknow. ISSN NO. – 0971-4650, Vol.33, July-December 2009.
10. Atankvad Paryavarane ke Liye ek Kadi Chunaoti published in research journal, Jigyasa, ISSN No. – 0974-7648.Vol (III) No-3, September 2010.
11. Sarvotch Nayayalaya ki Yatra Vidhik Vastunisthavad se Nyaik Sakriyatavad tak, published in Rajnitiki, Department of Political Science Mahatma Gandhi Kashi Vidhyapih, Varanasi,Vol. III,2009.

12. Bharatvarsh ki Rajnitik Parisithiya ur Nyayik Sakriyatavad, published in 'Raj –Yashti', Quarterly Journal of Rajasthan Political Science Association, ISSN No0974-8687.Vol.III, NO 4 Oct.-Dec.2010.

Dr. Rajeev Kumar Singh

1. Manual scavenging As Social Exclusion: A Case Study in Economic and Political Weekly, June 27, 2009
2. Citizenship, Exclusion & Indian Muslims in Indian Journal of Political Science, Meerut Vol LXXI, No 2, April-June 2010.
3. Multicultural society and minority rights in research journal Shodh Drishti, Vol2, No 7, Oct-Dec 2011.
4. Minority: The Problem of Definition in the research journal Abhivyakti, Kusum Jankalyan Samiti, Deoria,
5. Bharat me Rajnitik Apradhikaran Varanasi Mandal ke Vishesh Sandarbh Me in U.P Journal of Social Science Research, Vol. 1.No.1 Winter 2006-2007.
6. Bunker and Poverty: A case study of Varanasi district in the JIGYASA, a research journal, in Vol. 1, Jan 2009.
7. Politics of Religion in India in the Indian Journal of Bio- Research, (Social Science volume) Vol. 73, No 2, 2009
8. Bharatiya Rastriya Ekikaran aur Bhasa in the Vol.3,2008 of RAJNITIK, A Research Journal of Social Sciences from Mahatma Gandhi Kashi Vidyapeeth, Varanasi. UP, India.
9. Alpsankhak: Awdharana, Prakiti aur Swaroop in the research journal Parmeeta Oct-Dec 2010.
10. Politics of Muslim Minorities in India in the Research Journal of Life and Social Sciences in Vol. VI, Jan- June 2009. Rewa, M.P Vol.6
11. Bharat me Alpsankhyak: Samvaidhanik Pravadhano ki pristhbhumi in the annual volume of research journal Parmeeta Oct-Dec 2010, No 3.
12. Untouchables in India: Excluded among marginalized in the research journal Sodh Dristi, vol I No II
13. Bhartiya Rajniti me Dharmic Alpsankhyak in the research journal Anushilan Year 6. Vol XXIX.
14. Media Democracy and Citizenship in the Indian Journal of New Dimensions, Lucknow.
15. Singh Rajiv Kumar 2015, "Women Education: A Comparative Study of Hindu and Muslim Community," in U.P. Sinha (ed.) Exploring the Engagement and Empowerment of Women), pp. 18-34 (Concept Publisher. ISBN 973-93-5125-160-6

Department of Physics

Prof. Nawal Kishore

1. R.Kamal, S.S. Sekhon, N.Kishore, R.G.Mendiratta "Mossbauer spectra of $x\text{Na}_2\text{O} (1-x-y) \text{B}_2\text{O}_3$ $y\text{Fe}_2\text{O}_3$ glass system" J.Non-Crystalline Solids 53 (1982) 227-33
2. N.Kishore, K.Agarwal, R.Kamal, R.G.Mendiratta, "Infrared spectra of sodium and barium borate glasses doped with iron", Phys. & Chem. Glasses 23 (1982) 202-204
3. K.H.Rao, N.Kishore, K.Agarwal, R.G.Mendiratta, "Effect of Additives on properties of zinc-manganese ferrites", J.App. Physics 53 (1982) 1122-26
4. N.Kishore, T.K.Bansal, R.Kamal, R.G.Mendiratta, "Electron paramagnetic and direct current resistivity studies on barium borate glasses containing iron", Phys. & Chem. Glasses 23 (1984) 52-55
5. N.Kishore, T.K.Bansal, R.Kamal, R.G.Mendiratta, "Mossbauer spectroscopic studies in $\text{BaO}-\text{B}_2\text{O}_3-\text{Fe}_2\text{O}_3$ glass systems", J.Non-Crystalline Solids 69 (1985) 213-19

6. T.K.Bansal, N.Kishore, R.G.Mendiratta, "Mossbauer spectroscopic studies in the $0.1 \text{ Fe}_2\text{O}_3 \cdot 0.3 \text{ B}_2\text{O}_3 \cdot 0.6 (x \text{ B}_2\text{O}_3 (1-x)\text{V}_2\text{O}_5)$ glass system", *Phys. & Chem. Glasses* 26 (1985) 94-96
7. V.K.Bhatnagar, K.L.Bhatia, V.S.Yadav N.Kishore, "Electron spin resonance studies of Mn in Ge-rich bismuth-modified amorphous semiconductors $(\text{Ge}_{42}\text{S}_{58})_{99.5-x}\text{Bi}_x\text{Mn}_{0.5}$ ", *Phys. Rev. B* 39 (1989) 11203-06
8. S.K.Malik, K.L.Bhatia, N.Kishore, J.S.Phor, "EPR of Mn-doped Pb-modified amorphous germanium chalcogenide semiconductors", *J.Non-Crystalline Solids* 142 (1992) 55-62
9. K.L.Bhatia, S.K.Malik, N.Kishore, S.P.Singh, "Electronic conduction in Pb-modified amorphous semiconductors $\text{Pb}_{20} \text{Ge}_x \text{Se}_{80-x}$ exhibiting p- n transition", *Philos.Mag B* 66 (1992) 587-599
10. K.L.Bhatia, P.Singh, M.Singh, N.Kishore, N.C.Mehra, D.Kanjilal, "Optical study of MeV energy heavy ion-induced effects in crystalline Ge and Si", *Nucl. Instr. Methods B* 94 (1994) 379-387
11. M.Singh, K.L.Bhatia, N.Kishore, P.Singh, R.S.Kundu, "Electronic conduction in vitreous semiconductors in pseudo-binary system $(\text{As}_2\text{S}_3)_{1-x} (\text{PbS})_x$ ", *J.Non-cyrst. Solids* 180 (1995) 251-259
12. K.L.Bhatia, M.Singh, T.Kitagawa, N.Kishore, M.Suzuki, "Optical and electronic properties of Bi-modified amorphous thin films $\text{Ge}_{20} \text{Te}_{80-x} \text{Bi}_x$ ", *Semicond. Sci. & Techno* 10 (1995) 65-70
13. P.Singh, K.L.Bhatia, N.Kishore, M.Singh, S.K.Malik, D.Kanjilal, "Doping of chalcogenide glassy semiconductors by implanting Ni-ion", *J.Non-cyrst. Solids* 191 (1995) 146-154
14. R.S.Kundu, K.L.Bhatia, N.Kishore, C.Vijayaraghavan, "Effect of addition of Zn-impurity on the electronic conduction in semiconducting Glasses $\text{Se}_{80-x} \text{Te}_{20} \text{Zn}_x$ ", *Philos.Mag.*(1995) B 513-528
15. K.L.Bhatia, P.Singh, N.Kishore , S.K.Malik, "Electronic conduction in MeV energy ion-beam irradiated semiconducting glass $\text{Pb}_{20} \text{Ge}_{19} \text{Se}_{61}$ ", *Philos. Mag.B.* 72 (1995), 417-433
16. K.L.Bhatia, M.Singh, N.Kishore & M.Suzuki, "Electronic conduction in Bi-modified amorphous thin films $\text{Ge}_{20} \text{Te}_{80-x} \text{Bi}_x$ exhibiting absence of p-n transition", *Philos.Mag.B* 73 (1996), 383-393
17. K.L.Bhatia, P.Singh N.Kishore, D.Kanjilal & N.C.Mehra, "Surface Morphology and optical properties of MeV energy heavy ion irradiated c-Si and c-Ge; possibility of formation of porous material", *Philos.Mag.B* 74 (1996) 751-775.
18. M.Singh, K.L.Bhatia, P.Singh, R.S.Kundu & N.Kishore N.Kishore, "AC Conductivity of $(\text{As}_2\text{S}_3)_{1-x} (\text{PbS})_x$ in bulk vis-a-vis thin film forms", *Mater.Sci.Forum*, 223-224 (1996), 271-274
19. P.Singh, K.L.Bhatia, M.Singh, R.S.Kundu, S.K.Malik & N.Kishore, "Electronic conduction in amorphous semiconducting system $\text{Ge}_{42-x}\text{Se}_{58} \text{Pb}_x$ ", *Mater.Sci.Forum* 223-224 (1996) 267-270
20. K.L.Bhatia, P.Singh & N.Kishore, "Optical characterization of ion-beam induced disorder in semi-conductors irradiated with heavy ions", *Mater. Sci. Forum* 223-224 (1996) 419-428
21. K.L.Bhatia, R.S.Kundu, N.Kishore & V.K.Jain, "Effect of addition of Mn-impurity on the electronic properties of amorphous semiconductor $(\text{Se}_{70}\text{Te}_{30})_{99.9} \text{Mn}_{0.1}$ ", *Phil. Mag. B.*74 (1996) 317-30
22. R.S.Kundu, K.L.Bhatia, N.Kishore, M.Singh & P.Singh, "Electronic transport properties of Mn-doped a- $\text{Se}_{80-x}\text{Te}_{20} \text{Zn}_x$ system", *Solid State Phenomena.*55 (1997) 110-12
23. M.Singh, K.L.Bhatia, N.Kishore, R.S.Kundu, P.Singh & D.Kanjilal, "Electrical effects in MeV energy ion-irradiated amorphous $\text{As}_2 \text{Se}_3$ ", *Vacuum* 48 (1997) 969-72
24. K.L.Bhatia, M.Singh N.Kishore, "Electrical and optical properties of thermally evaporated thin films of $(\text{As}_2\text{S}_3)_{1-x} (\text{PbS})_x$ ", *Thin Solid Films* 293 (1998) 303-09
25. M.Singh, K.L.Bhatia, N.Kishore, R.S.Kundu & D.Kanjilal, "High Energy ion-implantation induced electrical effects in bulk amorphous $\text{As}_2 \text{S}_3$ ", *Nucl. Instrum. Methods.B.*140 (1998) 349-60
26. K.L.Bhatia, N.Kishore, J.Malik, M.Singh, A.Sharma & B.K.Srivastav, "Study of the effects of thermal annealing on the optical and electrical properties of vacuum evaporated amorphous thin films in the system $\text{Ge}_{20} \text{Te}_{80-x} \text{Bi}_x$ ", *Semicond. Sci. Techno.* 17 (2002), 189-97

27. J.Malik, K.L.Bhatia, N.Kishore, D.Kabiraj and A.S.Maan, "MeV Energy Lithium Ion-Irradiated Crystalline GaAs: an optical study", *Radiation Measurements* 36 (2003) 647-52
28. P.S.Gahlot, V.P.Seth, A.Agarwal, N.Kishore, S.K.Gupta, M.Arora, D.R. Goyal, "Influence of ZnO on optical properties and dc conductivity of vanadyl - doped alkali bismuthate glasses", *Rad. Effects & Defects in Solids* 159 (2004) 223-231
29. S.Sindhu, S.Sanghi, A.Agarwal, V.P.Seth, N.Kishore, "Effect of Bi₂O₃ content on the optical band gap, density and electrical conductivity of MO. Bi₂ O₃. B₂ O₃ (M=Ba, Sr) glasses", *Materials Chemistry & Physics* 90 (2005) 83-89
30. P.S. Gahlot, V.P. Seth, A. Aggarwal, N.Kishore, S.K. Gupta and M. Arora, "Electron paramagnetic resonance, optical and electrical properties of vanadyl doped alkali germanoborate glasses", *Physics and Chemistry of Solids* 66 (2005) 766-772
31. S.Sindhu, S. Sanghi, A. Aggarwal, Sonam, V.P.Seth & N.Kishore, "The role of V₂O₅ in the modification of structural optical and electrical properties of vanadium barium borate glasses", *Physica B* 365 (2005) 65-75.
32. S.Sindhu, S.Sanghi, A.Agarwal, V.P.Seth, N.Kishore, "Structural, optical, physical and electrical properties of V₂O₅.SrO.B₂O₃ glasses", *Spectro. Chemica Part A*, 64 (2006) 196-204
33. M. Singh, P. Aghamkar, N.Kishore and P.K. Sen, "Influence of Piezoelectricity and Magnetic field on Stimulated Brillouin Scattering in III-V Semiconductors", *J. Nonlinear Opt. Phys. & Mat.* 15, (2006), 465-479
34. S. Sindhu, S. Sanghi, A. Agarwal, N.Kishore and V.P. Seth, "Effect of V₂O₅ on Structure and Electrical Properties of Zinc Borate Glasses", *Journal of Alloys and compounds* 428 (2007) 206-213
35. P. Aghamkar, M. Singh, N.Kishore, S. Duhan and P.K. Sen, "Steady-State and Transient Brillouin Gain in Magnetoactive Narrow Gap Semiconductors", *Sem. Sc. & Tech.* 22 (2007) 749-754.
36. H.N.Dutta, Kh.Gazananda., V.Parkash, N.Kishore. J.Singh,V.Lagun, "A Unique plant over Schirmacher region East Antarctica ; signature of the beginning of global warming", *J. Ecophysiol, Occup. Hlth.* 7 (2007) 119-123.
37. H.S.Dahiya, Nawal Kishore & RM.Mehra, "Effect of Percolation on Electrical and Dielectric Properties of Acrylonitrile Butadiene Styrene/Graphite Composite", *Applied Polymer Science* 106 (2007) 2101-2110
38. M.Singh, P.Aghamkar, N.Kishore, P.K.Sen and M.R Perrone, "Stimulated Raman scattering in weakly polar transversely magnetized doped semiconductors", *Phys. Rev.B.* 76 (2007) 012302
39. S. Rani, S. Sanghi, Anshu, A. Agarwal N.Kishore and V. P. Seth, "Effect of ZnO/CdO on the Structure and Electrical Conductivity in Li₂O.MO.Bi₂O₃.B₂O₃ glasses (M= Zn, Cd)", *Journal of Physics & Chemistry of Solids* 69 (2008) 1855-1860
40. P.Aghamkar, S.Duham, M.Singh, N.Kishore and P.K.Sen, "Effect of thermal annealing on Nd₂O₃ doped silica powder prepared by the solgel process", *J.Sol-Gel Sci. Technol.* 46 (2008) 17-22.
41. N. Ahlawat, S. Sanghi, A.Agrawal, N.Kishore, S.Rani, "Investigation of near constant loss contribution to conductivity in lithium bismo-Silicate Gasses", *Journal of Non-Crystalline Solids* (2008) 3767-72
42. M.Singh, P. Aghamkar, N.Kishore, P.K. Sen, "Nonlinear absorption and refractive index of Brillouin scattered mode in piezoelectric semiconductor plasmas by an applied magnetic field", *Optics & Laser Technology* 40 (2008) 215-222
43. Sanjay, N.Kishore, A.Agarwal, V.P.Seth & M.S.Sheoran, "Thermal and electrical properties of MoO₃-Bi₂O₃-B₂O₃Glasses", *Indian Journal of Pure & App. Physics* 46 (2008) 719-721
44. P.Aghamkar, S.Duham, N.Kishore, Bhajanlal, "Effect of growth temperature on the structural of Nd-doped silica prepared by the chemical method", *Materials Chemistry and Physics* 114 (2009) 103-106
45. R. S. Saini, Mahabir Nain, R.P. Chauhan, S.K.Chakarvarti& Nawal Kishore, "Radon, Thoron and their Progeny in Some Dwellings of Northern Haryana using SSNTDs", *Indian Journal of Physics* 83(8) (2009) 1197-1200

46. Sanjay, N.Kishore, A.Agarwal, "Investigation of structural, optical and transport properties of $\text{MoO}_3\text{-PbO-B}_2\text{O}_3$ glasses", *J. Alloys and Compounds* 487 (2009) 52-57
47. Neetu Ahlawat, Ashish Agarwal, Sujata Sanghi, Nawal Kishore, "Stretched exponential relaxation and dispersive conductivity behavior in lithium bismuth silicate glasses", *Solid State Ionics*, 180 (2009) 1356-1361
48. Sanjay, N.Kishore & A Agarwal, "Study of structural, optical and transport properties of semiconducting $\text{Fe}_2\text{O}_3\text{-PbO-B}_2\text{O}_3$ glasses", *Indian Journal of Pure & Applied Physics* 48 (2010) 205-211
49. S.L.Goyal & N.Kishore, "The Systematics of (n, α) reaction cross-section at 14.5 MeV Neutron Energy", *Indian J. Phys.* 84 (5) (2010) 553 – 562
50. Surender Duhan, N.Kishore, P.Aghamkar, Sunita Devi, "Preparation and characterization of sol-gel derived silver-silica nanocomposite", *J. Alloys and Compounds* 507 (2010) 101-104
51. S.Rani, S.Sanghi, A.Agarwal, N.Kishore, "Study of structure and Li^+ ions dynamics in the presence of Fe_2O_3 in $\text{Bi}_2\text{O}_3\text{-B}_2\text{O}_3$ glasses", *Solid State Phenomena*, 161 (2010) 51-61
52. R.S.Kundu and N.Kishore, "EPR Study of Se-Te-Zn System with and without Mn Doping", *Optoelectronics and Advanced Materials – Rapid Comm.* 4 (2010) 295-98.
53. R. Punia, R.S. Kundu, J. Hooda, S. Dhankhar, Sajjan Dahiya and N. Kishore, "Effect of Bi_2O_3 on structural, optical, and other physical properties of semiconducting zinc vanadate glasses", *Journal of Applied Physics* 110 (2011) 033527
54. R.S.Saini, Ravish Garg, Dinesh Kumar, R.P.Chauhan, S.K. Chakarvarti & Nawal Kishore, "Measurement of Indoor Radioactive Pollutants at Various Heights using Track Etch Technique", *International Journal of Applied Engineering Research*, 6, (2011) 685-686
55. S.L. Goyal and N. Kishore, "Systematics for the cross-sections of the (n, p) reaction at 14.5 MeV neutron energy", *Indian J. Phys.* 12648-012-0049-7 (2012)
56. R. Punia, R. S. Kundu, Meenakshi Dult, S. Murugavel, and N. Kishore, "Temperature and frequency dependent conductivity of bismuth zinc vanadate semiconducting glassy system", *Journal of Applied Physics* 112 (2012) 083701
57. R. Punia, R. S. Kundu, S. Murugavel, and N. Kishore, "Hopping conduction in bismuth modified zinc vanadate glasses: An applicability of Mott's model", *Journal of Applied Physics* 112 (2012) 113716
58. Sunita Rani, Devendra Mohan and Nawal Kishore, "Effect of Swift Heavy Ions Irradiation on Third Order Nonlinear Optical Properties of As_2S_3 Chalcogenide Films", *Invertis Journal of Science & Technology*, Vol. 5, No. 2 (2012) 79-84
59. Sunita Rani, Devendra Mohan, Nawal Kishore, Purnima, "Sensitive measurement of optical nonlinearity in amorphous chalcogenide materials in nanosecond regime", *Spectrochimica Acta Part A* 93 (2012) 135-139
60. J. Hooda, R Punia, R.S. Kundu, Sunil Dhankhar and N. Kishore, "Structural and Physical properties of ZnO Modified Bismuth Silicate Glasses", *International Scholarly Research Network ISRN Spectroscopy* Vol. 2012 (2012) 578405 (5 pages)
61. Asha, Sneha Lata Goyal and Nawal Kishore, "Synthesis and fourier transform infra-red spectroscopy of polyaniline doped with TiO_2 ", *J Int Sc Tech*, (2013) 1, 1, 25-27
62. Sanjay Dahiya, R Punia, Sanjay, R S Kundu, Ashwani Sharma and N. Kishore, "Effect of B_2O_3 on Physical and Structural Properties of $95[x \text{B}_2\text{O}_3 (100-x)\text{Bi}_2\text{O}_3] 5\text{Fe}_2\text{O}_3$ Glass System", *J. Sci& Tech. Res.*, 3, No.1 (2013) 7-13.
63. Rajesh Parmar, R S Kundu, Rajesh Punia, N. Kishore and P. Aghamkar, "Fe₂O₃ Modified Physical, Structural and Optical Properties of Bismuth Silicate Glasses" *Journal of Materials* 2013, 650207 (5 pages)
64. R.K. Kundu, Sunil Dhankhar, R. Punia, Sarita Sharma and N. Kishore, "ZnCl₂ Modified Physical and Optical Properties of Barium Tellurite Glasses" *Trans. Ind. Ceram. Soc.* Vol. 72, no. 3 (2013) 206-210
65. Sanjay, N. Kishore, A Aggarwal, S. Dahiya, Inder Pal and Navin Kumar, "Optical and Spectroscopic studies of $\text{Fe}_2\text{O}_3\text{-Bi}_2\text{O}_3\text{-B}_2\text{O}_3\text{:V}_2\text{O}_5$ Glasses", *Modern Physics Letters B* Vol. 27 No. 28 (2013) 1305207 (10 pages)

66. R.S. Kundu, Sunil Dhankhar, R. Punia, Kirti Nanda and N. Kishore, "Bismuth Modified Physical, Structural and Optical Properties of Mid-IR Transparent Zinc boro-Tellurite glasses" *Journal of Alloys and Compounds* 587 (2014) 66–73.
67. R.S.Kundu, Meenakshi Dult, R. Punia, Rajesh Parmar, N. Kishore, "Titanium induced structural modifications in bismuth silicate glasses" *Journal of Molecular Structure* 1063 (2014) 77–82.
68. J. Hooda, R. S. Kundu, R. Punia, S. Murugavel, and N. Kishore, "Investigation of Electronic Transport Properties of Bismuth Zinc Silicate Glasses" *International Journal of Applied Science & Technology Research Excellence*, Vol.4, (2014), 19-24
69. Rajesh Parmar, R.S. Kundu, R. Punia, P. Aghamkar, N. Kishore, "Iron Modified Structural and Optical Spectral Properties of Bismuth Silicate Glasses", *Physica B*, 450 (2014) 39-44.
70. Meenakshi Dult, R.S. Kundu, S Murugavel, R Punia and Nawal Kishore, "Conduction mechanism in bismuth silicate glasses containing titanium" *Physica B*, 452 (2014) 102-107.
71. Asha, Snehlata Goyal, D Kumar and N Kishore, "Synthesis and characterization of polyaniline/TiO₂ composites" *Ind. J. Pure & Appl. Phys.* 52: 341-347(2014)
72. Balvinder Singh, V.K. Garg, Poonam Yadav, Nawal Kishore and Vandana Pulhani, "Uranium in groundwater from Western Haryana, India", *J Radio Anal Nucl Chem.* 301 (2014) 427-433
73. Sanjay Dahiya, Ashwani Sharma, Sanjay and N. Kishore, "Effects of Fe₂O₃ on physical properties and structure of Bi₂O₃-B₂O₃-Fe₂O₃ glasses", *Archives of Physics Research* 5 (1) (2014) 42-50
74. Sunita Rani, Devendra Mohan, Nawal Kishore, "Study of optical phase conjugation in amorphous Zn_x-S_y-Se_{100-x-y} chalcogenide thin films using degenerate four-wave mixing", *Spectrochimica Acta Part A* 118 (2014) 733-736
75. Sunita Rani, Devendra Mohan, Nawal Kishore and Rakesh Dhar, "Investigation of nonlinear optical parameters of zinc based amorphous chalcogenide Films", *Optik (optics)* vol. 125 (no.12) 2014 (4 pages).
76. Asha, Snehlata Goyal, Deepika Jain and Nawal Kishore, "Structural, Thermal and Electrical Properties of Polyaniline/CrO₃ Composites", *Journal of Chemical and Pharmaceutical Research*, 2014, 6(12), 105-113. Impact factor: 0.467, ISSN: 0975-7384.
77. Asha, Snehlata Goyal, D Kumar, Shyam Kumar and Nawal Kishore, "Synthesis and Characterization of Polyaniline/TiO₂ Composites", *Indian Journal of Pure & Applied Physics*, 2014, 52, 341-347. Impact factor: 0.711, ISSN: 0975-1041 (Online); 0019-5596 (Print)
78. Snehlata Goyal, Smriti Sharma, Deepika Jain, D. Kumar and N. Kishore, "In situ synthesis and characterization of polyaniline/ nickel oxide composites", *Advances in Applied Science Research*, 2015, 6(1), 89-98, Impact factor: 0.421, ISSN: 0976-8610
79. Snehlata Goyal, Smriti Sharma, Deepika Jain and N. Kishore, "Study of structural, electrical and thermal properties of polyaniline/ZnO composites synthesized by in situ polymerization", *Indian Journal of Pure & Applied Physics*, Impact factor: 0.711, ISSN: 0975-1041(Online); 0019-5596 (Print) (Accepted)
80. Kirti Nanda, Neelam Berwal, R S Kundu, R. Punia, N. Kishore, "Effect of Doping of Nd³⁺ ions in BaO-TeO₂-B₂O₃ glasses: A Vibrational and Optical study" *J. Molecular Structure* 1088(2015) 147-154 Impact Factor 1.404
81. Meenakshi Dult, R S Kundu, Neelam Berwal, R Punia, N. Kishore, "Manganese Modified Structural and Optical Properties of Bismuth Silicate Glasses", *J. Molecular Structure* 1089(2015) 32-37 Impact Factor 1.404
82. Kirti Nanda, R S Kundu, Sarita Sharma, Devendra Mohan, R Punia, N. Kishore, "Study of Vibrational Spectroscopy, linear and non linear optical properties of Sm³⁺ ions doped BaO-ZnO-B₂O₃ glasses", *Solid State Science* 2015 (1-8) (In Press).
83. Sarita Sharma, R S Kundu, R Punia, N. Kishore, "Structural, Optical, Electrical and Magnetic Properties of Zn_{0.7}Mn_xNi_{0.3-x}O Nanoparticles Synthesized by Sol Gel Technique" *Cogent Physics* 2015 (Accepted) ISSN: 2331-1940
84. Sanjay, N Kishore, R S Kundu, S Dhankhar, "FTIR and Optical properties of various Se-S-Zn Chalcogenide Glasses", *Materials Science and Engineering* 73 (2015) ISSN: 0094-234 X
85. R S Kundu, Sarita Sharma, Devendra Mohan, R Punia, N Kishore, Kirti Nanda, "Study of

- vibrational spectroscopy, linear and nonlinear optical properties of Sm³⁺ ions doped BaO-ZnO-B₂O₃ glasses ", Solid State Science 45 (2015) 15-22, Impact factor 1.679, ISSN: 0021-8979
86. Meenakshi Dult, R S Kundu, J Hooda, S Murugavel, R Punia, N Kishore, "Temperature and frequency dependent conductivity and electric modulus formulation of manganese modified bismuth silicate glasses", Journal of Non-Crystalline Solids 423-424 (2015) 1-8, Impact Factor 1.716, ISSN: 2314-4874
 87. Neelam Berwal, R S Kundu, Kiriti Nanda, R Punia, N Kishore , "Physical Structural and Optical Characterizations of Borate Modified Bismuth-Silicate-Tellurite Glasses", Journal Molecular Structure 1097 (2015) 37-44, Impact Factor 1.404, ISSN: 0021-8979
 88. Sarita Sharma, Kiriti Nanda, R S Kundu, R Punia, N Kishore, "Structural Properties, Conductivity, Dielectric Studies and Modulus Formulation of Ni Modified ZnO Nanoparticles", Journal of Atomic, Molecular, Condensate & Nano Physics 2 15-31 (2015) ISSN: 2349-2716

Dr. Aditya Saxena

1. 'Acoustic phonon spectrum of unaligned multi-walled carbon nanotubes and zero phonon Rayleigh Mössbauer scattering', Indian Journal of Physics, 89 (2015), 417-423. Co-authors: S.P. Tewari, P. Silotia and S. Dabas. DOI 10.1007/s12648-014-0607-2. ISSN: 0973-1458 (Print) 0974-9845 (Online)
2. 'Investigations on the triboelectric electricity generation and its application in energizing a voltage driven display device', DU Journal of Undergraduate Research and Innovation 1 (1) (2015) 49-59. A Saxena et al. ISSN 2395-2334
3. 'A Study of Crop Yield pattern with Climate Change based on Physical Parameters: Temperature and Rainfall in Western Uttar Pradesh to make future predictions for better Crop Management and Yield', DU Journal of Undergraduate Research and Innovation 1 (1) (2015) 36-48. A Saxena et al. ISSN 2395-2334
4. 'On the thermal conductivity of single-walled carbon nanotube ropes', Soft Nanoscience Letters 3, (2013) 7-10. Co-authors: S.P. Tewari, P. Silotia and S. Dabas. DOI: 10.4236/sn.2013.31002. ISSN Print: 2160-0600 ISSN Online: 2160-0740
5. 'Phonon frequency distribution function and temperature variation of Rayleigh Mossbauer scattering fraction from aligned multiwalled carbon nanotubes', Journal of Nanophotonics 05, (2011) 053508 (1-9). Co-authors: S.P. Tewari, P. Silotia and S. Dabas. doi: 10.1117/1.3590198. E-ISSN: 1934-2608
6. 'Phonon frequency distribution function in aligned multi-walled carbon nanotubes', Proc. Of SPIE 7761, (2010) 77610T (776130) (1-10). Co-authors: S.P. Tewari, P. Silotia and S. Dabas. doi: 10.1117/12.867993. ISSN Proceedings of SPIE: 0277-786X
7. 'On the excess specific-heat of single-walled carbon-nanotube ropes due to the adsorption of helium atoms in the temperature range 2-20 K', Journal of Nanophotonics 02, (2008) 023503 (1-7). Co-authors: S.P. Tewari, P. Silotia and S. Dabas. doi:10.1117/1.2896048. E-ISSN: 1934-2608
8. 'Vortices of the Bose-Einstein condensate in the presence of higher order energy corrections including three-body interactions for large values of gas parameter', Solid State Communications 143, (2007) 337. Co-authors: S. P. Tewari, P. Silotia and L.K.Gupta. doi:10.1016/j.ssc.2007.05.031. ISSN: 0038-1098
9. 'Variation of the ground state properties of trapped Bose-Einstein condensate due to localized impurity', Proc. Of SPIE 6710, (2007) 671016 (1-11). Co-authors: S.P. Tewari, P. Silotia and L.K.Gupta. doi: 10.1117/12.733809. ISSN Proceedings of SPIE: 0277-786X
10. 'Effect of three-body interaction in strongly interacting Bose-Einstein condensate in isotropic and highly anisotropic magnetic trap', Indian Journal of Pure and Applied Physics, 45, 173 (2007). Co-authors: S. P. Tewari, P. Silotia and L.K.Gupta. ISSN: 0019-5596
11. 'Effect of incorporating three-body interaction in the low-density energy expansion of Bose-

- Einstein condensate of ^{87}Rb atoms trapped in a harmonic potential', *Physics Letters A*, 359, 658 (2006). Co-authors: S. P. Tewari, P. Silotia and L.K.Gupta. doi:10.1016/j.physleta.2006.07.027. ISSN: 0375-9601
12. 'Effect of higher order energy corrections including three-body interaction of the Bose-Einstein condensate with the variation of repulsive self interaction energy', *Int. J of Mod. Phys. B.*, 20, (2006) 1690. Co-authors: S.P.Tewari, Poonam Silotia and L.K.Gupta. DOI: 10.1142/S0217979206034224. Print ISSN: 0217-9792 Online ISSN: 1793-6578
 13. 'Dimensionality effects on the strongly interacting Bose-Einstein condensate with three-body interactions', *Complex Mediums VI: Light and Complexity*, Proceedings of SPIE, 5924, (2005) 592416. Co-authors: S.P.Tewari, Poonam Silotia and L.K.Gupta. doi: 10.1117/12.618739. ISSN Proceedings of SPIE: 0277-786X
 14. 'Dynamical modes of a graphite surface-top and the middle- by unfolding the observed temperature dependent displacement-displacement auto-correlation function', *Physica B.*, 355, (2005) 264 Co-authors: S.P.Tewari and Poonam Silotia. doi:10.1016/j.physb.2004.11.003. ISSN: 0921-4526
 15. 'General expression of chemical potential for Bose-Einstein condensate in an anisotropic magnetic trap', *Quantum Communications and Quantum Imaging*, Proc. of SPIE, 5161, (2003) 220. Co-authors: S.P.Tewari and Poonam Silotia. doi: 10.1117/12.512323. ISSN Proceedings of SPIE: 0277-786X
 16. 'Energy dependent total thermal neutron scattering cross-section and transport of a neutron pulse in fullerite at 300 K' *Nanotubes and Nanowires*, Proc. of SPIE, 5219, (2003) 117. Co-authors: S.P.Tewari, Poonam Silotia and Kakoli Bera. doi: 10.1117/12.505772. ISSN Proceedings of SPIE: 0277-786X
 17. 'Ground state properties of Bose-Einstein condensate of ^{87}Rb atoms in an isotropic magnetic trap for different total number of atoms in the condensate ranging from 10^2 to 5×10^6 ', *Indian J of Pure and Appl. Phys.*, 41, (2003) 905. Co-authors: S.P.Tewari and Poonam Silotia. ISSN: 0019-5596
 18. 'Frequency distribution function of phonons in different layers of graphite', *Indian J of Pure and Appl. Phys.*, 41, (2003) 707. Co-authors: S.P.Tewari and Poonam Silotia. ISSN: 0019
 19. 'Dynamics of carbon in different layers of graphite', *Disordered Materials*, (Narosa, India, 2003), Chapter 21, Page 126. Co-authors: S.P.Tewari and Poonam Silotia. ISBN: 978-81-7319-463-4

Dr. Tanuj Deswal

1. Tanuj Kumar, A. Kumar, D. Kanjilal, An approach to tune the amplitude of surface ripple patterns, *Appl Phy Lett* 103 (2013) 131604. Impact factor: 3.3
2. Tanuj Kumar, M. Kumar, G. Gupta, R.K. Pandey, S. Verma, D. Kanjilal, Role of surface composition in morphological evolution of GaAs nano-dots with low-energy ion irradiation, *Nanoscale Res Lett*, 7 (2012) 552.
3. Tanuj Kumar, S.A. Khan, U.B. Singh, S. Verma, D. Kanjilal, Formation of nanodots on GaAs by 50 keV Ar⁺ ion irradiation, *Appl Surf Sci*, 258 (2012) 4148-4151.
4. Tanuj Kumar, M. Kumar, S. Verma, D. Kanjilal, Fabrication of ordered ripple patterns on GaAs (100) surface using 60 keV Ar⁺ beam irradiation, *Surface Engineering* 29 (2013) 543.
5. S. Verma, P. Kumsi, T. Kumar, D. Kanjilal, In-situ Investigation of Current Transport across Pt/n-Si (100) Schottky Junction during 100 MeV Ni⁺ 7 Ion Irradiation, *Device and Materials Reliability*, 13 (2013) 98.
6. Tanuj Kumar, Ashish Kumar, N. P. Lalla, Sonu Hooda, Sunil Ojha, Shammi Verma, and D. Kanjilal, Role of ion beam induced solid flow in surface patterning of Si (100) using Ar ion, *Appl Surf Sci*, 283 (2013) 417-421.
7. Tanuj Kumar, A. Kumar, D.C. Agarwal, N.P. Lalla, D. Kanjilal, Ion beam-generated surface ripples: new insight in the underlying mechanism, *Nanoscale Res Lett*, 8 (2013) 336, 1-5.

8. Ashish Kumar, Tanuj Kumar, A. Hähnel, D. Kanjilal, R. Singh, Dynamics of modification of Ni/GaN Schottky barrier diodes irradiated at low temperature by 200 MeV Ag¹⁴⁺ ions, *Appl Phys Lett.*, 104 (2014) 033507.
9. M. Kumar, K.K. Parashar, S.K. Tandi, T. Kumar, D.C. Agarwal, A. Pathak, Fabrication of Ag:TiO₂ Nanocomposite Thin Films by Sol-Gel Followed by Electron Beam Physical Vapour Deposition Technique, *Journal of Spectroscopy*, 2013 (2013) Article ID 491716.
10. Tanuj Kumar, U.B. Singh, M. Kumar, Sunil Ojha, S. Verma, D. Kanjilal, Tuning of ripple patterns and wetting dynamics of Si (100) surface using ion beam irradiation, *Current Applied Physics* 14 (2014) 312-317.
11. Ratnesh K. Pandey, Manvendra Kumar, Saif A. Khan, Tanuj Kumar, Ambuj Tripathi, D. K. Avasthi, Avinash C. Pandey, Study of electronic sputtering in CaF₂ thin films, *Appl Surf Sci*, 289 (2014) 77-80.
12. M Kumar, T Kumar, DK Avasthi, Study of thermal annealing induced plasmonic bleaching in Ag:TiO₂ nanocomposite thin films, *Scripta Materialia* 105 (2015) 46-49 Impact Factor: 3.2
13. RP Yadav, T Kumar, AK Mittal, S Dwivedi, D Kanjilal, Fractal characterization of the silicon surfaces produced by ion beam irradiation of varying fluences, *Applied Surface Science* 347 (2015) 706-712
14. Ratnesh K. Pandey, Manvendra Kumar, Tanuj Kumar, Avinash C. Yadav, Udai B. Singh, Saif A. Khan, Ambuj Tripathi, D. K. Avasthi, Dynamic scaling of swift heavy ion induced surface restructuring of BaF₂ thin film, *Materials Letters* 143 (2015) 309-311 Impact factor: 2.4
15. S Hooda, B Satpati, S Ojha, T Kumar, D Kanjilal, D Kabiraj, Structural manipulation in Ge by swift heavy ions governed by electron–phonon coupling strength, *Materials Research Express* 2 (4) (2015) 045903
16. Tanuj Kumar, Manish Kumar, Vandana Panchal, PK Sahoo, D Kanjilal, Energy-Separated Sequential Irradiation for Ripple Pattern Tailoring on Silicon Surfaces, *Applied Surface Science* 357 A (2015) 184-188
17. Tanuj Kumar, S. A. Khan, U. B. Singh, S. Verma and D. Kanjilal, Nano Pattern on n-Si (100) Surface by Ion Irradiation, *AIP Conference Proceedings*, 1349 (2011)727-728. ISSN: 1551-7616
18. Tanuj Kumar, S. A. Khan, S. Verma and D. Kanjilal, Nano structuring of GaAs(100) surface using low energy ion irradiation, *AIP Conference Proceedings*, 1447 (2012)703-704. ISSN: 1551-7616
19. S. Verma, T. Kumar, Sandeep Kumar and D. Kanjilal, Dependence of Schottky Barrier Height on Metal Work Function, *AIP Conference Proceedings*, 1349, (2011) 1111-1112.

Dr Avinash Chand Yadav

1. Power spectrum of mass and activity fluctuations in a sandpile Avinash Chand Yadav, Ramakrishna Ramaswamy, and Deepak Dhar *Physcal Review E* 85, 061114 (2012).
2. Scaling behavior in probabilistic neuronal cellular automata Kaustubh Manchanda, Avinash Chand Yadav, and Ramakrishna Ramaswamy *Physcal Review E* 87, 012704 (2013).
3. Memoryless nonlinear response: A simple mechanism for the 1/f noise Avinash Chand Yadav, Ramakrishna Ramaswamy, and Deepak Dhar *Europhysics Letters* 103, 60004, (2013).
4. Sub-diffusion and trapped dynamics of neutral and charged probes in DNAprotein coacervates Najmul Arfin, Avinash Chand Yadav, and H. B. Bohidar *AIP Advances* 3, 112108 (2013).

Dr. Arun Kumar

1. Arun Kumar, Ganesh Iyer and Anandh Subramaniam, Simulation of the stress state of GaN-AlN based epitaxial devices, *Physica Status Solidi C* 12 (2015) p.399.
2. Arun Kumar, Monika Gautam and Anandh Subramaniam, Critical Sizes for the Stabilization of Coherent Precipitates, *Journal of Applied Physics* 115 (2014) p.193509-1.
3. Arun Kumar and Anandh Subramaniam, Negative, zero and positive stiffness in extended Eshelby plates, *Philosophical Magazine Letters* 93 (2013) p.703.
4. Arun Kumar, Gaganpreet Kaur and Anandh Subramaniam, Critical Sizes for coherent to semicoherent transition in precipitates, *International Journal of Materials Research (formerly Zeitschrift für Metallkunde)* 104 (2013) p.1171.
5. Arun Kumar, Monika Gautam and Anandh Subramaniam, On the Formation and Stability of Two Misfit Dislocations in the Cu- γ Fe System, *Journal of Solid Mechanics and Materials Engineering* 7 (2013) p.135.
6. Arun Kumar and Anandh Subramaniam, Position dependant critical thickness in finite epitaxial systems, *Applied Surface Science* 275 (2013) p.60.
7. Arun Kumar and Anandh Subramaniam, Finite substrate effects on Critical Thickness in Epitaxial Systems, *Advanced Materials Research* 585 (2012) p.39.
8. Arun Kumar and Anandh Subramaniam, Stable Edge Dislocations in Finite Crystals, *Philosophical Magazine* 92 (2012) p.2947.
9. Arun Kumar, K.G. Kavitha and Anandh Subramaniam, Interfacial Edge Dislocation Interactions with Free-Surfaces in nanocrystals, *Journal of Nanoscience and Nanotechnology* 12 (2012) p.5096.
10. L.S. Pali, Nitesh Shah, Arun Kumar, Anandh Subramaniam, Hydrogen storage in epitaxial films: a finite element study, *Nanomaterials and Energy* 1 (2012) p.46.
11. Arun Kumar and Anandh Subramaniam, Materials Analogue of Zero Stiffness Structures, *Philosophical Magazine Letters* 91 (2011) p.272.
12. Arun Kumar and Anandh Subramaniam, Critical Thickness for Nb Nanofilm on Sapphire Substrate: an example towards Understanding Evolution of Coherent Nanostructures, *International Journal of Nanoscience* 10 (2011) p.351.
13. Prasenjit Khanikar, Arun Kumar and Anandh Subramaniam, Image forces on edge dislocations: a revisit of the fundamental concept with special regard to nanocrystals, *Philosophical Magazine* 91 (2011) p.730.
14. Prasenjit Khanikar, Arun Kumar and Anandh Subramaniam, Determination of Image Forces in Nanocrystals using Finite Element Method, *Advanced Materials Research* 67 (2009) p.33.
15. Ganesh Iyer, Arun Kumar and Anandh Subramaniam, Critical width for coherent stripes, *AIP Conference Proceedings* 1536 (2013) p.1219.
16. Anandh Subramaniam and Arun Kumar, Simulations of Dislocations and Coherent Nanostructures in Computational Finite Element Methods in Nanotechnology, ed. Sarhan Musa, CRC Press-Taylor and Francis Group, Florida (2012) Chapter 5.

Mr. Vinay Kumar

1. Statistical Models And Estimation In Epidemiological Studies: A Review Published In The International Journal of Computer Science And Information Technology Research Excellence, Volume 3(1), 2013
2. Intrusion Detection Using Data Mining Techniques: A Study Through Different Approach Published In International Journal of Applied Science & Technology Research Excellence Vol. 3 Issue 4, July-August 2013,
3. Some Principles And Applications of Operation Research: A Historical Approach, International Journal of Applied Science & Technology Research Excellence Vol. 3 Issue 4, July-August 2013,
4. A Statistical Study on Impact of Government Policy: Fact From Family Planning Program, Published In Edited Book on Application and Role of Statistics in Multi-Disciplinary Research (ISBN No. 978-81-7844-173-3)

Department of Tourism & Hotel Management

Prof. Ashish Dahiya

1. Dahiya, A., & Duggal, S. (2015). Evaluation of Websites using Balanced Scorecard (BSC) Approach in the Hotel Landscape in India Journal of Tourism – an International Journal, 15, 41-60.
2. Chand, M., Dahiya, A., & Duggal, S. (2015). Hospitality and Tourism Research Journal Publications in India: Bon Voyage since 1976-2014. Tourism Innovations – an International Journal of Indian Tourism & Hospitality Congress (ITHC), 4(1), 1-21.
3. Dahiya, A., & Duggal, S. (2015). Evaluating the Official Websites of SAARC Countries on their Web Information on Food Tourism. Asia Pacific Journal of Information Systems (APJIS), 24(1), 145-162.
4. Chand, M., & Dahiya, A. (2014). The impact of service quality on tourist satisfaction and loyalty in Indian tour operation industry, International Journal of Sales & Marketing Management Research and Development (IJSMMRD), 4(5), 1-14.
5. Dahiya, A., Duggal, S., & Kumar, S. (2014). An analysis of perceived food heritage of Haryana: The study of spicy chutneys. Atithi Journal of Hospitality & Tourism, 2(1), 167-178.
6. Dahiya, A., Duggal, S., & Kumar, S. (2014). Websites of Hotel Management Institutes in India: An empirical study of private institutes under NCHMCT, MoT, GoI. RIPPLES, 4(1), 8-16.
7. Dahiya, A., & Duggal, S. (2014). The Website Performance of Hospitality Education Institutes in India – The Comparative Content Analysis. South Asian Journal for Tourism & Heritage, 7(2), 75-96.
8. Dahiya, A., & Duggal, S. (2014). Trends and Practices in Hospitality & Tourism Research: A selected study from International Journals. International Journal of Hospitality & Tourism Systems (IJHTS), 7(1), 27-33.
9. Dahiya, A., & Duggal, S. (2013). Comparative Analysis of the Website Performance of Industry Integrated HMIs, Central Government IHMs and State Government IHMs in India. J Tourism Hospit 2: 117. doi:10.4172/2167-0269.1000117
10. Dahiya, A., & Duggal, S. (2013). Websites of Hotel Management Institutes (HMIs) in India: An empirical study of central and state government Institutes. International Journal of Hospitality & Tourism Systems (IJHTS), 6(2), 22-33.

11. Dahiya, A., & Duggal, S. (2013). An Analytical Study of the Websites of Industry Integrated Hotel Management Institutes in India. *Journal of Hospitality Application and Research (JOHAR)*, 8(2), 54 – 69.
12. Dahiya, A. (2013). Hospitality & Tourism Education in India : In search of Innovative Programmes. *Journal Productivity Quarterly, The Principal Journal of National Productivity Council of India*, 53(4), 358-370.
13. Dahiya, A., & Duggal, S. (2011). Hotel Websites in India A Comparative Study of Indian and Foreign Hotel Chains. *Indian Journal of International Tourism & Hospitality Research*, 4(1), 1-13.
14. Bagri, S. C., Chand, M., & Dahiya, A. (2010). Housekeeping Practices in Indian Hotel Industry: a comparative study of Chain and Non-Chain Hotels. *Indian Journal of International Tourism & Hospitality Research*, 4(1), 1-13.
15. Bagri, S. C., Chand, M., & Dahiya, A. (2010). Investigating Tourism & Hospitality Research in India and evaluating the Scholarly Productivity in a Major Tourism Journal. *Journal of Indian Art, Culture, Heritage and Tourism*, 2(1), 51-60
16. Chand, M., & Dahiya, A. (2010). Application of Management Accounting Techniques in Indian small and medium hospitality enterprises: an empirical study. *International Journal of Entrepreneurship and Small Business*, 11(1), 25 – 41.
17. Bagri, S. C., Chand, M., & Dahiya, A. (2009). An analysis of the perceived housekeeping practices in Indian hotels. *Indian Journal of International Tourism & Hospitality Research*, 3(1), 28-40.
18. Chand, M., & Dahiya, A. (2008). Human Resource Strategies and Global Business Environment: A Case study of Indian Hospitality Enterprises. *Tourism Development Journal – An International Journal*, 5-6(1), 42-49.
19. Chand, M., & Dahiya, A. (2008). Hospitality Education and Advisory Committees in Indian Universities: An analysis of academic success. *Atna Journal of Tourism*, 3(1), 115-128.
20. Dahiya, A., & Negi, P. (2008). Content Analysis of Hotel Management Syllabi: A Study of Indian Universities Atithi *A Journal of Hospitality & Tourism*, I (I),9-32
21. Dahiya, A., & Negi, P. (2008). Career Opportunities & Programmes in Hotel Management. Published in *Employment News- Vol. XXXIII No.28*, 11-18 Oct 2008, Ministry of Information & Broadcasting, Govt. of India. Page no 1 & 56,
22. Chand, M., Dahiya, A., & Patil, L. (2007). Gastronomy Tourism – A tool for promoting Jharkhand as a Tourist Destination. *Atna Journal of Tourism*, 2(I), 88-100.
23. Patil, L., Dahiya, A., & Gopali, J.B. (2006). Eco Tourism, a tool for sustainability and conservation of heritage resources in Maharashtra. *Journal of Tourism – an International Journal*, 8, 41-60.
24. Gupta, S., Gupta, A., & Dahiya, A. (2006). Need & Means for organized finishing programme for Hotel Management Students. *Journal of Hospitality Application & Research*, 1(2), 21-26.
25. Agrawal, A.M., & Dahiya, A. (2006). Housekeeping – related musculoskeletal disorders – in Hospitality Industry in India. *Journal of Hospitality Application & Research JOHAR*, 1(1), 15-31
26. Dahiya Ashish (2012). Sustainable Development of Hospitality Industry. Published in Book Titled *BHY012 for BSCHIIA Programme (2012) e - Publication Pp -1-22*, School of Tourism & Hospitality Service Sectoral Management, Indira Gandhi National Open University – A Central University, New Delhi.
27. Dahiya Ashish (2012). Eco Design in Hospitality Architecture. Published in Book Titled *BHY012 for BSCHIIA Programme (2012) e - Publication Pp -1-34*, School of Tourism &

Hospitality Service Sectoral Management, Indira Gandhi National Open University – A Central University, New Delhi

28. Mishra, Jitendra Mohan, Dahiya A & Mohit Kukreti (2009). Housekeeping & Tourism Destinations. Published in Book titled Hospitality industry Contemporary issues,(2009) CMTHS Publications Pp 139-160. ISBN 978-81-904282-1-7
29. Dahiya A & Sharma S (2008). Hospitality Industry an Introduction. Published in Book titled Introduction to Hospitality Industry – A Text Book, (2008) Aman Publications, Pp 1-13. ISBN : 978-81-8204-046-05
30. Dahiya A & Negi P (2008). Major Hospitality Players & Associations in India. Published in Book titled Introduction to Hospitality Industry – A Text Book, (2008) Aman Publications, Pp 149-158. ISBN : 978-81-8204-046-05
31. Dahiya A (2008). Impacts of Hospitality Industry Associations on Quality Education in India. Published in book titled Travel & tourism Management : Contemporary Issues & Trends, (2008) Abhishek Publications Chandigarh, Pp 276-306. ISBN: 978-81-8247-184-9.
32. Dahiya A & Madhulika J (2007). Developing Human Resources- for Hospitality Industry. Published in 'Human Resource Development Practices in Tourism & Travel Sectors' (2007) by Centre for Mountain Tourism & Hospitality Studies H.N.B Garhwal University, Srinagar Uttaranchal, Pp 86-93. ISBN: 81-904282-0-9.
33. Dahiya A, Patil L & Gupta A (2007). Hospitality Careers – Opportunities & Dilemmas Facing Graduate Education in Tourism & Hospitality. Published in Book titled “Cutting Edge Research in Tourism – Emerging Issues & Challenges” sub theme “Tourism education System: Need for Professionalisation of Tourism education. New Methods in Tourism Research.”(2007) Abhishek Publications Chandigarh, Pp 585-596. ISBN: 81-8247-152-4.
34. Dahiya A & Patil L (2007). Impact of High Occupancies in Waste Management – A Concern for Hotel Housekeepers. Published in Book titled “Tourism development – Impacts & Strategies” (2007) Anmol Publications New Delhi, Pp 137 – 149. ISBN: 978-81-261-3207-2

Ms. Shelley Duggal

1. Chand, M., Dahiya, A., & Duggal, S. (2015). Hospitality and Tourism Research Journal Publications in India: Bon Voyage since 1976-2014. *Tourism Innovations – an International Journal of Indian Tourism & Hospitality Congress (ITHC)*, 4(1), 1-21.
2. Dahiya, A., & Duggal, S. (2015). Evaluating the Official Websites of SAARC Countries on their Web Information on Food Tourism. *Asia Pacific Journal of Information Systems (APJIS)*, 24(1), 145-162.
3. Dahiya, A., Duggal, S., & Kumar, S. (2014). Websites of Hotel Management Institutes in India: An empirical study of private institutes under NCHMCT, MoT, GoI. *RIPPLES*, 4(1), 8-16.
4. Dahiya, A., & Duggal, S. (2014). The Website Performance of Hospitality Education Institutes in India – The Comparative Content Analysis. *South Asian Journal for Tourism & Heritage*, 7(2), 75-96.
5. Dahiya, A., & Duggal, S. (2014). Trends and Practices in Hospitality & Tourism Research: A selected study from International Journals. *International Journal of Hospitality & Tourism Systems (IJHTS)*, 7(1), 27-33.
6. Dahiya, A., & Duggal, S. (2013). Comparative Analysis of the Website Performance of Industry Integrated HMIs, Central Government IHMs and State Government IHMs in India. *J Tourism Hospit* 2: 117. doi:10.4172/2167- 0269.1000117

7. Dahiya, A., & Duggal, S. (2013). Websites of Hotel Management Institutes (HMIs) in India: An empirical study of central and state government Institutes. *International Journal of Hospitality & Tourism Systems (IJHTS)*, 6(2), 22-33.
8. Dahiya, A., & Duggal, S. (2013). An Analytical Study of the Websites of Industry Integrated Hotel Management Institutes in India. *Journal of Hospitality Application and Research (JOHAR)*, 8(2), 54 – 69.
9. Dahiya, A., & Duggal, S. (2011). Hotel Websites in India A Comparative Study of Indian and Foreign Hotel Chains. *Indian Journal of International Tourism & Hospitality Research*, 4(1), 1-13.
10. Dahiya A & Duggal S (2015) "Evaluation of Websites using Balanced Scorecard (BSC) Approach in the Hotel Landscape in India" *Journal of Tourism*. Vol- 16(1), 1-22.
11. Dahiya, A., Duggal, S., & Kumar, S. (2014). An analysis of perceived food heritage of Haryana: The study of spicy chutneys. *Atithi Journal of Hospitality & Tourism*, 2(1), 167-178.
12. Shalini, D., & Duggal, S. (2015). A review on Food Tourism Quality and its associated forms around the world. *African Journal of Hospitality, Tourism and Leisure*, 4(2), 1-12

Mr. Vikas Mohan

1. E-tourism approach to silk route formation: a perspective tool for marketing (2013) (ISSN-23481986), Volume-1, Issue-1, Pp 30-42.
2. Determinants of Spa Popularity (2015), *IJMCI*(ISSN-23487585), Volume-2, Issue-2, 2015, Pp520-530.
3. Branding and Imaging of a Newly Developed Destination (2015). *IJMCI* (ISSN-23487585), Volume-2, Issue-2, Pp 518-523.

Department of Psychology

Dr Jitendra Kumar

1. Kushwaha, Jitendra Kumar (2013): Perceived Discrimination during Higher Education and Its affinity with correlates of Mental Health: An Analysis. *The International Journal of Social Sciences Research*, Vol.1, No. 2, Pp 82-91. ISSN: 2320-6284
2. Kushwaha, Jitendra Kumar (2013): Beck Anxiety Inventory: Hindi Translation and Re-Validation for Students of Higher Education. *Indian Journal of Community Psychology*, Vol.9, Issue.I, Pp 21-35. ISSN: 0974-2719
3. Kushwaha, Jitendra Kumar & Wankhede G.G. (2012): Perceived Discrimination Scale for Students: Professional Manual. *Psycho MATRIX*, New Delhi.
4. Kushwaha, Jitendra Kumar (2011): Mental Health Problems due to Discrimination in Education: A theoretical exploration to Empirical Expedition in peer reviewed edited book by Chavan, Chetan. U. (2011): *Mental Health: The Role of Education*. Ketaki Prakashan Pvt Limt. Mumbai, Pp 212-216. ISBN: 978-81-922307-1-9

Department of Sociology

Dr Sumedha Dutta

1. Dutta, Sumedha. (2014). Dvaitvaad se pare: Aadhunik Bharat mein Dhaarmik Sansthaon ki Bhoomika. *Bharatiya Samaj Shastra Sameeksha*, 1(1), ISSN NO. 2349-1396, January-June:107-112

2. Dutta. Sumedha, "Mapping the plight of the urban poor in the era of the LPG", in Anand Kumar, Sarada Das and Ashish Das ed. *Chronic Poverty in India: Policy Issues and Challenges*, New Delhi: Vitasta Publications.

Annexure II

Department and Faculty Wise Book Published/Edited

Department of Biotechnology

Prof R C Kuhad

1. Lignocellulose Biotechnology: Present and Future Prospect, **Kuhad R C** and Singh A, I. K. International, New Delhi 2007
2. Advances in soil bioremediation. Soil Biology Series, Singh A, **Kuhad R C** and Ward O P, Springer, Verlag, Germany 2009
3. Bioaugmentation , Bostimulation and Biocontrol. Soil Biology Series, Singh A, Parmar, N. and **Kuhad R C**, Springer, Verlag, Germany. 2011
4. Biotechnology for environmental management and resource recovery, **Kuhad RC** and Singh A., Springer, Verlag, Germany. 2013

Department of Biochemistry

Dr Sanjay Kumar

1. HIC-I in Tumorigenesis:Tumor suppressor gene (Book). Scholar's press, ISBN: 978-3-639-76130-6

Department of Economics

Dr. Ranjan Aneja

1. Socio-Economic Regional Development in Haryana, LAP Publisher, ISBN 978-3-659-44604-7

Department of Education

Dr. Sarika

1. Examination System: ISBN 13-978-81-922141-0-8
2. Peace Oriented value Education: ISBN 13-978-81-922141-1-5
3. Academic Leadership & Women Empowerment ISBN 13-978-81-922141-3-9
4. Educational Administration & Gender Budgeting ISBN 13-978-81-922141-5-3
5. Compendium Anand Book Depot Delhi India/ 2013- ISBN 13-978-81-922141- 9-1

Department of English and Foreign Languages

Dr. Manoj Kumar

1. Rohinton Mistry's Creative Response to India published by Salabh Publishing House, Meerut (ISBN: 978-81-88681-39-6)
2. A Text Book for Objective Questions in English published by Prakash Book Depot, Bareilly (ISBN: 978-81-7977-247-8)
3. Rohinton Mistry's Such a Long Journey: A Critical Study published by Prakash Book Depot, Bareilly (ISBN: 978-81-7977-391-8)
4. Insight: A Compendium of World Literature published by Yking Books, Jaipur, India (ISBN: 978-93-82532-50-7)

5. Yking Concise Encyclopaedia of Language, Literature and Culture published by Yking Books, Jaipur, India (ISBN: 978-93-82532-48-4)
6. English Literary Discourses at a Glance published by Yking Books, Jaipur, India (ISBN: 978-93-82352-95-8)

Dr. Sanjiv Kumar

1. Diasporic Transformations: Novels of V.S. Naipaul. Rawat Publications, Jaipur. ISBN: 978-81-316-0621-9.

Dr. Bir Singh

1. Scientific & Spiritual Vision of William Wordsworth published by RBSA Publishers, Jaipur in 2009 (ISBN- 978-81-7611-467-7)

Department of Hindi and Indian Languages

Dr. Arvind Singh Tejawat

1. Meeran kaa Jeevan by Lokbharti Prakashan (ISBN:9789352210275) Year: 2015

Dr. Amit Kumar

1. कठिन समय में/कविता संग्रह/सतलुज प्रकाशन, पंचकुला/ISBN 978-81-88803-14-9
2. लोकसाहित्यकार राजकिशन नैन: विवेचन और मूल्यांकन/आलोचना/अमृत प्रकाशन, दिल्ली/ ISBN 978- 81-8280-083-0
3. दुख कोई चिड़िया तो नहीं' कविता संग्रह, अंतिका प्रकाशन, गाजियाबाद से वर्ष 2015 में प्रकाशित ISBN 978-93-81923-81-8

Department of Library and Information Science

Dr. Pawan Kumar Saini

1. Library and Information Science UGCNET/SLET ISBN 978-93-82658-11-5, K. K .Publisher, New Delhi.

Dr Narender

- Library and Information Science: An Overview, Nirmal Publication, ISBN – 978-81-86400-302-8
- Library and Information Science: UGC NET/SET, Divyam Prakashan, ISBN- 978-93-82658-45-0
- School Library Organization and Management, Nirmal Publications, ISBN- 978-81-86400-305-2

Department of Management

Dr. Anand Sharma

1. Published as co-editor Edited book Application and Role of Statistics in Multidisciplinary Research (Pages 254) from K K Publishers, Delhi (ISBN No.978 81 7844 173 3)

2. Published as co-editor Text Book Business Studies for Class 12th National Institute of Open Schooling, (Govt. of India)(No.215 Sec co)

Department of Political Science

Dr. Rajeev Singh

1. Manual Scavenging In India: The story of Unequal citizens: V.D.M publishing House Germany, 2010, ISBN NO. 978-3-639-21087-3.

Department of Physics

Prof. Nawal Kishore

1. Advanced College Physics Volumel V.P.Seth, S.P.Taneja, N.Kishore Vijaya Publications, Ludhiana (Pb.)(1989)
2. Advanced College Physics Volumell S.P.Taneja, N.Kishore, V.P.Seth Vijaya Publications, Ludhiana(Pb.) (1989)
3. Solid State Physics and Electronics S.P.Taneja, N.Kishore, V.P.Seth Vijaya publications, Ludhiana (Pb.) (1990)
4. Nuclear Physics and Elementary Particles N.Kishore, V.P.Seth, S.P.Taneja Vijaya Publications, Ludhiana (Pb.) (1991)
5. Advanced College Practical Physics N.Kishore & V.P.Seth Vijaya Publications, Ludhiana(Pb.) (1992)
6. Electronics and Nuclear Physics N.Kishore , V.P.Seth, S.P.Taneja Vijaya Publications, Ludhiana(Pb.) (1992)
7. Optics: Waves and Oscillations V.P.Seth, S.P.Taneja and N.Kishore Vijaya Publications, Ludhiana (Pb.) (1994)
8. Solid State Physics, Atomic, Molecular and Laser Physics V.P.Seth, and Nawal Kishore Vijaya Publications, Ludhiana (Punjab) (2004)
9. Quantum Mechanics and Nuclear Physics Nawal Kishore and V.P.SethVijaya Publications, Ludhiana (Punjab) (2004)
10. Atomic, Molecular, Laser and Nuclear Physics V.P.Seth, and Nawal Kishore Vijaya Publications, Ludhiana (Punjab) (2011)
11. Solid State Physics and Quantum Mechanics V.P.Seth, and Nawal Kishore Vijaya Publications, Ludhiana (Punjab) (2011)
12. Quantum Mechanics, Laser and Nuclear Physics Nawal Kishore and .P.SethVijayaPublications, Ludhiana (Punjab) (2011)

Dr. Aditya Saxena

1. Thermal Physics, (Institute of Life Long Learning (ILLL), India, 2015) Sole Editor: Aditya Saxena. ISBN: 978-81-931455-8-6
2. Digital Electronics, (Institute of Life Long Learning (ILLL), India, 2015) Sole Editor: Aditya Saxena. ISBN: 978-81-931455-9-3
3. Mechanics, (Institute of Life Long Learning (ILLL), India, 2015) Sole Editor: Aditya Saxena. ISBN: 978-93-85611-79-7
4. Oscillations and Waves, (Institute of Life Long Learning (ILLL), India, 2015) Sole Editor: Aditya Saxena. ISBN: 978-93-85611-81-0

5. Electricity and Magnetism, (Institute of Life Long Learning (ILLL), India, 2015) Sole Editor: Aditya Saxena. ISBN: 978-93-85611-82-7
6. Mathematical Physics-I, (Institute of Life Long Learning (ILLL), India, 2015) Sole Editor: Aditya Saxena. ISBN: 978-93-85611-78-0
7. Mathematical Physics-II, (Institute of Life Long Learning (ILLL), India, 2015) Sole Editor: Aditya Saxena. ISBN: 978-93-85611-80-3
8. Mathematical Physics-III, (Institute of Life Long Learning (ILLL), India, 2015) Sole Editor: Aditya Saxena. ISBN: 978-93-85611-83-4
9. Microprocessor and Computer Programming, (Institute of Life Long Learning (ILLL), India, 2015) Sole Editor: Aditya Saxena. ISBN: 978-93-85611-84-1
10. Optics, (Institute of Life Long Learning (ILLL), India, 2015) Sole Editor: Aditya Saxena. ISBN: 978-93-85611-85-8
11. Numerical Analysis, (Institute of Life Long Learning (ILLL), India, 2015) Sole Editor: Aditya Saxena. ISBN: 978-93-85611-86-5

Department of Tourism and Hotel Management

Prof. Ashish Dahiya

1. Food of Haryana: The Great Desserts - Dahiya Ashish, University Press MD University Rohtak India. (2013)
2. Food of Haryana: The Great Chutneys -Dahiya Ashish, University Press MD University Rohtak India.(2012)
3. Hospitality Industry Contemporary Issues-S.C Bagri & Ashish Dahiya, Centre for Mountain Tourism & Hospitality Studies, HNB Garhwal Central University, Uttarakhand, India (2009)
4. Introduction to Hospitality Industry: A Text Book Prof. S.C Bagri & Ashish Dahiya, Aman Publications - New Delhi (2008) Hardbound

Department of Psychology

Dr Jitender Kumar

1. Kushwaha, Jitendra Kumar & Wankhede, G.G. (2012): Discrimination in Higher Education: Perception and Experiences of OBC Students. Lambert Academic Publishing, Saarbrucken, Germany. ISBN: 978-3-8484-1704-9

Department of Environment Science

Dr Mona Sharma

1. **Mona, S.** Kaushik, A. 2015. Biohydrogen production and biosorption of textile dye from wastewater. ISBN 978-3-659-69996-2, Lambert Academic Publishing, Germany, 1-133

Dr Anoop Yadav

1. **Yadav, A.** and Garg, V.K. (2013). Management of Organic wastes by vermicomposting. In: Advances in Industrial Biotechnology (Eds Ram Sarup Singh, Ashok Pandey and Christian Larroche) IK International Publishing House Pvt. Ltd., India. 477-501. ISBN 978-93-82332-53-4

2. Garg V.K. and **Anoop Yadav** (2012). Potential of Vermiremediation in Waste Management. In: Strategies for Mitigation of Environmental Degradation and Climate Change (Eds. C.P. Kaushik, A. Kaushik, V. K. Garg and Mona Sharma). Arihant Prakashan Pvt. Ltd., New Delhi. 74-78. ISBN 978-93-80872-61-2.
3. Garg, V.K., Gupta, Renuka and **Yadav, A.** (2007). Potential of Vermicomposting Technology in Solid Waste Management. *In: Current Developments in Solid State Fermentation* (Eds: Ashok Pandey, Carlos Ricardo Soccol and Christian Larroche). Asia-Tech Publishers Inc., New Delhi (for India) and Springer Publishers (for Rest of the World). Pp 468-511. ISBN: 978-0-387-75212-9.

Department of Commerce

Dr Suman

- Stock market return and volatility in developing countries. ISBN No 978365919791. Lambert Academic Publishing, Germany.

Department of Geography

Dr. Aneesh Kumar Mishra

- Mishra A.K. (2012): 'Urban Land Use and Planning: A Study of Emerging Alwar, India', Lap Lambert Academic Publishing, Saarbrücken, Germany, ISBN 978-3-659-14395-3

Dr. Naresh Kumar Verma

- Geopolitics of Nuclear and Energy Resources: A Case Study of Korean Peninsula in the Cold War Era", VDM Publishing House, Saarbrücken (Germany), 2010, ISBN: 978-3639323498.
- "Nuclear Programmes of North Korea and Iran: A Comparative Geopolitical Analysis" Manak Publishers, Delhi (2014), ISBN 978-93-7831-399-9.

Department of Computer Sciences and Information Technology

Dr Sunil Kumar

- Edge Detection using Rough Set Theory, ISBN: 9783659768095, Lambert Academic Publishing, Heinrich-Bocking, Germany

Department of Statistics

Vinay Kumar

- Kumar, Vinay (2014). Application and role of statistics in Multidisciplinary approach. K K Publishers, Delhi (ISBN No.978 81 7844 173 3)

CRITERION IV

INFRASTRUCTURE AND LEARNING RESOURCES

CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

4.1. Physical Facilities

Undoubtedly, the infrastructure and learning resources are one of the most important components for any academic institution where the overall performance depends significantly upon the quality and availability of such facilities. In addition, it is worth noticing that a conducive and favorable environment that promotes teaching, learning, and research is an essential requirement for the University so that the right goals and positive growth could be achieved in times to come.

In order to ensure reasonably sufficient infrastructure in terms of physical facilities, library as learning resources, and IT infrastructure, Central University of Haryana has been putting best efforts in this direction since its establishment.

The University started functioning from its permanent campus w.e.f. August 2013 which is spread over 488 acres located at Jant-Pali Villages, about 13 Kms away from Mahendragarh Railway Station. Prior to August 2013, the University was functioning from its temporary campus located at Government B.Ed College, Narnaul. Although this place comes under semi-arid zone, several initiatives have already been taken to beautify and enrich environment of the campus through wide and regular plantation drives. The University is one of the newly established Central University and has been utilizing the existing physical infrastructure efficiently and optimally.

University has got environmental clearance for the first and second phase of construction. University is following the concept of green buildings for the proposed construction and developmental activities of the university. The second of construction work includes Academic blocks, Administrative blocks, and Vice-Chancellor's House, Permanent staff quarters, Central library, Sports complex and these are being constructed by NBCC (National Buildings construction corporation Ltd.) and CPWD (Central Public Works Department).

To have an overview of the physical infrastructure, one can broadly categorize them in the following three categories:

1. Teaching and learning related infrastructures: In this regard, the following facilities have come up:

- Well-furnished and ventilated classrooms of adequate size having ICT facility, white-board,

projector etc.

- Smart class room facility available with all the departments.
- State of the art laboratories available with all the departments.
- 24 in to 7 power supply and Wi-Fi based internet facility.
- A state of art, air conditioned and spacious auditorium with a seating capacity of 200.
- A full-fledged centralized library.

2. Accommodation related infrastructures:

Accommodation facilities at the campus include:

- Two hostels: one for boys and one for girls, with a capacity of 200 students each.
- A semi-permanent housing complex is built for the teaching staff and the permanent residential complex for both teaching and non-teaching staff is in advanced stage of construction.
- Part of girl's hostel is presently used as guest house and 8 rooms are specified for this purpose.

3. Infrastructures that support basic/general needs: This component has the following facilities:

- Health Centre: The University has a medical unit with a facility of Doctor on Call along with two nursing staff working round the clock to provide medical facility to the students and the staff .The transportation facility is made available to the health centre on the need basis.
- Transportation: The University has its own bus that commutes between the University and Mahendragarh on all working days (Monday to Friday) on regular intervals so that students, teaching and non-teaching staff could easily commute. Haryana Roadways buses too have stopover at the University.
- Canteen: The University has one Vita Milk Booth for milk products and one general canteen to cater the basic needs of students and staff.
- Shopping Complex: A shopping complex has recently started functioning and have number of shops to fulfill the basic needs.
- Bank: The University has a branch of Punjab National Bank is its campus with ATM facility.
- Security: Adequate arrangements have been made in order to ensure safety of man and material. Ample numbers of security guards are being deployed at various entry and exit points. Firefighting equipment's have been placed at various points in the University buildings.
- Sports Complex: The sports complex has been recently developed which consists of the facilities like hockey, volleyball, football and cricket grounds along with six lanes of 400 m

running track. In addition, hostels and academic blocks have tennis and badminton courts.

- Gymnasium: There is separate well equipped gymnasium in boys and girls hostels.
- Recreational activities: Each hostel has a common room with TV facility.
- Roads: All the buildings in the campus are well connected with good quality roads.
- Helipad: The University has its own helipad near the main entrance.
- Garden: All the buildings in the campus are surrounded by lush green gardens.
- Water supply: Presently bore-well is used for water supply in the campus. In order to meet the future requirements, Canal water would be used as an agreement has been made between the University and Irrigation Department of Haryana.
- Electricity: The University has dedicated power supply from the electricity board and in addition to that it has its own DG sets to ensure uninterrupted power supply.
- Internet: The University campus including hotels is fully equipped with Wi-Fi facilities.

4.1.1. How does the University plan to ensure adequate availability of physical infrastructure and ensure its optimal utilization?

Presently the University has four well-furnished buildings which include Academic block, Administrative block, Boys hostel and Girls hostel. Construction work for new academic blocks No. A-1, A-3, A-4; 48 number of Type-II permanent houses for non-teaching staff and 24 number of Type-IV houses for faculty is in advanced stages of construction. NBCC has been appointed for construction work of the academic blocks and Vice Chancellor's residence and CPWD has been given the responsibility for construction of residential houses. The construction work is expected to be completed by August 2016.

There are several building projects like; Health Centre, Central Library Building, Academic Block No. 2, Faculty Guest House, Construction of Sewerage Treatment Plant, Water Treatment Plant, Canal Water Supply Line, Water Distribution Pipe Line, Sewerage Line, and Electric Sub-Station etc. that would be taken up during XII Plan.

4.1.2. Does the University have a policy for creating and enhancement of infrastructure in order to promote good teaching-learning environment? If yes, mention a few recent activities.

Yes, the University is dedicated to create and enhance the infrastructure to promote conducive environment for teaching and learning. The advisory committees such as Finance Committee, Building Committee and other sub-committees formally plan and recommend the policies and

execution channels for creating and enhancement of infrastructure. Accordingly, phase-wise expansion is taking place in the University. All existing buildings and class rooms are Wi-Fi enabled and this facility will be extended to new buildings (academic, administration, student's activity centre and guest house etc.) soon after the possession. The University has developed an interactive website to host all relevant information including faculty profile, academic calendar, admission and examination and other details.

4.1.3. How does the University create a conducive physical ambience for the faculty in terms of adequate research laboratories, computing facilities and allied services?

As an initiative to develop a conducive ambience for promoting research, the faculty members have been provided space for research laboratories as per their requirement. Access to photocopy, scanning or other related services is also provided through the central library of the University. The laboratories are available for all faculty at all times including odd hours on request.

4.1.4. Has the University provided all the departments with facilities like office room, common room, and separate rest room for women students and staff?

Yes, the University has adequately allocated office rooms for faculty members, class-rooms, and space for laboratories to all the departments as per the requirement. A common room is allocated for reading purpose, and there is also sufficient provision for rest /waiting rooms.

4.1.5. How does the University ensure that the infrastructure facilities are disabled friendly?

In order to ensure that the infrastructure facilities are disabled friendly, the University observes national guidelines pertaining to the same. Further, there is a provision of ramps and railing facilities at all important entrances in the buildings. Majority of important activities are disabled friendly such as library is functioning on the ground floor. The new buildings are planned to be designed in a manner that all facilities such as ramps, lifts, washrooms and railings would be constructed appropriately for the disabled. The separate accommodation facilities are being provided for the disabled in the boys and girls hostels. A disabled student from the English department has been provided with electric wheel chair by the University.

4.1.6. How does the University cater to the requirements of residential students? Give details of:

Hostel life is unique in the sense that you are away from your own family, and you get a chance to live with people from diverse background where diversity could be found in terms of language, dressing, and cultural differences. That may useful from the point of view to learn and share various aspects of life from people with different backgrounds. In order to provide good hostel facilities the University is committed to work towards the betterment of the residential requirements of students.

Capacity of the hostel and occupancy (to be given separately for men and women):

There are two hostels one each for boys and girls. The intake capacity of each hostel is 200 and maximum two students are accommodated in a single room. Since limited hostel facilities are available at present, one more student can be allowed to stay in a room if both students mutually agree to share.

Recreational facilities in hostels e.g. gymnasium, yoga centre etc.:

The University has well-equipped gymnasium each in the boys and girls hostel with appropriate arrangement for yoga activities. A common room with LCD is also provided in both hostels with cable facility. The indoor games facilities like; chess, table tennis, badminton, carom board, etc. are also provided to the students in both the hostels.

Broadband Connectivity/Wi-Fi in the Hostels:

Both hostels have the Wi-Fi facility with a speed of 1Gbps.

4.1.7. Does the University offer medical facilities for its students and teaching/non-teaching staff living on campus?

Yes, the University has a medical unit with a facility of Doctor on Call along with two nursing staff working round the clock to provide medical facility to the students and the staff .The transportation facility is made available to the health centre on the need basis.

4.1.8. What special facilities are available on campus to promote students' interest in sports and cultural events/activities?

The sports and cultural activities are important part of students' life as these could be instrumental in developing a sound health, good personality and familiarizing with cultural awareness. Keeping in mind this point, the University has been constantly focusing on such issues.

A brief overview of this aspect is below mentioned:

Promotion of sports interests:

The University has a sport complex/stadium and this can facilitate a variety of games such as cricket, football, hockey, volleyball, Kho-Kho and 400 m athletic track. In the hostels, there is an arrangement of indoor games like table tennis, badminton, etc. Under the supervision of the In-charge Sports, various activities such as management, coordination and development of sports related issues and above all the interests of students are promoted. In addition to that various sports activities are organized in the University from time to time.

Promotion of extra-curricular interests:

The University makes all efforts towards ensuring this vision by building partnership with community, neighborhood educational institutions, and with other stakeholders. The cells and clubs of the University such as Book Reading Club, Cell for Differently-Abled, Women Empowerment Cell, SC/ST Grievances Cell, Anti-Sexual Harassment Cell, Group for Promotion of Arts, Culture and Heritage, Equal Opportunity Cell takes care for holistic development of the students. The University is fully committed to make the learning environment more conducive and inclusive through the above mentioned cells. Several programmes are being organized by NSS (National Service Scheme), YRC (Youth for Red Cross) unit of the University and the students volunteers take active initiative in Cleanness campaign, Plantation drive, Blood donation camp and other community development

programmes.

The University celebrates various days of national and international importance like Yoga Day, Environment Day and International Day for Girl Child, etc. through the concerned cells. In order to recognize the comprehensive role of art as an expression of the cultural values of a society the University works towards preserving these expressions for the benefit of future generations through the functioning of the Group for the Promotion of Arts, Culture and Heritage. The University has been added as a chapter of SPIC MACAY which is a non-political nationwide voluntary movement that organizes various cultural programmes to promote Indian and world heritage. To ensure the holistic development of the students various industrial visits are being organized by the Career Counseling, Training and Placement Cell and many more extracurricular activities keep taking place in the University.

4.2. Library as a Learning Resource

4.2.1. Does the library have an Advisory Committee? Specify the composition of the committee. What significant initiatives have been taken by the committee to render the library student/user friendly?

The University Library is having a comprehensive book subscription procedure at par with other prominent University libraries of India. A three-tier Library Committee has been constituted for smooth functioning of the University library which is mentioned below:

Library Committee

- ◆ Vice Chancellor, Chairperson
- ◆ Registrar, Ex-Officio Member
- ◆ All the Deans of Schools, Ex-Officio Member
- ◆ Dean Students' Welfare, Ex-Officio Member
- ◆ Finance Officer, Ex-Officio Member
- ◆ Librarian, Secretary

Book Purchase Rate Committee (BPRC)

- ◆ Registrar, Chairperson
- ◆ All Heads/Officiating Heads of the concerned Departments, Ex-Officio Member
- ◆ Finance Officer, Ex-Officio Member
- ◆ Librarian, Secretary

Departmental Purchase Committee

- ♦ All Heads/Officiating Heads of the concerned Departments, Member
- ♦ All Faculty members of the concerned Departments, Member

It was resolved on 28th August, 2014 to finalize and recommend books through the Departmental Purchase Committee.

Book subscription procedure adopted:

The requisition of books submitted by the faculty members of different School/Department is routed through the respective Heads/Deans to the library committee for recommendation to purchase. The duplicity of the books is being verified by the library staff before placing the list of recommended books before the Library Committee for its review. Once approved by the Library Committee for purchase, Library Staff again verifies the library OPAC to eliminate any duplicate orders. The library staff then prepares the final list of books to be purchased and place the book supply orders to the approved vendors on the terms and conditions for book purchase decided by the BPRC (Book Purchase Rate Committee) of the University.

The following activities are also performed by the committees:

- ♦ Supervision on general matters related to University library.
- ♦ Formulation of rules for management and use of the library subject to the approval with the authorities of the University.
- ♦ Preparation of annual report of University library and its submission to administrative authority.
- ♦ Preparation of proposals related to the development of library.

1. Provide details of the following:

- **Total area of the library:** 3530 square feet
- **Total seating capacity: (Persons)**
Reading Hall (study centre): 125
Reference Section: 25
E-Resource Lab: 25

- **Working hours (on working days, on holidays, before examination, during examination, during vacation)**

On all working days (Monday to Friday): 09:00 am to 08:00 pm

On Holidays (Saturday and Sunday): 10:00 am to 04:00 pm

During Examination: 09:00 am to 08:00 pm

During Vacations: 10:00 am to 04:00 pm

- **Layout of the library (individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources)**

Individual reading carrels: Reading Section

- **Clear and prominent display of floor plan; adequate sign boards; Fire alarm; access to differently-abled users and mode of access to collection**

Various sign boards are adequately placed for clear and easy access to the library. In order to fight any fire incidence in the library, adequate firefighting appliances are being installed at proper places. The ramp facility is also provided for differently-abled students enabling them to easily access the library facilities. From the security point of view, CCTV cameras are also installed in all the parts of the library.

4.2.2. Give details of the library holdings:

A. Print (books, back volumes and theses)

Sr. No.	Type of Learning Resource	Total No.
1	Books	20866+
2	Print Journals	49
3	E-Resources/E-books & Journals	20915+
4	CDs/DVDs	80
5	Reports	251
6	Magazines	14 = 4 Hindi + 10 English
7	Newspapers	14 = 7 Hindi +7 English

B. Average number of books added during the last three years

On an average, approximately 4183 books were added during the last five years.

C. Non Print (Microfiche, AV)

Microfiche: Nil

AV: Nil

D. Electronic (e-books, e-journals): 8500+(e-journals)

E-Resources & Databases accessed through UGC- INFLIBNET consortium		
Sr. No.	Publisher	URL
1	American Chemical Society	http://www.pubs.acs.org/
2	American Institute of Physics	http://journals.aip.org/
3	American Physical Society	http://publish.aps.org/browse.php
4	Annual Reviews	http://arjournals.annualreviews.org/
5	Economic & Political Weekly	http://www.epw.in
6	Elsevier Science	http://www.sciencedirect.com/
7	ISID	http://isid.org.in/
8	JCCC	
9	Oxford University Press	http://www.oxfordjournals.org/
10	JSTOR	http://www.jstor.org/
11	Project Euclid	http://projecteuclid.org/
12	Royal Society of Chemistry	http://www.rsc.org/Publishing/Journals/
12	SIAM	http://epubs.siam.org/
14	MathSciNet	http://www.ams.org/mathscinet/
15	Springer Link	http://www.springerlink.com/

E-Resources & Databases accessed through UGC- INFLIBNET consortium		
Sr. No.	Publisher	URL
16	Taylor & Francis	http://www.informaworld.com/

E. Special collections (e.g. text books, reference books, standards, patents) :

On the basis of the requirement of various departments there is sufficient number of text books and adequate collection of reference books is available in the library. As the University is in the nascent stage, efforts are in process for patents and copyrights.

F. Book Banks:

The University is having its own Book Bank facility and each student is provided four books for the full semester.

4.2.3. What tools does the library deploy to provide access to the collection? OPAC:

University library is having OPAC system.

- ◆ **Electronic Resource Management package for e-journals:**
E-Journals are accessible through UGC- INFONET Digital Library Consortium.
- ◆ **Library Website:**
A Separate link is being provided on the University website.
- ◆ **In-house/remote access to e-publications:**
Yes, the University is having in-house/ remote access to e-publication.

4.2.4. To what extent is ICT deployed in the library?

Library is fully automated.

1. Give details with regard to

- ◆ **Library automation:** E-Granthalya
- ◆ **Total number of computers for general access:** 25
- ◆ **Total numbers of printers for general access:** 4
- ◆ **Internet band width speed:** 1 Gbps
- ◆ **Institutional Repository:**

The creation of Institutional Repository is under process.

- ♦ **Content management system for e-learning:**

Content Management system will be started soon.

- ♦ **Participation in resource sharing networks/consortia (like INFLIBNET)**

The University is a member of UGC- INFLIBNET.

2. Provide details (per month) with regard to

- ♦ **Average number of walk-ins:** 865 per month.

- ♦ **Average number of books issued/returned:** 1266 per month

- ♦ **Ratio of library books to students enrolled:**

1:19 books per student

3. Library membership: 1083 students + all faculty members are registered user.

4. Average number of books added during the last Five years:

4173 in last Five years (Total number of books: 20866, as on 17 October, 2015)

5. Average number of login to OPAC: 400+

4.2.5. Give details of specialized services provided by the library with regard to

1. Borrowing Facility: Number of documents permitted to be borrowed at a time.

Sr. No.	Category	Number of Book	Loan Period
1.	Teachers	10	60 days
2.	M.Phil. and Research Scholars	6	25 days
3.	PG students	4	15 days
4.	Non- Teaching staff	2	15 days

2. Reference service: Fresher's are offered orientation programmes to apprise them of library organization and services.

3. Reprography/Scanning: Photocopying / Scanning / printout services are provided from 9.00 am to 8.00 pm on nominal payment basis during all working days.

4. OPAC (Online Public Access Catalog): OPAC is the representation of the Library's collection of learning resources. The catalog is accessible to the bonafide users.

5. Future Plan

- Information literacy and orientation programme.
- Virtual reference service
- Digitization of doctoral theses/ M.Phil. dissertations and book bank facility

4.2.6. Provide details of the annual library budget and the amount spent for purchasing new books and journals.

Details of the amount spent on Book/Journals purchase:

S. No.	Year	Amount (Rs.)
1	2009-2010	5,61,624
2	2010-2011	8,39,437
3	2011-2012	2,38,7981
4	2012-2013	55,82,292
5	2013-2014	1,28,83,393
6	2014-2015	17,06,887
7	Total	2,39,61,614

4.2.7. What initiatives has the University taken to make the library a ‘happening place’ on campus?

Several initiatives have been taken to expose the value of library and its associated content through information literacy, orientation programme and book exhibitions. There is a reading hall adjoining the library with a capacity of 60 students where they can easily access the books, magazines and newspapers. The E-library provides 8500+ journal accessibility and helps the students, research scholars and faculty members to carry out their research work to achieve the vision of interdisciplinary research of the University.

4.2.8. What are the strategies used by the library to collect feedback from its users? How is the feedback analyzed and used for the improvement of the library services?

In order to collect feedback from library users, there is a provision of suggestion box and a register placed in the library. These suggestions are placed before the various competent authorities for rectification and remedial action.

4.2.9. List the efforts made towards the infrastructural development of the library in the last four years.

Several efforts have been made to enhance the library infrastructure such as furnishing the

reading halls, channel book racks and installation of CCTV cameras etc. The blueprint of the new Central Library building has been approved.

The new Central Library building will have the following facilities:

- The building will have maximum windows with thermally insulated glass so as to achieve maximum day light and minimum electricity consumption.
- Energy efficient central air conditioning.
- Rooftop solar power generation system with battery backup for night reading hall.
- CCTV system/ access control with smart card will be installed in the building.
- Fire safety measures will be incorporated as per National Building Code.
- Adequate audio/video facility to be provided in the conference hall & seminar rooms.
- Building management system/library management system will be installed in library with information kiosks at approved places.

4.3. IT Infrastructure

4.3.1. Does the University have a comprehensive IT policy with regard to:

IT Service Management –

The University follows certain general rules the IT facility: preparing note sheet for purchase, tender and maintenance of stock registers for all necessary IT related matters. Separate user id is provided to the Student as well as to the teaching and non-teaching staff for accessing internet facility. The computer labs are equipped with latest hardware's and software's. The sitting capacity of the computer labs is around 50. CCTV cameras are installed at the University Building to avoid misuse of IT facility.

Information Security

The University uses Core Layer Switch and Secure Password with router and switches to secure information. Additionally, there is a provision of backup system for the important databases.

Network Security

The University uses Cyberoam that restricts outsiders to use the network. In addition to this, to enable the access of internet facility, unique user id is provided to all teaching & non-teaching staff and students. The students have to renew the id at the beginning of each semester. All the computer systems of the labs are having updated antivirus in order to make it fully secure.

Risk Management

For the Risk Management the University takes the following steps:

- Updated Anti-Virus is being used in all computer systems.
- CCTV Cameras are installed in the University campus.
- Regular monitoring of cameras in library, computer labs and main gates to prevent illegal entrance.
- Monitoring of network using Cyberoam.

Software Asset Management

For the Software Asset Management the following steps are being taken:

- Maintenance of Stock registers for available items.
- Separate committees have been notified for the purchase of various software items.
- Purchase of license as per the requirements.

Open Source Resources

The University has started the process of developing Massive Online Open Courses (MOOCs) for which proposals have been submitted by the faculty members from various departments. The University has a policy to promote free open source software wherever possible.

Green Computing

The University has implemented following measures regarding Green Computing:

- Less paper consumption.
- Creating and delivering documents in digital format by Google forms, emails etc.
- Purchasing items by checking energy star.
- Use of LED displays.
- All the University teaching and non-teaching staff have been provided separate E-mail id's in order to make the smooth official communication process, which has reduced the paper work of the University.

4.3.2. Give details of the University's computing facilities i.e., hardware and software.

i. Number of systems with individual configurations

- 90 computers with operating system Windows-8 professional, 4GB RAM, High Definition Graphics card.

- 20 Vista computers.
- 45 Window -8 Computers with 4GB RAM, i3 Processor and 500 GB Hard Drive.

ii. **Computer-student ratio**

There are approximately 50 computers installed in computer laboratory, E-library, and MCA laboratory etc. Apart from this, there are more than 100 computers in our University with teaching and non-teaching staff. Presently, more than 1000 students are registered in the current Academic Session. The computer-student ratio is $50/1000 = 1/20$, i.e. 20 students are using one single computer.

iii. **Dedicated computing facilities**

- Microsoft Office 2010 & 2013
- Quick Heal Endpoint Security for Small and Medium business.
- Oracle (Oracle 12 C Standard Edition one)
- Visual Studio (Professional Edition 2013)
- Java
- Linux
- Turbo C/C++
- SPSS

iv. **LAN facility**

LAN facility has been provided to all the rooms in the Administrative and Academic blocks. The University has the LAN facility of 1 Gbps to access the NKN (National Knowledge Network). There are around 500 LAN points in the University.

v. **Proprietary software**

- Oracle (Oracle 12 C Standard Edition one)
- Microsoft Office
- Quick Heal
- Visual Studio (Professional Edition 2013)
- SPSS

vi. **Number of nodes/ computers with internet facility**

There are 500 nodes in the University and all the computers are connected with internet facility.

4.3.3. What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?

All the existing building have internet facility and are Wi-Fi enabled. The University is planning to deploy internet facility for new Administrative and Academic Blocks that are under construction. The University has already submitted the plan to MHRD for campus wide Wi-Fi and networking.

4.3.4. Give details on access to on-line teaching and learning resources and other knowledge and information database/package provided to the staff and students for quality teaching, learning and research.

The University is in process to develop Massive Online Open Courses (MOOCs) and proposals have already been submitted by various faculty members. All the Departments are IT facilities to enrich the teaching-learning process. Computers and LED Projectors have been made available to facilitate the IT based teaching in all the departments. Various online learning resources are made available to the Faculty and Students through the library.

4.3.5. How does the University address issues such as authenticity and copyright with regard to online resources that lie outside the University?

The Plagiarism software URKUND is present in the library to check the dissertations of the research scholar's and research work of the University.

4.3.6. What are the new technologies deployed by the University in enhancing student learning and evaluation during the last four years and how do they meet new / future challenges?

The following initiatives have been taken in this regard:

- Well-designed smart class room.
- Internet facility accessible to all students and teaching/non-teaching staff through Wi-Fi based system.
- E-library and Computer labs are available.
- Introducing MOOC and online courses.
- Video Conferencing.

4.3.7. What are the IT facilities available to individual teachers for effective teaching and quality research?

Following steps have been taken in this regard:

- For the effective teaching and quality research there is the accessibility of 8500+ e-journals.
- Wi-Fi connectivity has been provided in each and every room. Access to internet is provided with unique user ID.
- Projector and LED screen have been installed for Classroom presentations.

4.3.8. Give details of ICT-enabled classrooms/learning spaces available within the University? How are they utilized for enhancing the quality of teaching and learning?

The class rooms are furnished with projector, LED and Wi-Fi facilities. The usage of various social groups like Google group are used for the information communication among faculty and students. The Faculty delivers the lecture by using the MS-PowerPoint presentations and other ICT tools.

4.3.9. How are the faculty assisted in preparing computer- aided teaching-learning materials? What are the facilities available in the University for such initiatives?

As the University campus is Wi-Fi enabled, all the faculty members can view and download the case studies, presentations, reading materials and other resources for preparing the teaching learning material. Moreover, the e- journals available in the library are sufficient to update the knowledge of faculty members.

4.3.10. How are the computers and their accessories maintained?

The computer and the accessories are being maintained by the following ways:

- The University ensures 3 years comprehensive warranty for the purchased items related to the hardware's and software's of the computers and five year warranty for network equipment's.
- Tracking of software and hardware is done in a register, namely, Product Movement Register.
- Staff for the technical assistance ensures the maintenance of all the computers in the University.

4.3.11. Does the University avail of the National Knowledge Network connectivity? If so, what are the services availed of?

Yes, the University is using National Knowledge Network (NKN) for Internet connectivity. All the internet facility and video conferencing are done with it.

4.3.12. Does the University avail of web resources such as Wikipedia, dictionary and other education enhancing resources? What are its policies in this regard?

Yes, the University avail web resources such as Wikipedia, dictionary and other education enhancing resources. In the present time, the role of open web resources such as Wikipedia, Scholarpedia, Wolfram and other relevant education enhancing resources have become so important that it is useful to go through them to have an overview of any topic

4.3.13. Provide details on the provision made in the annual budget for the update, deployment and maintenance of computers in the University.

The departments are provided with sufficient funds for maintenance and up-gradation of computers.

4.3.14. What plans have been envisioned for the gradual transfer of teaching and learning from closed University information network to open environment?

Efforts have been made to avail open information that can be freely accessed through the internet. The University has planned to develop Massive Online Open Courses (MOOCs) that would be freely accessible to anyone who is interested in distance learning.

4.4. Maintenance of Campus Facilities

4.4.1. Does the University have an estate office/ designated officer for overseeing the maintenance of building, class-rooms and laboratories? If yes, mention few of campus specific initiative undertaken to improve the physical ambience?

The University has a designated officer i.e. “Executive Engineer” who oversees the maintenance of various assets of the University including building, class-rooms and laboratories. Following initiatives have been taken in this regard:

- Ample number of trees have been planted in the University campus in order to make the

campus green.

- The faculty garden has been developed between the faculty Semi-permanent quarters of the University.
- The University is having Sewage Treated Plant (STP), the treated water is further used for horticulture.
- The University roads have been provided with delegators.
- LED lights have been installed.
- The solar geysers have been installed in the boys and girls hostels.
- CCTV camera have been installed in the administrative block for the security purpose.
- Kitchen garden has been developed.

4.4.2. How the infrastructure facilities, services and equipment are maintained? Give details.

The infrastructure facilities and services are managed under the supervision of the Executive Engineer. Equipment's of the laboratories are managed and maintained by the concerned departments. The University has employed sufficient staff to maintain the electricity, security, garden and others services.

CRITERION V

STUDENT SUPPORT AND PROGRESSION

CRITERION V: STUDENT SUPPORT AND PROGRESSION

5.1. STUDENT MENTORING AND SUPPORT

In the University, the students are mentored and supported from the time of admission to exit time by various academic and administrative heads. During the stay of students in University campus, they may avail the support of services like library, internet, hostel, sports, canteen, medical and insurance. The facilities provided have attracted more students over the years.

5.1.1. Does the University have a system for student support and mentoring? If yes, what are its structural and functional characteristics?

Yes, the University has a well-developed system of support and mentoring for the students in the campus. The University has instituted various schemes for the welfare of the students. Most of these schemes are undertaken by the Dean, Students Welfare. The University arranges bus facility for the students commuting daily from the villages around. Several scholarships are awarded to the needy and deserving students under different schemes. A scheme of '*Earn While You Learn*' is also operative for the benefit of the students belonging to weaker sections of the society in order to make them self-reliant while pursuing their studies on the campus. The University bears the expenditure incurred by the students on educational tours too.

Various Cells and Clubs are constituted in the University for mentoring and support of students such as Group for promotion of Art, Culture and Heritage, Sports club, Movie club, National Service Scheme and Youth Red Cross, Cell for Person with disability etc. These cells/clubs help in all-round and multifaceted personality development of the students. Various cultural, literary, and adventurous events of local, regional and national importance are organized by these cells and clubs.

The University provides residential accommodation on the campus to most of its students in its two hostels – one each for girls and boys.

5.1.2. Apart from classroom interaction, what are the provisions available for academic mentoring?

Besides classroom interactions, there are multiple opportunities for the students to grow in their academic and other related fields. The departments/institutes periodically organize seminars/workshops and conferences where the students get opportunities to interact with experts in their respective fields, as also with their seniors in the subject.

The departments also arrange and organize special lectures/workshops in association with the Career Counseling and Placement Cell and with the office of the Dean Students Welfare, which also help the students to develop and grow.

In addition to the above, students are taken to the field trips and educational tours to visit the various institutions, research stations and industries located in the various parts of the country. Besides, students are given Personal Counselling and remedial coaching is provided for students who require extra training. Special coaching classes for competitive examinations like SSB, NET-UGC are provided for advanced learning.

5.1.3. Does the University have any personal enhancement and development schemes such as career counseling, soft skill development, career-path-identification, and orientation to wellbeing for its students? Give details of such schemes.

Yes, the University has several schemes wherein the students get opportunities for their overall growth, development and to realize their true potential. Various Cells and Clubs are constituted as under:

A. *Career Counselling, Training and Placement Cell*

The cell conducts special sessions for-

- a. Career Path Identification
- b. Career Counselling
- c. Soft skill development
- d. ICT Skills
- e. Language and Communication skills
- f. Comprehensive analysis
- g. Social skills
- h. Values and ethics
- i. General Orientation

B. *National Service Scheme (NSS) and Youth Red Cross (YRC)*

These units are working in the University for the well being of the students. They are periodically organising the activities as under:

Table: 1

Activities of National Service Scheme

Date	Activities of National Service Scheme
20th to 26th September 2014	STATE LEVEL N.S.S. TRAINING CAMP 4 Volunteers participated in State Level N.S.S. Training Camp at Haryana Agriculture University Hisar (Haryana). Team performed well in all the activities like skit, singing, rally etc. during the camp of camp.
24th September, 2014	NSS DAY CELEBRATION NSS Unit of CUH celebrated the N.S.S. Day at Prof M.C. Sharma Auditorium , Central University of Haryana and invited lecture of Dr. R.N. Yadav, Principal, Janta College Dadri was organized on the theme “N.S.S. and Youth”.
29th September, 2014	SWACHH BHARAT ABHIYAN Declamation contest (Neha, Sheetal Das adjudged first and second respectively) and slogan Writing (Neha, Mona, Ramakant adjudged first ,second and third respectively) competitions were organized on various topics like sanitation, public hygiene, waste management & related issues under the theme of Swachh Bharat
30th September, 2014	SANITATION AWARENESS Sanitation drive & sanitation awareness rally at adopted Village Jant was organized by University fraternity with the involvement of villagers. Through a successful rally and nukud natak University tried to spread the message of sanitation and health among the villagers. SPECIAL LECTURE In afternoon session special lecture by Dr. Pankaj Mishra, University of Delhi on “ Role of Youth in Swachh Bharat Abhiyan ” was organized.

<p>2nd October, 2014</p>	<p>LAUNCHING OF SWACHH BHARAT ABHIYAN</p> <p>NSS and YRC units of CUH Launched the “Swachh Bharat Abhiyan” at University with great enthusiasm.</p>
<p>31st October , 2014</p>	<p>CELEBRATION OF NATIONAL INTEGRATION DAY</p> <p>‘Run for unity’ was organized by University fraternity with the involvement of local villagers on ‘Rashtriya Ekta Divas’ or the National Integration Day. A successful run through which University tried to spread the message of integration, brotherhood and harmony in society.</p>
<p>20th March,2015</p>	<p>NSS ANNUAL CAMP (20th to 26th March, 2015)</p> <p>First NSS Annual Camp on the theme “Healthy Youth, Healthy India” was organized by NSS Unit of CUH with participation of 50 volunteers with great enthusiasm and feeling of social service through various activities. The camp was inaugurated by then Vice-Chancellor Prof. U.P Sinha with his message of service to the society with good intension. On this occasion DSW addressed volunteers about their positive roles in University and nearby villages and shared his NSS experience with volunteers. During first camp the main focus on personality development.</p>
<p>20th March,2015</p>	<p>During the camp volunteers participated in various programmes and activities with true spirit of social service. With the mission of “MAKING UNIVERSITY CAMPUS AND SURROUNDING CLEAN AND GREEN”. Volunteers started cleanliness drive in campus and village Jant. Gardening was done by removing weeds and digging, watering plants. Undesirable wastes were dumped at dumping zone.</p>
<p>21st March,2015</p>	<p>Volunteers also create awareness among villagers about the “Swacch Bharat Abhiyan” through awareness rally and Nukad Natak on the theme “Swachh Gaav Abhiyaan”. Awareness rally was given green signal by the V.C of CUH with the presence of many dignitaries like</p>

	Registrar, DR, DSW and many HODS' of different departments. Villagers were inspired by the practices of volunteers. Volunteers cleaned the drainage of the village. Volunteers interacted with the villagers and gave suggestion regarding cleanliness.
22nd March,2015	Another campaign of “ Green and Clean Village ” at Baba Jai Ram Das Dhaam, Pali was organised in the temple campus under the supervision of head of the temple committee
23rd March,2015	Rally on “ BETI BACHAO, BETI PADHAO ” also organized and flagged off by then Registrar Dr. A.K. Jha. This Rally was organized to spread awareness regarding “ Save Girl Child ” in adopted village Jant. A play was also there which motivated villagers that they must send their girls (daughters) to the schools. Play was successfully played by volunteers and villager praised the play very much. Throughout the rally, volunteers gave slogans. Working on the mantra of “ Sound mind in sound body ” volunteers participated in various games according to their groups. Volleyball, Kabaddi, Badminton, and Tug-of-war matches were also held. Volunteers filled themselves with energy and great enthusiasm.
24th March,2015	Some basic of March past and parade were learned by the volunteers in the morning sessions of the camp. Volunteers practiced various yoga exercises during morning sessions and learned various asanas and pranayams to protect their body from all kinds of disease.
25st March,2015	Some literary and other activities were also organized side by side during camp like debate, declamation, poetic recitation, patriotic songs. Quiz Competition (based on Vivekananda ideas) was held on the topic “Leadership and personality development”. Volunteers participated enthusiastically in the competition.
26th March, 2015	Camp was concluded with happy ending. In valedictory address, Major Gen. (Dr.) Ranjit Singh, Vice Chancellor, CRSU Jind motivated the volunteers for social service and service to the nation in true spirit. He motivated youths that they must be strong and healthy.

	He said that “Only a healthy mind and healthy body can lead a nation”.
5TH June, 2015	Tree Plantation in campus and invited Lecture by Dr. R.N Yadav, Principal Janta College, Dadri organized by NSS.
21ST June, 2015	Hawan and Yoga Camp in the morning session, which was followed by invited Lecture of Acharya Abhay Dev, Gurukul khanpur (Narnaul) on “ Yoga and Youth ”. Yoga demonstration and competition was also held in which many teams from district participated and showed their talents.
1st July to 18th August, 2015(during admission)	Volunteers provide the facilities of “ Help Desk ” to the new comers in CUH during admission.
15th August, 2015	Van Mahotsav was celebrated with sapling of many trees on Independence Day 2015 at CUH Campus.
10th to 19th September, 2015	Team of four NSS volunteers- Nikhil, Barkha, Sakshi and Shashi participated in Adventure Programme at ABVIMAS, Pong Dem (HP).
24th September, 2015	NSS volunteers celebrated NSS Day and participated in many events. Awareness program on Sanitation was organized by the volunteers at adopted village Malra. First session was conducted at Government Senior Secondary School Malra Bass. In first session a skit was performed by NSS volunteers on sanitation to create awareness among the students. After that a Rally was organized which was flagged off By Hon’ble Vice Chancellor Prof. R.C. Kuhad to aware the villagers of village Malra Baas and Malra Sarai. During rally volunteers performed street – play done at the various places in both the villages to sensitize the villagers on the various sanitation.
24th September 2015	In the afternoon session volunteers enthusiastically participated in the lecture delivered by the guest speaker Dr. Mahender Singh on the “ Role of youth in nation building ”. Volunteers enjoyed programme

	through various cultural activities which were based on various social evils such as save girl child, sanitation, rape etc.
15th October, 2015	In the memory of Bharat Ratan Dr. A P J Kalam the first ever students' day celebrated by NSS volunteers of Central University of Haryana in the form of organising first <i>Blood Donation Camp</i> ". NSS volunteers altruistically contributed in this camp. Donation was started with the inauguration ceremony by Hon'ble Vice- Chancellor Prof. R.C. Kuhad. In this camp 134 donors donated their blood.

Table: 2

Activities of Youth Red Cross

10th to 15th September 2014	STATE LEVEL TRAINING CAMP (GIRLS) University team participated in State Level Youth Red Cross Training Camp at Haridwar. Ten students (Sumit ,Jyoti, Nirmala, Poonam, Sunita, Aroma, Neeli Keerthi, Shashi Kala, Jyoti and Shivani Sharma) along with Dr. Renu Yadav (Female- Counsellor participated in State Level Youth Red Cross Training Camp at Haridwar and won many prizes in various competitions. University team judged best coordinating team in the camp.
12th to 16th December 2014	Volunteers of YRC, Central University of Haryana attended 5 day national level "Youth Red Cross Training - Cum Study Camp" which was jointly organized by Youth Red Cross Bharathiar University Coimbatore and Indian Red Cross Society Tamilnadu Branch. This camp was attended by four research scholars with Mrs. Arti Yadav namely Mr. Bajrang, Mr. Mohd. Irfan, Ms. Nirmala, and Ms. Manisha. Volunteers get benefited by listening knowledgeable lectures on various essential issues which were presented by dynamic, eminent and inspiring professors from different institutions and universities. Volunteers also participated in ' Swachhata Abhiyan ' during the Marudhamalai temple visit on 14 th December 2014 and also participated in 5 K.M. long blood donation awareness Rally organized by Bharathiar University in Coimbatore city on 15 th December 2014.

3rd to 8th August, 2015	YRC Team (Boys) participated in State Level Training Camp at Panchkula (Haryana). Team won many prizes- 2 nd in speech competition and 1 st in group song. Sunil adjudged Best Youth award.
August 30th to 4th September,2015	Participation of YRC Team (Girls) in State Level Training Camp at Panchkula (Haryana). They won awards: 1 st in skit and 1 ^{2nd} in solo dance and Best Cooperation award.
16th to 22nd September, 2015	Participation of YRC Team (Boys) in Nation Level Youth Red Cross Training Camp for Boys at Panchkula and they won awards: 1 st in quiz and 1 st in extempore speech and Sunil got special Youth Award for Best Coordination.

C. *Movie Club*

The University has also constituted a '*Movie club*' which aims to develop creative thinking in students and to entertain and inspire students to express themselves in terms of their vision and ideas for their wellbeing. This club provides a platform to the students to express, appreciate and discuss their ideas related to the theme of the movies. Movies are a contemporary, timeless and low cost medium for expression of universal values such as love, relationship and integrity and portray the social, cultural, economic and psychological aspects of the lives of people, which can be appreciated and also provides learning. The movie club functions with the purpose to nourish the body, mind and soul of students.

The following movies were screened by the Movie Club from January, 2015 to April, 2015:

- i. *Mother India*
- ii. *Jaane Bhi Do Yaaro*

D. '*Book Reading Club*'

This club provides a platform to the students and faculty to organize book-review and book-reading sessions on the latest publications and relevant books. The book reading club helps to share, debate and question multidisciplinary perspectives of a text which stimulates the intellectual growth. This club also reinforces the reading habit and provide platform to present case-studies and to share the new researches.

Since its inception, the *Book Reading Club* of the University has organised many book-reading sessions inviting initiators and discussants from different disciplines and from

amongst the faculty as well as the students. The books read, reviewed and discussed in different sessions include the following:

- i. *First Book Reading Session on Pratibha Ray's Yajnaseni: The Story of Draupadi*, Rupa & Co., Delhi, 1995. (Oct. 17, 2011)
- ii. *The Story of English in India* by N. Krishnaswamy and Lalitha Krishnaswamy (Nov. 2, 2011);
- iii. *Post Colonial Ecocriticism* by Graham Huggan and Helen Tiffin (Nov. 9, 2011);
- iv. *Language and Politics in India* edited by Asha Sarangi (March 19, 2012);
- v. *Beautiful Country: Stories from another India* by Saida Hameed and Gunjan Veda (Oct. 11, 2012);
- vi. *The Argumentative Indian* by Amartya Sen (Oct. 20, 2012);
- vii. *The Palace of Illusions* by Chitra Banerjee Divakaruni (Nov. 5, 2012);
- viii. *Digital India* by Pradip Ninan Thomas (Nov. 8, 2012);
- ix. *Surajmukhi Andhere Ke* by Krishana Sobti (April 15, 2013).

E. Quality Management Cell for Skills and Proficiency Building and Opportunity Creation

The Cell assesses and reviews the structure of the modules for soft-skills and proficiency building and recommends the necessary revisions, amendments and restructuring in the contents and teaching–learning methodology techniques. This cell oversees the activities of the specialized units/cell established in the University to ensure Skill Development, Opportunity Creation and Placement. It also makes recommendations regarding the capsule sessions for the Skill Development and Placement Cell.

5.1.4. Does the University publish its updated prospectus and handbook annually? If yes, what are the main issues / activities / information included /provided to students through these documents? Is there a provision for online access?

Yes, the University annually publishes its '*Information Brochure*'. Moreover, for the wider dissemination of information to the students and other stakeholders the 'Information Brochure' is also available online on the official website of the University. It provides information to the students on various aspects like:

- The Courses/Programmes offered by the University
- Admission schedule, procedure for submission of applications for admission, syllabi and pattern of entrance examination, eligibility criteria, fee structure, weightage
- The intake of students in various Courses/Programmes
- The names and profile of Faculty members
- Scholarship schemes
- Hostel facility
- Other information relevant for the students

5.1.5. Specify the type and number of University scholarships/freeships given to the students during the last four years. Was financial aid given to them on time? Give details (in a tabular form) for the following categories: UG/PG/M.Phil/Ph.D./Diploma/others (please specify).

Yes, the University provides financial aid and scholarships to the students under different schemes.

Table: 3

University Scholarships Non-NET

Session	M.Phil (No. of Students)	Ph.D (No. of Students)	Amount Spent (lakhs)
2012-13	48	16	30,11,184
2013-14	48	16	15,40,402
2014-15	34	19	28,83,188
2015-16	27	-	8,50,220
Total	157	51	82,84,994

Table: 4
Freeships/Earn While You Learn Scheme

Session	P.G. Students	Amount spent (lakhs)
2013-14	15	3,16,650
2014-15	22	1,06,500
Total	--	4,23,150

5.1.6. What percentage of students receive financial assistance from state government, central government and other national agencies (Kishore Vaigyanik Protsahan Yojana (KVPY), SN Bose Fellow, etc.)?

The students of the University receive financial assistance in the form of scholarships/fellowships from the various agencies of the Government of India and the State Government.

Table: 5
Post-Matric

Category	2014-15	2015-16
SC	23	Scholarship/Fellowship yet to be awarded
OBC	42	Scholarship/Fellowship yet to be awarded
BC	3	Scholarship/Fellowship yet to be awarded

Table: 6
Promotion of Science Education *POSE Scholarship Scheme (Pose)*

	2013-14	2014-15	2015-16
Pose	4	4	30

Table: 7

State/Minority Scholarship

	2015-16
UP	17
Minority	38

Table: 8

Ambedkar Medhavi Chatra Sanshodhit Yojana

Year	Count
2014-15	40

The University is also launching Merit cum Means Scholarship for Meritorious Students from the current academic session.

5.1.7. Does the University have an International Student Cell to attract foreign students and cater to their needs?

The University is in the process of establishing an '*International Student Cell*' to attract foreign students and to cater to their needs.

5.1.8. What types of support services are available for -

- **Overseas students**
- **Physically challenged / differently-abled students**
- **SC/ST, OBC and economically weaker sections**
- **Students participating in various competitions/conferences in India and abroad**
- **Health centre, health insurance etc.**
- **Skill development (spoken English, computer literacy, etc.)**
- **Performance enhancement for slow learners**
- **Exposure of students to other institutions of higher learning/corporate/business houses, etc.**

- **Publication of student magazines**

- **Overseas students**

University is in process of constituting an Overseas Students Cell to devise the mechanism to attract and retain the overseas students in the next academic session.

- **Physically challenged/differently-abled students**

A special Cell for Person with disabilities has been created in year 2013. The aim of creating this cell is to facilitate equal opportunities, ensure protection of their rights and create congenial environment for their full participation. The cell formulates and monitors special policies, guidelines, and schemes to ensure enjoyment of equal opportunities for the differently-abled students in all the walks of campus life. The cell endeavours to sensitize the University community to respect and cooperate with the differently-abled persons. The cell undertakes programmes to enhance the physical, emotional, mental, technical capabilities of the differently abled person to meet the present and future challenges of their life. The University took appropriate steps to ensure safe, healthy and barrier free environment in hostels, libraries, academic buildings, administrative buildings, roads, pedestrian ways, canteens, gardens, shopping complex and other public places and utilities. University also monitor the implementation of guidelines for conducting written examination for differently-abled persons framed by the Ministry of Social Justice and Empowerment, Department of Disabilities Affairs such as reservation of seats during admission and scholarships, economic assistance for the differently-abled students. The activities of 'Cell for Persons with Disabilities (PWDs)' celebrated ***“International Day for the Differently-Abled Persons”*** on **03.12.2014**.

- **SC/ST, OBC and economically weaker sections**

The SC/ST Cell is constituted in the University to cater the needs of students from SC and ST in year 2014. The Mandate of SC/ST Cell is to ensure, protect and promote the interest of persons belonging to SC and ST Category.

The various activities organized by SC/ST Cell are as follow:

- a. Event on the occasion to celebrate the birth anniversary of Dr. B.R. Ambedkar on 13th April, 2015 on **‘Role of Caste in the Changing Political-Economic Landscape of**

India'. Prof. Surajit Mazumdar, CESP/School of Social Sciences JNU, New Delhi was the key speaker.

- b. Public Discussion on International Workers Day (May Day) on 1st May, 2015 on “**Globalisation and Liberalisation: Impact on Labour and Labour Movement in India**”.

- **Students participating in various competitions/conferences in India and abroad:**

All the departments/Cells promote student participation in various competitions and conferences. University provides all support (financial and transportation) for the students participating in the competitions outside the University at different levels.

- **Health centre, health insurance etc.:**

Establishing a Health Centre is the priority agenda of the University and it is among the top priorities of the University for the proposed initiatives of the XII Five-Year Plan and by the time University gets its full-fledged Health Centre, University is running a 24X7 First-Aid Centre where trained Nurses are deployed for preliminary advice and first aid. University provides Group Health and Accidental Insurance to all the enrolled students at a nominal contribution of Rs. 200/- per annum.

- **Skill development (spoken English, computer literacy, etc.):**

Special sessions are being conducted by Career Counselling, Training and Placement Cell with the help of Department of English, Hindi and Computer Science.

- **Performance enhancement for slow learners:**

Extra Classes are run by the individual departments to enhance the learning capacity of slow learners.

- **Exposure of students to other institutions of higher learning/Corporate/business houses, etc.**

Students get exposed to other institutions of higher learning with the support provided by the University in their participation in National/State-level events. Youth Red Cross Unit of the University has sent many delegations to different Universities/destinations where the University students get ample opportunity to interact with the students and faculty from the institutions of higher learning. University conducts special and extension lectures by the

experts from institutions of higher learning/Corporate/business houses at regular intervals to give an opportunity to the students to have an interface with their expertise and experience.

- **Publication of student magazines/newsletters:**

Department of Official Languages (Rajbhasha) has collected the creative/critical writings of the students and the same shall be published very soon.

Literary Club, a Student-Centric organ of the Department of English and Foreign Languages also comes out with the Departmental Newsletter.

So far, University has published two issues of University Newsletter (a mouthpiece of Central University of Haryana). University published the well-researched articles of the researchers who presented their papers in the National Seminar “Inclusive Democracy: People, Power and Progress” at Central University of Haryana, Narnaul (May 30-31, 2012) in a special volume titled *Research Scholars’ Musings*.

5.1.9. Does the University provide guidance and/or conduct coaching classes for Students appearing for Civil Services, Defense Services, NET/SET and any other competitive examinations? If yes, what is the outcome?

Yes, the University provide guidance and conduct coaching classes for Students appearing for Civil Services, Defense Services, NET/SET and any other competitive examinations. The fresh schedule circulated by the Career Counselling, Training and Placement Cell on 29th Sept. 2015 is as under:

I. Schedule and Time Table for Skill Development Classes:

Venue: Smart Class Room, Academic Block, Ground Floor				
Monday	Tuesday	Wednesday	Thursday	Friday
4:00 to 5:00 pm	4:00 to 5:00 pm	4:00 to 5:00 pm	4:00 to 5:00 pm	4:00 to 5:00 pm
Language & Communication Skills	Personality Development Program (PDP) Classes	Basic Computer Skills	Values and Ethics	Social Skills

II. Schedule and Time Table for UGC-NET classes (Paper-I only)

Venue: Smart Class Room, Academic Block, Ground Floor				
Monday	Tuesday	Wednesday	Thursday	Friday
9:00 to 10:00 am	9:00 to 10:00 am	9:00 to 10:00 am	9:00 to 10:00 am	9:00 to 10:00 am
Comprehension Analysis	Reasoning/QA/D I	General Awareness	Divergent Thinking	Teaching/Resear ch Aptitude

All the Counselors have been requested to make schedule for Paper-II and III in consultation with the respective Head of Departments.

5.1.10. Mention the policies of the University for enhancing student participation in sports and extracurricular activities through strategies / schemes such as

- **additional academic support and academic flexibility in examinations**
- **special dietary requirements, sports uniform and materials**
- **any other (please specify)**
 - **Additional academic support and academic flexibility in examinations:** University is planning to have its Ordinance for the provision of academic support and flexibility in examinations for the students participating in sports activities.
 - **Special dietary requirements, sports uniform and materials:** University provides the refreshment to the sports persons as per the norms of the University. Sports Uniform/Kit is provided to the sports persons participating in the event at State/National-Level.
 - **Any other (please specify):** University proposes to announce certain awards/recognitions and felicitations to the distinguished sports persons of the University who bring laurels to the University at various levels.

5.1.11. Does the University have an institutionalized mechanism for students' placement? What are the services provided to help students identify job opportunities, prepare themselves for interview, and develop entrepreneurship skills?

Yes, with the aim of ensuring the quality education and getting students placed in reputed organizations/institutes/NGOs, the University with its focus on the multidisciplinary approach strives hard for the development of overall personality of the students. With the objective to equip the students with all kind of employability skills so that they can be absorbed in the global job-market, a *Career Counseling, Training and Placement Cell* has been constituted in the University.

The cell aims to facilitate students in the matter of job and employment opportunities as well as to add value in the employable skills and knowledge which can be imparted to the students as per the requirement of the ongoing programs in the University. In tune with the aforesaid objectives University is running UGC-NET classes for the PG/M.Phil/Ph.D. students and special classes for various other competitive examinations like Staff Selection Board (SSB) and other competitive examinations.

The cell organizes the special classes/lectures of experts in every semester for the personality development of the students. To add value in the employable skills and knowledge Career Counseling, Training and Placement Cell in 2014-15 organised following activities:-

- a. Personality development classes were conducted during the last semester with the focus on Communication skills, Personality development, Computer skills, Values and Ethics, Social skills, etc.
- b. Special classes for the SSB aspirants were conducted on 2nd-3rd Dec 2014 by Col Kataria for which 45 students registered themselves and 20 attended. Mentoring by Col Kataria had a great impact on students. That's why there is growing demand from the students to conduct such sessions regularly.
- c. Ad-Mad show was conducted in the month of November 2014 by the Department of Management Studies to groom the management students to deal efficiently with the given situations in the business environment. This helps them to realize the actual market situations. The hidden objective behind this activity was to expose the students to the concept of stage management and hence addressing issue of stage fear. Additionally the activity also helped the students in grooming and developing their analytical skills.

- d. A '*Business Quiz*' was also organized in the month of November 2014 by the Department of Management Studies to train and acquaint the students of Management and Commerce with the different business terminology being used in business operations.
- e. A special '*Resume Development Program*' is going on in various departments so that the students can showcase their knowledge, skills and talent to the job market through curriculum vitae.
- f. Mock interviews are also being conducted from time to time to train the students for facing the various interview boards for their final placements.
- g. The students of MBA were taken for industrial visit to Hero Moto Corps, Dharuhera and Medica Men Bio Medical Company, Bhiwadi to acquaint and expose them to the real corporate functioning in various areas of the business so that it will be helpful for them when they really go and join the corporate world.
- h. The students of MBA participated and won first prize in the national level Case Folio competition at GIBS (Gitaratan Institute of Business Studies) Delhi where participants from nearly 14 Universities and Institutes participated.
- i. An educational trip to Suraj Kund Mela at Faridabad was organized on 7-8 Feb 2015 for better understanding and knowledge about multiculturalism of the nation and art, culture and heritage of the various states of India.
- j. The cell has taken initiative to identify and engage various governmental and non-governmental organization for the training and placement of the students of various disciplines. In this context a MoU has already been signed with Center for Social Research, New Delhi. The talks are in the final stage with NSIC (National Small Industries Corporation) New Delhi to associate and sign an MOU to train the students of CUH either at NSIC campus or CUH campus, wherever applicable, in the areas like: Entrepreneurship development, Software development, Mobile repairing and plan is also being discussed to open an incubation center at the campus of CUH.
- k. The cell is planning to start the classes of GD (group discussion) and PD (post dinner) talks on issues of contemporary nature in the hostel premises providing the students with an opportunity to express themselves in an open environment enabling them to improve their communication skills.

5.1.12. Give the number of students selected during campus interviews by different employers (list the employers and the number of companies who visited the campus during the last four years).

University has initiated the process of maintaining linkages with industries for Placement, Training and Internship. University has recently communicated with following potential experts from Industry & Corporate Sector and these companies communicated and visited the University.

The following companies have visited the University recently:

1. Mr. Vinay Kaushik, Vice President – Human Resource Division Cell, Samsung Engineering India Limited, Noida
2. Mr. Manjit Singh Gill, Corporate Chef, ITC Welcome Group Hotels Division, Gurgaon.
3. Mr. Vikram Singh, Associate Vice President and Head, IT, Airtel, Gurgaon
4. Dr. R.K. Garg, Director, Technology Application Services (TAS), New Delhi
5. Dr. Gautam Ghosh, Vice President, Panacea Biotech Ltd. New Delhi
6. Dr. Anup Kalra, Director, Ayurved Pvt. Limited, New Delhi.
7. Mr. Shiv Kaushik, President, SVI Analytica, New Delhi.
8. Dr. Ashok Sonsukera, R&D Head, Reliance Life Sciences, Navi Mumbai
9. Mr. Deepak Kumar, Vice President, Application Services, Sify Technologies Ltd. Noida, UP
10. Mr. Ajay Arora, Business Head, Hindustan, HT Media Group, UP (West) and Uttarakhand.

Besides, the Industries where students undertook summer training include the following:

- Daikin India Ltd., Nimraana, Rajasthan
- Bharti Airtel Ltd., Sec. 18, Jil Tower, 2nd Floor, Plot No. 18, Gurgaon
- Videocon Industries Ltd, Udyog Vihar, Gurgaon
- U B Group, Chopkani, Alwar
- Lifestyle Retail, New Delhi
- Amtek India Ltd., RIICO Industrial Area, Bhiwadi, Distt. Alwar, Rajasthan
- Shiv Engineering Industries, Kapriwas (Dharuhera), Distt. Rewari, Haryana
- B L Lifesciences Pvt. Ltd., A 245 Okhla Industrial Area, Phase 1, New Delhi 110020
- Pricol Ltd., Plant No. 2, Plot no. 34 & 35, Sec 4, IMT Manesar, Gurgaon 122050, India
- Anand Rathi Share & Stock Broker Ltd. , Subhas Marg, C-Scheme, JAIPUR

- Pantaloon India Ltd, Delhi
- Shree Cement, Dharuheda
- Sandhar Components Ltd, Gurgaon
- NTS Ltd, Gurgaon

The students of our University has been placed in the following organisations:

1. ICICI Prudential Ltd, Delhi
2. Daikin Air-conditioning
3. IACM South Extension, Delhi
4. APPCO Group, Delhi
5. Muthoot Finance
6. Nippon Steel, Neemrana
7. Union Bank of India
8. Nisshinbo Mechatronics India Pvt Ltd, Manesar
9. Halla Visteon Climate Systems India Pvt Ltd, Bhiwadi
10. Adani Logistics

Table: 9**Student placements**

Sr. No.	Name	Designation	Organization
1	Suyash Mishra	Assistant Professor	Institute of Management, Noida
2	Prashant Kaushaliya	Bank PO	Union Bank of India
3	Hukam Singh	Executive	Nippon Steel, Neemrana
4	HitLal Agarwal	Finance Executive	Nisshinbo Mechatronics India Pvt Ltd, Manesar
5	Naveen Kumar	Finance Executive	Halla Visteon Climate Systems India Pvt Ltd, Bhiwadi
6	Pritam Singh	Assistant Professor	RPS group of Institute, Balana, Mahendergarh
7	Surbhi Bhargava	Finance Executive	Viva Financials
8	Surender	Executive	OMAXE Ltd
9	Sandeep	Executive	Adani Logistics
10	Jagpravesh	Cluster Head	HDFC Ergo

5.1.13. Does the University have a registered Alumni Association? If yes, what are its activities and contributions to the development of the University?

The departments and Cells/Clubs have already started the process of maintaining the data of alumni and some of the departments and cells have ensured the participation of alumni for necessary inputs and support. The first Alumni meet shall be conducted in the last week of Oct. 2015 for which necessary preparations are underway.

5.1.14. Does the University have a student grievance redressal cell? Give details of the nature of grievances reported. How were they redressed?

Yes, The University has a 'Student Grievances Redressal Cell' constituted in year---. The grievances submitted by the students are being redressed promptly and presently there is no grievance pending with the Cell.

5.1.15. Does the University promote a gender-sensitive environment by (i) conducting gender related programmes (ii) establishing a cell and mechanism to deal with issues related to sexual harassment? Give details.

Yes, the University has a well constituted '*Internal Complaints Committee*' (ICC) with one senior Woman faculty with 8 members for Prevention, Prohibition and Redressal of Sexual Harassment of Women at workplace. At present the `ICC has one registered case.

5.1.16. Is there an anti-ragging committee? How many instances, if any, have been reported during the last four years and what action has been taken in these cases?

Yes, ragging in the University campus is strictly prohibited. Anyone indulging in ragging is appropriately punished. The punishments may include expulsion or suspension from the University or hostel, fine, public apology, withdrawal of scholarships etc. In order to curb the menace of ragging an '*Anti-Ragging Committee*' is constituted in the University under the senior faculty member along other members. By pasting notices, banners, flags, posters etc. at prominent places in the University, a wide publicity is given to the anti-ragging mandate in the University. No complaint of ragging in the University campus has been reported during the last four years.

5.1.17. How does the University elicit the cooperation of all its stakeholders to ensure the overall development of its students?

The views and suggestions of various stakeholders that emanate during the students industrial visits, experiential learning, Parents Teachers meeting etc. are considered for the development of students. Stake holders like experienced industrial executives, progressive farmers are included in the curriculum development cell, Board of studies and Faculty for contribution of vital inputs in designing the curriculum.

Stake holders and alumni are also invited for contribution of endowment funds that offer scope for special lecture, prizes etc. They are also offered a platform for campus recruitment.

5.1.18. How does the University elicit the cooperation of all its stakeholders to ensure the overall development of its students?

The students, the teachers, the non-teaching staff & the administrative authorities are the four pillars of the University. Out of these, the students are the focal point because the existence of rest of the three depends upon the very existence of the students only. Therefore, the University takes utmost care of its students by motivating the teachers and non-teaching staff to work for the overall betterment of the students. The Hon’ble Vice-Chancellor and the Worthy Registrar of the University interact with the students to motivate them and redress their grievances.

5.1.19. How does the University ensure the participation of women students in intra- and inter-institutional sports competitions and cultural activities? Provide details of sports and cultural activities where such efforts were made.

The University fraternity is highly motivated to encourage the women students to participate in various sports and cultural activities. This is also reflected by the large-scale participation of the women students of the University in different Sports activities and social initiatives like NSS, YRC and other campaigns that the University runs from time to time. In order to spread awareness regarding “Save the Girl Child, Educate the Girl Child” in the surrounding villages, a rally on the theme “*BETI BACHAO, BETI PADHAO*” was also organized by the University. This Rally succeeded to motivate the villagers that they must send their girls (daughters) to the schools.

5.2. STUDENT PROGRESSION

5.2.1. What is the student strength of the University for the current academic year? Analyse the Programme-wise data and provide the trends for the last four years.

Table: 10

Year wise student detail

Year	Male	Female	Total
2009-10	16	16	32
2010-11	39	33	72
2011-12	48	51	99

2012-13	47	50	97
2013-14	49	53	102
2014-15	193	295	488
2015-16	263	308	571

5.2.2. What is the programme-wise completion rate during the time span stipulated by the University?

Table: 11

Programme	Duration of Programme	Admitted	Pass-out	%
LL.M.	Two Year	38	23	60.53
M.B.A.	Two Year	58	45	77.59
M.Com	Two Year	24	23	95.83
M.A. Economics	Two Year	23	20	86.96
M.A. Education	Two Year	32	25	78.13
M.Sc. Chem.	Two Year	9	7	77.78
M.Sc. Phy.	Two Year	10	9	90.00
M.Sc. Stat.	Two Year	4	4	100.00
M.Phil. Economics	One Year	36	25	69.44
M.Phil. Education	One Year	8	Nil	0.00
M.Phil. English	One Year	42	22	52.38
M.Phil Hindi	One Year	29	17	58.62
M.Phil. Pol. Sc.	One Year	34	19	55.88
Ph.D. Economics	Two Year	22	2	9.09
Ph.D. English	Two Year	25	7	28.00

Ph.D. Hindi	Two Year	10	2	20.00
Ph.D. Mgt.	Two Year	10	1	10.00
Ph.D. Pol. Sc.	Two Year	21	5	23.81

5.2.3. What is the number and percentage of students who appeared/qualified in examinations like UGC-CSIR-NET, UGCNET, SLET, ATE / CAT / GRE / TOFEL / GMAT / Central / State services, Defense, Civil Services, etc.?

The List of UGC-NET/JRF Qualified Students (JUNE-2014) is as under:

Sr. No.	Name of Student	School	Department and Year	Course/Program	NET/JRF
1	Rakesh Kumar Pandey		Hindi	M Phil	JRF-NET
2	Abhishek Vikram		Hindi	M Phil	NET
3	Sohan Lal		Pol Science	PhD	NET
4	Maheshwar		Management	MBA	NET
5	Rekha Garg		English	PhD	NET
6	Mukesh Yadav		English	PhD	JRF
7	Poonam		English	PhD	NET
8	Tarun		Economics	PhD	NET
9	Poonam		Education	MA	NET
10	Anju		Education	M Phil	NET
11	Ajay		Education	PhD	NET
12	Ashok		Education	PhD	NET

13	Rama. K. Krishna		Management	MBA	JRF-NET
14	Sarita		Management	PhD	JRF-NET

5.2.4. Provide category-wise details regarding the number of Ph.D./D.Litt./D.Sc. theses submitted/ accepted/ resubmitted/rejected in the last four years.

The category-wise details regarding the number of Ph.D./D.Litt./D.Sc. theses submitted/ accepted/ resubmitted/rejected in the last four years is as under:

Programme	Submitted	Accepted	Resubmitted	Rejected
Ph.D. Economics	2	2	Nil	Nil
Ph.D. English	7	7	Nil	Nil
Ph.D. Pol. Sc.	5	5	Nil	Nil
Ph.D. Hindi	2	2	Nil	Nil
Ph.D. Mgt.	1	1	Nil	Nil

5.3. STUDENT PARTICIPATION AND ACTIVITIES

5.3.1. List the range of sports, cultural and extracurricular activities available to students. Furnish the programme calendar and provide details of students' participation.

Adequate Sports Infrastructure is available in the University. The Outdoor/Indoor Grounds are presently available for the Games like –

- a. Badminton,
- b. Cricket,
- c. Football,
- d. Hockey,
- e. Volleyball,
- f. Kho-Kho,

- g. Kabaddi,
- h. Racing Tracks,
- i. Chess,
- j. Table-Tennis,
- k. Yoga,
- l. Gymnasium (Boys and Girls separately).

The Sports Infrastructure/Facilities which are proposed to be developed in the University on the basis of International parameters are as under:

- a. Construction of Sports Stadium having the sitting capacity of 800 with Football Ground- 01, Hockey Ground- 01, and Cricket Ground- 01
- b. Construction of Lawn Tennis Courts- 02
- c. Basket Ball Court- 01
- d. Multi-purpose Gymnasium Hall with sitting capacity of 600
- e. Construction of Olympic Standard Swimming Pool

5.3.2. Give details of the achievements of students in co-curricular, extracurricular and cultural activities at different levels: University / State / Zonal / National / International, etc. during the last four years.

- a. Participation of YRC Team (Boys) in State Level Training Camp at Panchkula (Haryana) from August 3rd to 8th, 2015 and won awards of Best Youth, 2nd in Speech Competition and 1st in Group Song.
- b. State Level Training Camp: Participation of YRC Team (Girls) in State Level Training Camp at Panchkula (Haryana) from August 30th to 4th September, 2015 and won awards: 1st in Skit and 2nd in Solo Dance and Best Cooperation award.
- c. Adventure Programme: Participation of NSS Team (Boy & Girls) One Boy and Three Girls in Adventure Programme at ABVIMAS, Pong Dam (Himachal Pradesh) from 10th September to 19th September, 2015.
- d. National Level Youth Red Cross Training Camp: Participation of YRC Team (Boys) in National Level Youth Red Cross Training Camp for Boys at Panchkula (16th September to 22nd September, 2015) and won awards: 1st in Quiz, 1st in Extempore Speech and Special

Youth award for Best Cooperation to our volunteer Sunil from Environmental Science Department.

- e. Participation of Student Representative, Mr. Ghulam Mohd. Khan in the Delegation of Students from Central Universities to visit Parliament of India. (Session 2014-15)
- f. Participation of Student Representative in Interaction with Minister of Human Resources Development: Mr. Vikas, Department of Psychology was selected to be the Student Representative from CUH for Interaction with Minister of Human Resource Development on 16th Sept. 2015.

5.3.3. Does the University have a mechanism to gather data and feedback from its graduates and employers and use them for the growth and development of the institution?

The University has compiled the data of potential alumni from each department and some of the departments/Cells have included the alumni for their constant feedback and support towards growth and development of the institution. Alumni feedback form has already been devised and the comprehensive details are being gathered as a continuous process.

5.3.4. Does the University conduct special drives / campaigns for its faculty and students to promote heritage consciousness?

To promote heritage consciousness among students, faculty and community, University organized a month-long campaign titled *Journey for Change* from Jan. 28- Feb. 7, 2013 featuring Colloquium on “Value Education: Imperative for Change” and a play “Gyan Purnima ki Aur” at MLS DAV Public School, Narnaul (January 28, 2013), Holy Child Public School, Rewari (January 29, 2013), Government College, Ateli (Mahendergarh) (Jan. 30, 2013), GGS IP University, New Delhi (February 1, 2013), Jhajjar, Haryana (February 4, 2013), and Youth Pavilion, Delhi World Book Fair (February 7, 2013).

The Group for the Promotion of Art, Culture and Heritage of the University conducts various events to promote cultural and heritage consciousness. The events conducted by the Group include the following:

- a) The group hired the services of a music instructor from November, 2014 to March, 2015 to train the students in playing guitar and singing
- b) The group celebrated Foundation Day on 24th February, 2015
- c) Organized the orientation programmes at the commencement of the session 2014-15 and 2015-16 on 8th August, 2014 and 3rd August, 2015

- d) Organized Cultural evenings on various occasions like Hindi Pakhwada-2014, Convocation Day – 1st March, 2014, Orientation Day – 8th August 2014, and Foundation Day- 24th February, 2015.
- e) Organized symposium on 24th November 2014
- f) Organized Extempore competition on 8th September, 2015.
- g) Organized Musical Instruments (Sarod and Tabla) Performance of SPIC MACAY artists on 9th October, 2015.

The Group for the Promotion of Arts, Culture and Heritage was constituted with the vision to develop wholesome personality of learners. Its mission is to provide a platform to students for developing artistic and creative expression through a variety of outlets: formal theatrical performances, dance, music, festival celebrations, cultural exchange programmes and visit to places of national importance.

This group recognizes the comprehensive role of art as an expression of the cultural values of a society and works towards preserving these expressions for the benefit of future generations.

The following activities were conducted by the Group for the Promotion of Arts, Culture and Heritage from January 2014 to August 2015:

- a. The group hired the services of a music instructor from November, 2014 to March, 2015 to train the students in playing guitar and singing.
- b. The group celebrated Foundation Day on 24th February, 2015.
- c. Organized orientation programmes
- d. Organized Cultural evenings
- e. Organized symposium
- f. Organized Extemporaneous competition

5.3.5. How does the University involve and encourage its students to publish materials like catalogues, wall magazines, college magazine, and other material? List the major publications/materials brought out by the students during the last four academic sessions.

The various Departments of the University have initiated the process of constituting the departmental clubs and the departmental newsletters/magazines are being published by the student members of these clubs to encourage students to publish materials like wall magazine and college magazine.

5.3.6. Does the University have a Student Council or any other similar body? Give details on its constitution, activities and funding.

Yes, as provisions of the Central Universities Act, 2009 University has the provision of a Students Council consisting of forty student representatives (twenty to be elected and twenty to be nominated). The Dean Students Welfare is the Chairperson of the Council and he convenes minimum two meetings of the Council in a year i.e., one at the beginning of the session and one in the even semester. The student representatives have been elected/nominated for the constitution of the Students Council for the current Academic Session.

5.3.7. Give details of various academic and administrative bodies that have student representatives on them. Also provide details of their activities.

The following are the various academic and administrative bodies which have student representatives on them:

- a. **Academic Council:** Two student representatives to be nominated by the Vice Chancellor on merit basis—one from among the research scholars and the other from the postgraduate students from the various schools/departments of the University on rotation basis (the student member shall not be allowed to participate in discussions in respect of matters relating to examinations, selection committees, appointments and conditions of the service of the teaching staff)
- b. **Hostel Mess Committee:** Five student representatives to be nominated by the Warden/Provost
- c. **Mess Secretary:** The mess secretary shall be nominated by the Provost/Proctor from among one of the five members of the mess committee by rotation.
- d. **Internal Complaint committee:** Two students of the University are nominated members of the ICC and they attend the meetings of ICC which are held at periodical intervals.

CRITERION VI

GOVERNANCE, LEADERSHIP AND MANAGEMENT

CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 Institutional Vision and Leadership

6.1.1 State the vision and the mission of the University?

Vision:

To develop enlightened citizenship for a knowledge society for peace and prosperity of individuals, nation and the larger world through promotion of innovation, creative endeavours and scholarly inquiry.

Mission:

The Mission of the University is as follows:

- To provide learning environment for the growth and development of students and faculty, the University System will contribute to the educational, cultural, economic, and social advancement of India by providing quality education through innovative programmes; by pursuing leading-edge research, scholarly inquiry, and creative endeavors. The University will strive to create a learning ambience with diverse cultural backgrounds and enhance students' acquisition of useful knowledge, communicative skills and analytical abilities through innovative teaching and a holistic learning environment.
- To facilitate cutting edge research in traditional disciplines and new/emerging areas at the frontiers of knowledge.
- To focus on relevance and quality in each area/discipline.
- To be a global brand in education and research sectors.
- To provide international linkages for contextual and cultural learning for both faculty and students.
- To involve various stakeholders including Government, Industry, Community, etc. in providing relevant and quality education and learning environment on campus.
- To constantly review and update the curriculum to include new knowledge and society focus.
- Partnership with national and international institutions.
- Interdisciplinary approach in academic and research areas.
- To create and maintain highest level of integrity, ethics and values on campus and ensure zero tolerance for lack of these core constituents.
- To progressively expand the current academic and research areas into their diversified focus and implementation in phases.

- ♦ To encourage creativity and innovation in every discipline

6.1.2 Does the mission statement define the institution's distinctive characteristics in terms of addressing the needs of the society, the students it seeks to serve, the institution's tradition and value orientations, its vision for the future, etc.?

Yes, the mission statement, which focuses on excellence, ideas and knowledge defines University's distinctive characteristics. The University stands for excellence in all its endeavours, the most significant of which is to serve society in general and students in particular. In an interconnected world facing unprecedented environmental and social challenges, society demands that educational institutions provide a significant net positive return for society at large, not just for its own fraternity. Our mission statement reflects our desire to fulfil this implicit agenda. Realizing the mission to serve the neighboring community, University has adopted six neighboring villages—Jant, Pali, Dholi, Malra, Bhurjat and Lavan. The University is tirelessly working for the holistic development of the surrounding localities. To bring the quality education to the doorsteps of the villagers, free remedial classes are organized in the University Campus by our research scholars for the school going students of the villages. University provides necessary educational facilities (including consultation, counseling and special sessions for the students) to the adopted schools. Some major social outreach initiatives taken by various centres, cells and clubs such as Centre for Community Development and *Unnat Bharat Abhiyan* include legal literacy camp for the villagers; AADHAR Card camp for the villagers; renovation of building of the neighboring government schools; legal awareness survey; gender sensitization and awareness programmes for health, hygiene and sanitation in the villages.

The cross fertilization of ideas adds value for academics and facilitates University-Community interface. The University, through its Centre for Community Development focuses on social, environmental and related issues of the community. The cross-fertilisation is also evident in the University's collaborations with other organizations such as National Cooperative Union of India (NCUI) and Technology Applications Service (TAS), New Delhi. The University, apart from the running courses with multi-disciplinary approach, has adopted engaging teaching pedagogy and provides exciting environment for research.

The University is committed to the Digital India cause for digital empowerment of students and faculty. The University provides free online access to more than eight thousand reputed journals through INFLIBNET and other facilities including—24 hrs. power backup, Wi-Fi-enabled

campus with the speed of 1Gbps, e-labs with research software, well-equipped Science labs, large number of text books, reference books (20,866) and print resources in University Library to promote cause of Science education amongst the students and neighbouring society.

The University encourages DST Inspire fellows to join the departments of sciences.

The University's tradition, value orientation and its vision for the future are based on the belief system which promotes community and social empowerment. The University, through academia-society interface, extracts the best of ideas from all the stakeholders and sister universities to embark upon the journey of excellence. This is done through Internal Quality Assurance Cell activities. The vision of the University explicitly mentions the focus on convergence of global and local knowledge system for which the social outreach initiatives of the University are being oriented towards preservation and promotion of '*Lok Vidya*'. As the part of International Day for Girl Child celebrations on 9th Oct. 2015, University organized various programmes to promote the folk talent and artistry among the women of the adopted villages.

6.1.3 How is the leadership Involved:

*** In ensuring the organization's management system development, implementation and continuous improvement?**

The Vice Chancellor, Deans, Registrar, Finance Officer, Heads and other officers of the University collectively develop, implement and improve the University's management system.

The Vice-Chancellor provides overall leadership while promoting participative management in University administration. He acts as the chairperson of various statutory bodies of the University including the Executive Council, the Academic Council, Finance Committee, Building Committee, Selection Committees etc. These bodies function as the policy and decision making bodies.

The Board of Studies (BOS) and the School Board headed respectively by the Heads of the Departments and the Deans of Schools make important academic decisions which are further submitted for consideration and approval of the Academic Council and the Executive Council. At the department level, the Heads play a leadership role in both academic and administrative matters. As Chairperson of the Department Research Committee and the

Board of Studies, the Heads of the Departments play an important role in curriculum development and evaluation.

The decisions and deliberations in these bodies contribute towards excellence and overall development of the work ethics and organizational culture, and promoting the University's Vision and Mission.

Finally, the IQAC headed by the Vice Chancellor acts as a nodal agency for quality assurance, develops and applies quality benchmarks/parameters for the various academic and administrative activities of the institution, and continuously strives for overall quality improvement.

* **In interacting with its stakeholders:**

The University has developed various mechanisms for the leadership to interact with its stakeholders, for example, meetings of University Court, Executive Council, Academic Council, Finance Committee, Students' Council; interaction with the Visitor in the Annual conference of Vice Chancellors at Rashrapati Bhawan; meetings convened by UGC/MHRD at regular intervals; interaction with the community through various programmes being initiated under Community Development and *Unnat Bharat* campaign; interface with academia through extension lectures by renowned academicians from different disciplines; conducting workshops/dialogue with the involvement of scientists, experts, resource persons from industry, corporate and Innovation Foundation of India. University leadership keenly participates in the activities of Industry Interface Cell, Alumni Association, Teachers-Parents Meet, Grievance Redressal Cell, NSS/YRC, and Centre for Community Development, *Unnat Bharat Abhiyan Cell*, and Group for the Promotion of Art, Culture & Heritage, Women Empowerment Cell, Legal Aid Clinic and Centre for Entrepreneurship, Skills and Innovations to interact with the participants from different spheres. There is a mechanism for obtaining students' feedback through the meetings of Students Council and other interactive meets.

The University leadership entertains the queries and the issues raised by the stakeholders and implements the best practices for the academic growth of the University in consultation with University authorities.

* **In reinforcing a culture of excellence:**

The University in order to reinforce a culture of excellence encourages its faculty members to participate in national and international conferences and seminars in India and abroad. The University has signed MoUs with various agencies and institutes with an eye on excellence in specific areas. The experts from industry and academia are invited on a regular basis to interact with the students and teachers.

- The University leadership ensures using of various ICT tools to achieve excellence in teaching, learning, evaluation, research and extension activities. Focus is on making the teaching-learning process more student centric. The Research Promotion Cell works to improve research and communication capabilities of Students by organising research methodology, research report writing and communication skills workshops from time to time. Teaching faculty is actively engaged in the government sponsored initiatives such as e-pathshala and Massive Open Online Courses (MOOCs).
- The University policies for achieving excellence are further fine-tuned by the statutory bodies like the Academic Council and the Executive Council keeping in view the Vision and Mission of the University. The other steps initiated by the University leadership towards reinforcing a culture of excellence are as follows:

i. Establishment of Centre for Entrepreneurship, Skills and Innovations that has performed following functions:

- Students and faculty of the University took the initiative to make the Best out of Waste.
- Student innovator, Mr. Sunil, M.Sc., Environmental Science, designed a project “Future Car-Hybrid Technology for Future” which got wide appreciation in a National Exhibition and Symposium on Innovative and Futuristic Approaches in Science and Technology (iFast) on 26-28th Feb. 2014 held at Maulana Azad NIT, Bhopal.
- Innovation Club published a booklet dedicated to the grassroots innovators and organised an exhibition based on the innovations of these innovators on the occasion of the first Convocation of the University on March 1, 2014.
- *Shodh Yatra* was organised in collaboration with National Innovation Foundation (May 22-23, 2014)

- On Environment Day (5th June 2015), University organized an exhibition on the theme “Innovations and Environment”.

ii. The University is creating partnerships with different incubators from Industry and Academia. The following linkages have been established:

- Technology-based Incubator (TBI), University of Delhi (South Campus), New Delhi
- Centre for Innovative and Applied Bio-processing, Mohali
- National Small Industries Corporation (NSIC), New Delhi (proposal has been initiated)
- SVI Analytica, New Delhi

iii. The signing of MOUs:

- University has signed an MoU with Technology Applications Service (TAS), New Delhi for conducting joint training programs, one semester project work as part of the requirement of the post-graduate course work and exploring possibilities to jointly design, develop and fabricate new and innovative products based on proven technologies.
- The Centre for Entrepreneurship, Skills and Innovations has signed an MoU with National Entrepreneurship Network (NEN).
- University has signed an MoU with National Cooperative Union of India (NCUI) to run PG Diploma in Cooperative Management and other cooperative activities.

iv. The University is pursuing *Rashtriya Avishkar Abhiyaan* which aims at nurturing a spirit of inquiry and creativity, create interest for Science and Mathematics, effective use of technology amongst children and encourage children who show an inclination and talent for these subjects. Under this *Abhiyan*, Science, Maths and Technology (SMT) Club has been established. After its establishment, SMT Club have initiated the following activities towards implementation of *Rashtriya Avishkar Abhiyan*:

- a. Organized Science Exhibition for the students of the government schools located in the villages adopted by the University (on 11 Sept. 2015)

- b. SMT Club organized a Workshop in collaboration with Technology Applications Service (TAS), New Delhi to develop the interest of school, college and University students in science subjects.
- c. The Club organized a special lecture for Science students by Prof. H.P. Dikshit, former Vice Chancellor, IGNOU on 15th Oct. 2015.
- d. Further, the SMT Club proposes to organise an ambitious ‘Science Conclave’ in the month of January 2016 for the students of schools and colleges of Mahendergarh District to promote science education.
- v. The constitution of IQAC focuses on excellence as a dynamic process and evolves strategies and programmes to reinforce a culture of excellence in teaching and research. In this regard, meetings of IQAC were conducted on 13th Oct. 2015 and 19th Oct. 2015.

Besides, University leadership has advised various departments/schools to opt for ISO certification for further developing a culture of excellence through standardized processes for academics and administration.

*** In identifying organizational needs and striving to fulfill them:**

The University Leadership deliberates on the futuristic needs of the University through various meetings and interactions and strives to fulfill them. The resource requirements are proposed and discussed in Finance Committee meeting for further action and allocation. Generally, the organizational needs pertain to introducing professional courses, modernizing education and administration, building up of infrastructure (academic, research, administrative, residential etc.), promoting value based education, environment friendly practices, research & innovation and quality higher education. Based on the overall stock taking and introspection, the short-term and long-term plans are designed and complied with the support of the administrative, finance and academic section.

6.1.4 Were any of the top leadership positions of the University vacant for more than a year? If so, state the reasons.

Yes, following posts of the University remained vacant for more than a year:

- i. The post of the Vice Chancellor remained vacant for more than one year, from 4th March, 2014 to 15th April, 2015.

Reason: On the relieving of Vice Chancellor, Maj. Gen. Ranjit Singh on 4th March 2014, the process of appointment of regular Vice Chancellor took more than one year.

ii. The post of PVC is vacant since 1st June, 2013 onwards.

Reason: University didn't appoint the Pro Vice Chancellor after relieving of Prof. D.C. Vashist on 31st June 2013.

iii. The post of Controller of Examinations is vacant since the inception of the University*:

Reason: University advertised the post of Controller of Examinations (COE) in the year 2012 and 2014 but interviews couldn't be held so far.

* **Recently COE has joined on deputation.**

6.1.5 Does the University ensure that all positions in its various statutory bodies are filled and meetings conducted regularly?

Yes, the University ensures that all positions in various statutory bodies are filled and meetings are conducted regularly as per the schedules prepared by the University. In case any position(s) becomes/become vacant, efforts are made to appoint persons of eminence and repute to the statutory bodies of the University.

6.1.6 Does the University promote a culture of participative management? If yes, indicate the levels of participative management.

Yes, the University promotes a culture of participative management. Beginning from top, the first level constitutes the statutory bodies where the principle of participative management and decision making is followed in word and spirit.

The second level constitutes involvement of faculty in administrative affairs where the administration entertains and considers the suggestions of the faculty members with open mind. The third level involves participation of faculty members in departmental administration and growth which is duly ensured by the Heads of the Departments.

The fourth level constitutes creative interaction among all the Schools and Departments through their Deans and Heads. Meetings of the Deans and Heads are convened from time to time to discuss and resolve important issues. These meetings are chaired by the Vice Chancellor and/or the Registrar of the University (depending on the agenda of the meeting). The participative management at this level is also brought alive through the comprehensive and functional committee system.

Finally, the University promotes participative culture by making provisions for the engagement of important stakeholders such as the students, parents and the corporate world or the industry professionals. For instance:

- (a) The administration gives due consideration to the suggestions communicated by the student representatives through the Students' Council.
- (b) Parents are engaged through parents-teachers meet and
- (c) There is a Research Promotion Cell to develop a symbiotic and synergetic research environment while maintaining relationship between the University and industry.

6.1.7 Give details of the academic and administrative leadership provided by the University to its affiliated colleges and the support and encouragement given to them to become autonomous.

There are no colleges affiliated to the Central University of Haryana.

6.1.8 Have any provisions been incorporated / introduced in the University Act and Statutes to provide for conferment of degrees by autonomous colleges?

There are no colleges affiliated to the Central University of Haryana.

6.1.9 How does the University groom leadership at various levels? Give details.

The University shapes leadership at the level of the administration, faculty and students through various participative and interactive platforms. The University leadership identifies suitable faculty members, non-teaching staff and students and provides them sufficient opportunities to be groomed as future leaders. They are involved in various cells, committees and councils which have direct bearing on the efficiency and productivity of the University. For instance, IQAC, Academic Council, Grievance Redressal Cell, Internal Complaint Committee for Prevention, Prohibition and Redressal of Sexual Harassment, Students Council, Industry Interface Cell, Alumni Club, Grievance Redressal Cell, NSS/YRC, Centre for Community Development, *Unnat Bharat Abhiyan Cell*, Group for the Promotion of Art, Culture & Heritage, Women Empowerment Cell, Legal Aid Clinic and Centre for Entrepreneurship, Skills and Innovations. The Registrar, Finance Officer, Dean Students Welfare, Proctor, Deputy Registrar, Section Officer and Assistant Registrars play crucial role in implementation of the policies devised by decision making bodies.

University has framed various Ordinances defining the responsibilities, functions and powers of the authorities of the University including Pro Vice Chancellor, Deans, Heads, and Dean Students Welfare. University has given additional responsibility of Hostel Wardens to the faculty. Besides, leadership among the faculty is groomed through inclusion of the faculty in various cells, clubs, proctorial boards, centres, councils and other bodies.

The faculty members are encouraged to acquire research projects as principal investigators. All necessary support and incentives are given to them to develop their research potential to become leaders in their own field of research.

The leadership qualities are inculcated among the students through NSS camps, sports activities, cultural activities and various competitions and contests. There is the provision of Students Council where student representatives, elected and nominated from various departments, participate in discussions and deliberations. Various co-curricular and extra-curricular activities are conducted through active participation of the students.

The University also follows mentoring system to ensure personality development and grooming of each and every student in the campus.

6.1.10 Has the University evolved a knowledge management strategy? If yes, give details.

Yes. The University has evolved a knowledge management strategy through a combination of teaching, research, innovation, incubation and extension activities. The faculty is encouraged to apply for research projects, training workshops, faculty development programmes, orientation and refresher courses to improve their teaching skills and contribute towards knowledge generation and dissemination. The research output is channelized and disseminated through research publications and Seminars, Conferences, Workshops, Symposia etc. Teaching faculty are also encouraged to offer consultancies to community and industry. Orientation and training programs are organised whenever new/fresh faculty members are appointed in the University. The University maintains the videos of various seminars and conferences wherein the industry experts are invited to deliberate on various topics. Finally, the University has also established Centre for Bio-Resource Management as Centre for Excellence and plans to establish a few more such centres which are interdisciplinary in nature. Various academic collaborations and linkages with incubation centres serve as genuine knowledge exchange systems. Knowledge sharing with the collaborating organisations and institutes takes place through video conferencing mode too. This is facilitated by Wi-Fi connectivity. The Library

subscribes to the online research journals through INFLIBNET, a UGC Inter-University Center for Information and Library Science which facilitates scholarly research work.

6.1.11 How are the following values reflected in the functioning of the University?

*** Contributing to national development**

In the era of 'knowledge society' the development and growth of a nation has been linked to its output in the domains of research and innovation. The University under the leadership of its dynamic and visionary Vice Chancellor, Prof. R. C. Kuhad, has already charted out its course to make the national aspirations in higher education a concrete reality. The University seeks to produce a skilled, efficient, and committed workforce in diverse fields of expertise and thereby empower them to serve the nation. The extension activities of the University through NCC, *Unnat Bharat Abhiyan*, and Community Development reflect its commitment towards social goals which are a part of human and national development. The University takes up the national agenda of social welfare and conducts social awareness campaigns (such as *Swachh Bharat Abhiyan*, *Beti Bachao, Beti Padhao Abhiyaan*, Aadhar card camp, Legal Literacy Awareness camps), in the six adopted villages to equip the village community with knowledge, awareness and inculcate in them a sense of civic responsibility.

*** Fostering global competencies among students**

The teaching faculty understands its responsibility to prepare students to survive and succeed in a global society. Thus, the course curriculum is designed in view of the requirements of the global market, industrial sector and corporate world. The course contents are updated every year to incorporate the latest developments in different fields. Towards pursuance of this end, the Choice Based Credit System (CBCS) was introduced in University from the Academic Session 2015-16 in all Post-Graduate courses. Special emphasis has been given on improving communication skills of students for their personality developments and increased employability. Digital technology is also imparted to the students in order to foster global awareness in classrooms. Finally, we strive to impart global education at University in order to instil in students universal dispositions that foster cross-cultural understandings.

*** Inculcating a sound value system among students**

The University adopts various mechanisms to inculcate a robust value system among the students. Inspirational figures are invited from various walks of life to interact with students and motivate them to adopt moral values and ethical various a sound value system. Social and ethical values are inculcated through NSS programmes. The Centre for Community Development, Women Empowerment Cell, Career Counselling, Training and Placement Cell and Yoga Club also organize various activities for overall personality development of students as well as development of a sound value system. The participation of students in campaigns such as remedial coaching classes for school students, campus cleanliness drive, tree plantation drive and blood donation camps through *Swachh Bharat Abhiyan*, *Unnat Bharat Abhiyan* Cell, NSS/YRC units and adoption of six villages by the University bears a testimony to the societal-community values nurtured by the students and their commitment to community, society and nation as a whole.

*** Promoting use of technology**

The University administration has developed a roadmap for achieving online system for various operations such as admission, enrollment, filling of examination forms, revaluation forms, library functions (issue and return of library books), fee submission etc. Besides this, all the departments have smart class rooms to facilitate ICT-enabled teaching-learning process. Notably, the University is fully Wi-Fi enabled.

*** Quest for excellence**

The University's quest for excellence is reflected in the following ways:

- Regular upgradation of syllabus to keep it relevant for exams like NET, SET, UPSC, GATE etc.
- Encouragement for publication of research in refereed journals with high impact factor, Ph.D scholars are compulsorily required to publish two research papers within the duration of their research.
- Collaborations and MOUs with Industry, reputed organizations, institutes and NGOs.
- Development of the 'State-of-Art' laboratories
- Provision of annual awards for best research paper, best department, contribution to corporate life, and best class-room teaching.
- Creation of Research Laboratories.

6.2 Strategy Development and Deployment

6.2.1 Does the University have a perspective plan for development? If yes, what aspects are considered in the development of policies and strategies?

Yes. The University has a perspective plan for development from academic as well as administrative perspective.

- * Vision and mission: The Perspective Plan is in line with the vision and mission of the University.

The future roadmap for the thrust areas such as teaching and learning, research and development, community engagement, human resource planning and development, industry interaction which the University proposes to focus, is as follows:

I. Identifying the prospective areas requiring immediate attention for creating vibrant academic and research environment and to review all the ongoing projects in the institution.

1. Making the website a repository of all the available information, facilities, resources and opportunities that the University offers so that the stakeholders of the University are not deterred by any barriers of geographical location while accessing the relevant information. Open educational resources (OERs), Massive Open Online Courses (MOOCs) and resources available under 'Creative Commons' license will be linked to provide vast pool of useful and supplementary material to the students. MOOCs will offer the students anytime-anywhere learning environment, and emerge as an effective tool for knowledge sharing and dissemination.
2. Establishing credible open fora for interaction with the teaching, learning and the non-teaching community to understand their needs, demands and aspirations to see the desired change.
3. Establishment of University Development Corpus Fund to create a corpus for funding, supporting and sustaining academic and research initiatives of various in-house Centres and Institutes, faculty members, research scholars and students. The corpus will involve generation of funds from but not restricted to:
 - Industry
 - Alumni Endowments
 - Overhead grant from Extramural Research grants
 - Consultancy
 - Patents and technology transfer
 - Grant from International bodies under their social and academic initiatives
4. Special initiatives and programs for differently-abled and disadvantaged students to realise the vision of inclusive quality education. All efforts shall be made to make the campus differently-abled and disadvantaged-friendly as per the requirements and guidelines of Government of India. A duly constituted special cell shall initiate affirmative action and monitoring of progress of all such programs towards equal opportunity to all the students including their employability aspects too. Grants and

aid will also be provided to deserving students for enhancing their employability skills.

5. Equal Opportunity Cell will ensure that all sections of the students are provided appropriate support; and special initiatives will be undertaken for bringing students of the backward and underprivileged sections at par with others to offer them a level playing field for competition including remedial classes for students of these categories.

II. Empowering and strengthening existing University System:

1. E-Governance: To bring the entire functioning of the University under the ambit of e- Governance, the University shall expedite the digitization process. The entire University is being linked through Wi-Fi internet connectivity so that all the schools, departments and centres will be on a common network.
2. Transforming education system for creating exciting opportunities:
 - Creating an exemplary model for the implementation of Choice Based Credit System (CBCS)
 - Shift in focus from teacher-centric to student-centric education.
 - Allows students to choose innovative curriculum through inter-disciplinary, intra-disciplinary courses, skill oriented papers, vocational education and encourages more flexibility for students.
 - Makes education broad-based and at par with global standards
 - Ease of mobility for students
3. Faculty Development Programmes: Creating opportunities for the faculty to get oriented to latest innovative pedagogies, research methodology and professional skills by providing training through induction courses/workshops and seminars at regular intervals. University has already submitted the proposal for the establishment of UGC-HRD Centre.
4. School/Department development program: Enriching state of the art Labs with more equipment and securing funds from various GOI schemes for creating department-centric research facilities and developing Learning Resource Centres.
5. New learning and teaching pedagogy initiatives: University proposes to create the facilities for developing e-learning material and also to facilitate the starting of MOOCs (Massive Open Online Courses).
6. Modernization of Library: Library is the temple of wisdom and knowledge in a University. Apart from acquiring new and existing titles and increasing the subscription of journals, one of the priority areas will be to link the library to the National grid so that access to all the e-journals and e-books that are subscribed through INFLIBNET and its affiliated universities and institutes are also available to the University students and faculty members. This will also result in saving precious national resources. Further University library and department/school libraries will be linked through the University intranet so that there is seamless flow of knowledge.

7. **Placement Opportunities:** The Career Counselling, Training and Placement Cell will be refurbished so that coordinated and concerted efforts are made to bring maximum number of students under its ambit. Registration and profiling of all students in the placement cell will be made mandatory so that each student gets the opportunity to apply for jobs.
8. **Strengthening of examination system:**
 - Online registration for exams
 - Online issue of admission card
 - Online submission of question papers
 - Centralized evaluation of undergraduate courses
 - Decentralization of Post Graduate examination by empowering the Teaching Departments.
9. Consolidation of existing departments by providing faculty and minimum required infrastructure
10. Introduction of new programs in Physical Sciences, Mathematical Sciences, Performing and Fine Arts, Language and Linguistics and Pharmaceutical Sciences, in phased-manner.
11. Introducing the Certificate and Diploma courses through the schemes like *Deen Dayal Upadhyaya Kaushal Kendra* and Skills Incubation Centre.
12. Priority will be given for establishing different centers under the Inter and Multi-Disciplinary format providing infrastructure and opportunity to develop and hone existing and new areas of research and innovation. These centers will act as catalysts for increasing the quality and quantity of research publication and to develop relevant and sustainable technology and obtain its patents (IPR).
13. **Center for Academic Auditing:** This center will be responsible for evaluation of all academic, research and associated activities of different Departments, Centers and Institutes of the University. It will also set up future benchmarks for the University.
14. **Technology Stock Exchange:** This center will be established with objectives like creating value for ongoing and new research. Apart from the running courses with multi-disciplinary approach, the University has adopted engaging teaching pedagogy and provides exciting environment for research. An ecosystem will be developed to provide common platform for researchers, industrialists, evaluator and IPR specialists for facilitating the improvement of incubated technologies and their transfer to industries.
15. **Centre for Policy and Modeling:** This center will focus in creating value in the following areas:
 - Policy for self-sustenance at macro and micro level of governance
 - Carbon footprint and Green initiatives Policy
 - Unified e-Content formulation, implementation and outreach Policy
 - Policy for reforms in Socio-Economic delivery mechanism
 - Modeling for Climate change and Weather prediction: Causes and Impact

- Modeling for Crop prediction and associated studies
 - Modeling Studies: Use of modeling as a tool for providing real-time solutions in diverse areas ranging from drug delivery, medical profiling and genetic code generation studies, controlling traffic flows, analyzing and predicting stock market trends, etc.
16. **Centre for Secondary Agriculture and Energy Harvesting:** Aiming at adding value to crop residue, Center on Bioenergy & biomaterials is proposed for developing technologies for production of alternate fuels and biomaterials. Energy harvesting is a new and rapidly developing concept, which strives to generate energy from everyday processes for powering low energy everyday requirements. The basic concept is to harness unproductive energy from various processes and convert it into electricity like rubbing, pressure, air friction, tidal energy, rotatory motion, body heat etc.
17. **Center for Community Development: To pursue the social outreach initiatives to address the issues of the neighbouring community, Centre for Community Development shall make rigorous efforts** with special focus on:
- Childcare, Health, Hygiene and Sanitation
 - Citizens' Rights and Duties
 - Self-help groups & Micro-finance cooperatives in collaboration with National Cooperatives Union of India (NCUI)
 - Training programs for Empowerment of Women and Gender Sensitization by Women Empowerment Cell
 - Conflict Resolution, Peace studies, Legal-aid and Counselling through Legal-Aid Clinic of the University
18. **Center for Innovation, Skill, Entrepreneurship and Employment:** This center will be made into a dynamic hub to provide all solutions related to students employment. To encourage innovative thinking, incubate ideas, changing mindset and increase the employability of the students, there will be regular interactions between the academia and the industry under the aegis of this center. Special emphasis will be laid for developing soft skills of the students like communication, team building, leadership and domain skills. Tie-ups will be made with both public and private partners to provide vocational and entrepreneurial training to the students for setting up their own Micro, Small, Medium Enterprises (MSME's) apart from regularly organizing placement drives. Courses to be offered under the scheme of *Deen Dayal Upadhyay Kaushal Kendra* and Incubation Centre for Skills (in collaboration with NSIC) shall be instrumental in achieving these objectives. In the ever-changing realm of education there is an increasing need to start vocational courses which directly cater to skills and vocations which do not form part of standard undergraduate and postgraduate courses.
19. **Instrumentation and Analytical Techniques:** Instrumentation is a rapidly growing field in India. There is huge potential in this field as India gears up to provide quality and cost effective alternatives to expensive imported instrumentation that is currently available in the market. Analytical Techniques and their applications cover a wide spectrum of disciplines ranging from Life Sciences, Physical Sciences and Material Sciences providing cutting edge solutions particularly in research areas.

20. **Courses on Diagnostics:** Diagnostic techniques require the user/learner to have a broad based knowledge, which is inter-disciplinary and multi-disciplinary in nature. The courses on diagnostics will seek to bridge the gap between the knowledge and skills required and those available in the existing courses by offering a course dealing with all the aspects of Diagnostics.
21. **New courses for Media Studies, Technical Writing and Editing:** The realm of Media Studies is ever expanding as new and innovative forms of engagement with the public take shape. Existing Media studies courses in audio, visual, electronic and print media and multimedia are mostly conducted by private institutes at prohibitive costs. These courses will try to provide such knowledge and skills at affordable cost and also aim to explore relatively niche fields of technical writing, editing and multimedia in Science and technology.
22. **Centre for Culture and Heritage:** University proposes to introduce the Centre for Culture and Heritage to facilitate the studies and researches in the field of Culture Studies, Indigenous Studies and studies on indigenous arts, culture and heritage. Besides, this center will be dedicated to preserving folk arts, music and literatures.

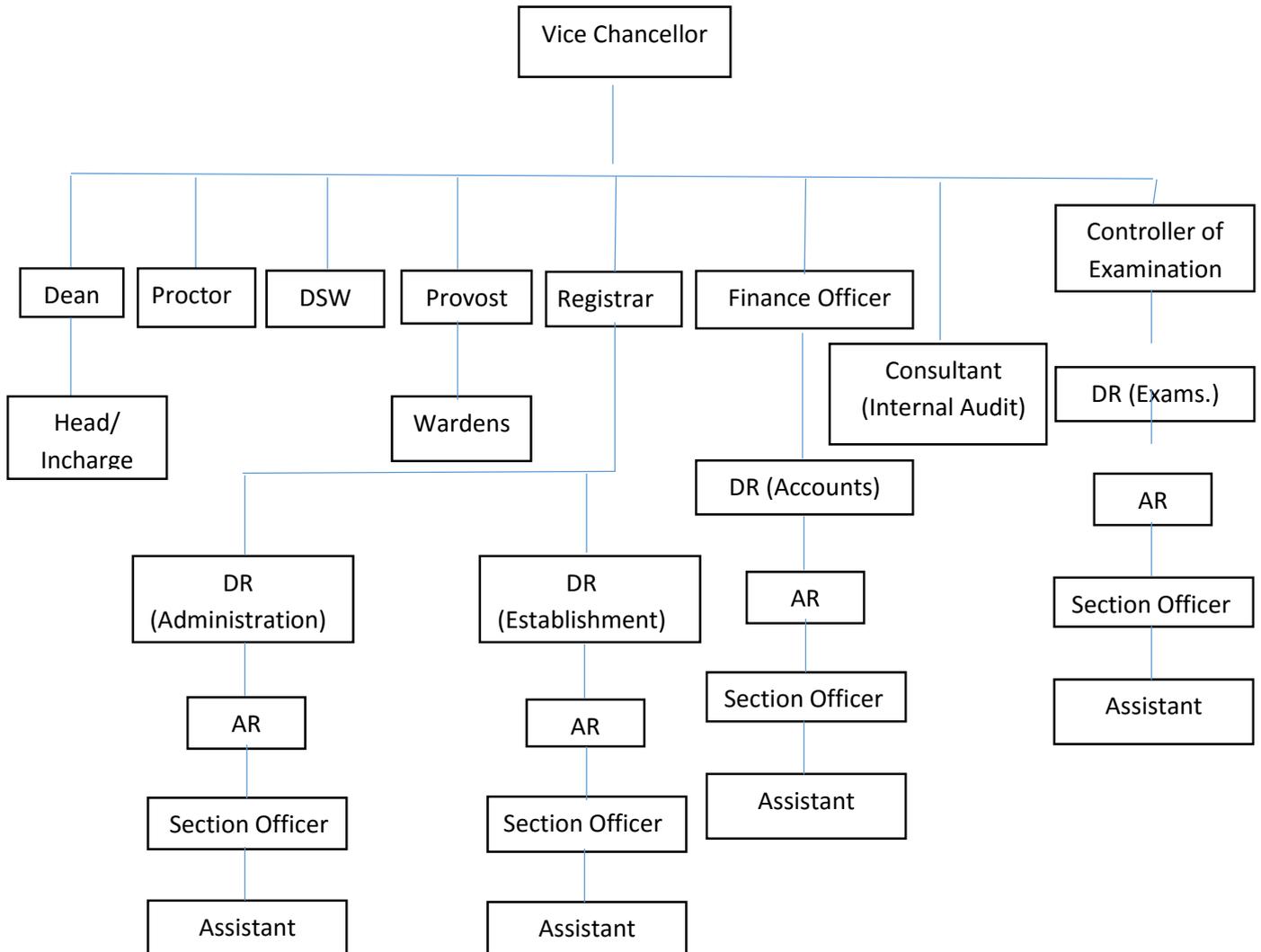
III. **Self-sustaining and miscellaneous Initiatives:**

Developing crucibles of learning and development: Motivating staff and students to develop models, experiments, technologies to catalyze local/regional/national growth and development in association with local industry/trade/handicrafts/vocations.

- *Solid Waste Management:* Initiatives for solid waste management will be undertaken so that the University becomes a zero-waste University. Options will be explored for utilizing the waste to create energy and other productive materials.
- *e-Waste management:* e-waste is increasingly becoming an environmental disaster and processes will be put in place to recycle and effectively dispose the e-waste that is generated by the University.
- *Energy generation:* Setting up of solar street lamps, solar panels on University building's rooftops and designing of new buildings on the concept of zero-energy/green buildings.
- *Rain-water harvesting:* A feasibility study will be conducted to implement rain-water harvesting so that University is able to meet at-least part equipment of water from its own sources.
- *Sports Academy:* Since the University has ample land available with it, hence part of that land will be utilized in setting up a sports academy for creating world-class infrastructure for students. This facility will also be leased out/ memberships provided so that the academy also earns revenue for the University. Moreover, special emphasis will be given to establishing sports facility for disabled persons.
- *Organic Farming:* keeping in mind the vast expanse of land available with the University, an organic farm will be set up and the produce may be sold at the local/regional markets to earn some revenue for the University. Moreover, it could be used for training the students and for demonstration purpose for the local population.
- *Solar Power Plant:* University proposes to establish solar power generation plant as a sustainable means to generate eco-friendly and cost-effective energy.

6.2.2 Describe the University’s internal organizational structure and decision making processes and their effectiveness.

The internal organizational structure for planning, implementing, monitoring and evaluating the administrative and academic functions is as follows:



The University’s governance system is democratic, decentralized and transparent. The Vice-Chancellor provides overall leadership while promoting decentralized and participative management in University administration. He acts as the Chairperson of various statutory bodies of the University such as the Executive Council, the Academic Council, the Building Committee, and the Finance Committee. These bodies function as the policy and decision making bodies. The Board of Studies (BOS) and the School Board headed respectively by the Head of the Department and the Dean make important academic decisions which are further submitted for the approval of the Academic Council and the Executive Council.

6.2.3 Does the University have a formal policy to ensure quality? How is it designed, driven, deployed and reviewed?

Yes. The University has constituted IQAC for Internal Quality Assurance and quality improvement in all spheres. The prime task of the IQAC is to develop a system for conscious, consistent and catalytic improvement in the performance of institutions. The Internal Quality Assurance Cell (IQAC) in Central University of Haryana has been constituted in accordance with the guidelines provided by NAAC. The work of the IQAC is the first step towards internalization and institutionalization of quality enhancement initiatives. It will not be yet another hierarchical structure or a record-keeping exercise in the institution. It will be a facilitative and participative voluntary system/unit/organ of the institution. It has the potential to become a vehicle for ushering in quality enhancement by working out planned interventionist strategies to remove deficiencies and enhance quality like the "Quality Circles" in industries. Notable, meetings of IQAC have been held on 13th October 2015 & 19th October 2015.

6.2.4 Does the University encourage its academic departments to function independently and autonomously and how does it ensure accountability?

Yes, the University encourages its academic departments to function independently in terms of formulation, revision and upgradation of syllabus, undertaking research and extension activities, conducting examinations, assessing answer sheets, suggesting names of experts for evaluation of M.Phil and Ph.D. work, evolving innovative teaching and evaluation methodologies, undertaking research projects and consultancies and organising seminars, conferences, workshops etc. The University has adopted Choice Based Credit System and the departments have autonomy in terms of offering elective courses.

The departments are supposed to follow Ordinance clauses while exercising autonomy. Further, the academic decision making by the Departments is subject to the approval of Board of Studies, School Board and Academic Council. The individual faculty and the Departments as a whole are required to submit appraisal reports to the IQAC to ensure accountability in academics.

The departments are given financial autonomy for working on their departmental budget and to initiate purchase accordingly. Further, departments are encouraged to maintain their own accounts.

6.2.5 During the last four years, have there been any instances of court cases filed by and against the institute? What were the critical issues and verdicts of the courts on these issues?

No. of Land-dispute related cases – 02 (Cases pending before Civil Court)

No. of Recruitment/selection committee related cases - 04 (cases pending before High Court)

No. of Environmental issues related cases - 02

Ownership of trees at campus and tree-cutting related cases – 03 (resolved amicably outside the court)

6.2.6 How does the University ensure that grievances / complaints are promptly attended to and resolved effectively? Is there a mechanism to analyse the nature of grievances for promoting better stakeholder-relationship?

Grievances of faculty, staff and students are addressed promptly through various committees/cells such as Internal Complaint Committee for Prevention, Prohibition and Redressal of Sexual Harassment of Women at Workplace, UGC Portal, Students Grievance Redressal Cell and SC/ST Grievances Cell. However the complainant is expected to approach the committees only after the initial channels for different kinds of grievances are exhausted. Thus, grievances related to specific departments and sections are resolved at by the Heads of the Departments or Section heads. Hostel related grievances of the students are resolved amicably at the level of Hostel wardens. Discipline related issues are resolved by Proctor and the concerns related to the welfare of the students are addressed by the Dean Students' Welfare. If the aggrieved party fails to get a solution, s/he is supposed to submit a written complaint to the Grievance Redressal Cell (established for staff, faculty and students). The cell looks into the issue and recommends appropriate action.

Further, the aggrieved party or the complainant is free to submit the complaint to the MHRD grievance portal.

6.2.7 Does the University have a mechanism for analyzing student feedback on institutional performance? If yes, what was the institutional response?

Yes. The Student feedback on institutional performance has been introduced w.e.f. the current academic session (2015-16).

6.2.8 Does the University conduct performance audit of the various departments?

Yes. The Internal Quality Assurance Cell (IQAC) shall conduct Academic and Administrative Audit of various departments every year and shall file Annual Quality Assurance Report annually.

6.2.9 What mechanisms have been evolved by the University to identify the developmental needs of its affiliated institutions?

Not applicable

6.2.10 Does the University have a vibrant College Development Council (CDC) / Board of College and University Development (BCUD)? If yes, detail its structure, functions and achievements.

Not applicable

6.3 Faculty Empowerment Strategies

6.3.1 What efforts have been made to enhance the professional development of teaching and non-teaching staff?

Following efforts have been made to enhance the professional development of teaching and non-teaching staff:

Faculty members are encouraged to participate in national and international conferences, seminars, symposia, workshops, summer and winter schools, in-service training programmes, orientation programmes and refresher courses.

Foreign-funded visits of faculty for delivering invited lectures or conference presentations in prestigious foreign universities receive full administrative and departmental support.

Short-term orientation programmes are organised by the University for both, teaching and non-teaching staff

Non-teaching staff is deputed for skill enhancement workshops and training programmes. Recently, University has submitted a proposal for establishing UGC-Human Resource Development Centre as a faculty development initiative.

6.3.2 What is the outcome of the review of various appraisal methods used by the University? List the important decisions.

Teaching faculty is required to submit Self-Appraisal Proforma (SAP) and UGC prescribed Performa for assessment performance indicator (API). The reports are analysed by the IQAC. The Vice Chancellor writes the confidential report for teaching faculty at the end of the academic session. If the performance is not up to the mark, the outcome of appraisal is communicated to the concerned teacher with a note to make improvement in future. This appraisal system motivates teachers to focus on teaching, research, community work, co-curricular activities and make positive contributions to the corporate life of the University.

The University has also started the practice of seeking Students' feedback, beginning from the current session, i.e., 2015-16. It is likely to help in making improvements in syllabus, pedagogy and teaching-learning mechanisms.

6.3.3 What are the welfare schemes available for teaching and non-teaching staff? What percentage of staff have benefitted from these schemes in the last four years? Give details.

- Child care leave
- Maternity Leave
- Paternity Leave
- Tuition Fee Reimbursement
- LTC
- Medical Claim Reimbursement
- Provision of Uniform for Drivers and Cooks

6.3.4 What are the measures taken by the University for attracting and retaining eminent faculty?

Various measures are taken by the University to attract and retain eminent faculty such as:

- The vacancies are widely advertised through the University website and national newspapers.
- The scheme of appointing renowned scientists and social scientists as consultants and adjunct faculty has been implemented. University has already got an Ordinance approved in this regard.
- Accommodation is provided to the teaching faculty.
- Residential facilities (as per entitlements) are being created on priority
- Career Advancement Scheme has been implemented to retain eminent faculty.

6.3.5 Has the University conducted a gender audit during the last four years? If yes, mention a few salient findings.

The University has not conducted a formal Gender Audit in the last four years. However, specific measures are adopted to promote gender equality and discourage gender discrimination. There is a “Women Empowerment Cell” to create awareness and gender sensitivity. The cell also provides counselling services to girl students. Sexual harassment prevention cell formulates policies to prevent sexual harassment. This cell deals with cases of discrimination and sexual harassment against women, in a time bound manner.

6.3.6 Does the University conduct any gender sensitization programmes for its faculty?

Yes, Women Empowerment Cell of the University conducts gender sensitization programmes from time to time. Such programmes are also conducted in neighbouring villages adopted by the University. The Cell organised 3-day Workshop for gender sensitization "Addressing Discrimination against Women: Walk the Talk" for ITI Staff, students and University faculty from 18th to 21st May 2011.

The University has taken sufficient measures to ensure safety of women students by the way of Workshops, meetings with Women students, counseling sessions, exhibitions, awareness campaign, plays based on women issues, community interactions. The University started with organizing series of workshops to address the discriminatory issues concerning different groups of women. Accordingly, a Workshop “Addressing Discrimination against Women: Walk the Talk” was organized from May 18-20, 2011 at the Temporary Campus of the University at Narnaul (Mahendergarh). The workshop provided the faculty and non-faculty participants a platform to frankly share their views, learn, unlearn, relearn, think and rethink, besides sensitizing them to women issues. The idea to hold these events show the commitment of the University to the cause of gender sensitisation in society. The Women Empowerment Cell of the University organised a Story Telling session to commemorate International Women’s Day on March 6, 2012. The University has been using different pedagogy of learning, teaching, experiencing, sharing, and spreading the message of knowledge creation through Value Education to society. Accordingly it initiated a journey starting from DAV, School, Narnaul, on 28th January 2013, followed in Holy Child School, Rewari, Govt. College Ateli, GGSIP

University, Schools and educational Institutions at Jhajjar and culminating at Book Fair, Pragati Maidan, Delhi on 7th February 2013. The event was designed in two parts: the first part involved discussion around the theme Value Education – Imperative for change while the second part involved a play enacted by the students. The play impressed one and all, raised pertinent questions on the issues including female foeticide, lack of awareness regarding value education, eve-teasing at public places, prevailing discrimination against women in different spheres of life, role of *Khap Panchayats* in suppressing the voice of woman, domestic violence, alcoholism, burden of illiteracy etc. The play was in the language and idiom of the common people so that the message of the play could percolate to the lay men and women.

6.3.7 What is the impact of the University’s Academic Staff College Programmes in enhancing the competencies of the University faculty?

Not Applicable. The University has submitted the proposal to UGC for establishing UGC-HRD Centre under faculty development initiatives and approval for the same is awaited.

6.4 Financial Management and Resource Mobilization

6.4.1 What is the institutional mechanism available to monitor the effective and efficient use of financial resources?

Every expenditure is being incurred after obtaining the sanction of the competent authority as per GFR norms as well as the Govt. of India instructions issued from time to time. Utilization certificate is submitted to the UGC regularly after interval of each quarter of the financial year. The expenditures are approved by the Finance Committee and Executive Council.

6.4.2 Does the University have a mechanism for internal and external audit? Give details.

Yes, University has the mechanism of internal audit through pre-auditing through Internal Audit Officer/Consultant and external audit is conducted by a team of C.A.G. after the close of each financial year.

6.4.3 Are the institution’s accounts audited regularly? Have there been any major audit objections, if so, how were they addressed?

Yes, the University’s accounts are audited regularly. Whenever there are objections in the audit inspection reports, the reply is submitted by the finance department for their settlement.

6.4.4 Provide the audited income and expenditure statement of academic and administrative activities of the last four years.

The audited income and expenditure statement of academic and administrative activities of last four years is as follows:

INCOME AND EXPENDITURE ACCOUNT (2011-12 and 2012-13)

<i>Particulars</i>	<i>Schedule</i>	<i>Amount in Rs.</i>	
		<i>Current Year</i>	<i>Previous Year</i>
		2012-13	2011-12
(A) INCOME			
<i>Grants\Subsidies</i>		258245212.00	641819400.00
<i>Fees\Subscriptions</i>		0.00	1055357.00
<i>Income from Royalty, Publication etc</i>			
<i>Interest Earned</i>		40707848.00	18199737.00
<i>Other Income</i>		1405068.00	103078.50
TOTAL (A)		300358128.00	661177572.50
(B) EXPENDITURE			
<i>Direct Exp.</i>		16212831.50	12323141.00
<i>Establishment Expenses</i>		23234328.00	18193681.00
<i>Other Administrative Expenses</i>		0.00	5381988.00
<i>Expenditure on Grants, Subsidies etc.</i>			
<i>Depreciation</i>		3093879.00	3903993.00
Total (B)		42541038.50	39802803.00
<i>Balance being excess of income over Expenditure (A-B)</i>		257817089.50	621374769.50
Balance being surplus carried to Capital Fund		257817089.50	621374769.50

INCOME AND EXPENDITURE ACCOUNT(2013-14 and 2014-15)			
		Amount in Rupees	
	Schedule	Current Year 2014-15	Previous Year 2013-14
		Total	Total
		General Fund	
<u>INCOME</u>			
<i>Academic Receipts</i>		4442347.00	1296432.00
<i>Grants & Donations</i>		553719700.00	1102315800.00
<i>Income from investments</i>		48610040.00	37049032.00
<i>Interest Earned</i>		0.00	0.00
<i>Other Incomes</i>		3171262.00	785817.00
<i>Prior Period Income</i>			
<u>TOTAL (A)</u>		609943349.00	1141447081.00
<u>EXPENDITURE</u>			
<i>Staff Payments & Benefits</i>		57808109.00	32174423.00
<i>Academic Expenses</i>		10182547.00	14446106.00
<i>Administrative and General Expenses</i>		28645738.00	23235347.00
<i>Transportation Expenses</i>		1219610.00	986634.00
<i>Repairs & Maintenance</i>		2369471.00	1311176.00
<i>Finance Costs</i>		14615.00	5640.00
<i>Other Expenses</i>		125057.00	0.00
<i>Prior Period Expenses</i>		-5524660.00	0.00
<u>TOTAL (B)</u>		94840487.00	72159326.00
<i>Balance being excess of Income over Expenditure (A-B)</i>		515102862.00	1069287755.00
<i>Transfer to/from Designated fund</i>			
<i>Building Fund</i>		0.00	0.00
<i>Others (Specify)</i>		8223591.00	5124575.00
<i>Balance Being Surplus (Deficit) Carried to General Fund</i>		506879271.00	1064163180.00

6.4.5 Narrate the efforts taken by the University for Resource Mobilization:

The University receives grants from UGC and MHRD under three heads:

1. Grant in aid General (Recurring, Head-31).
2. Grant in aid Salary (Head-36)
3. Grant in aid Capital assets, (Non-Recurring, Head- 35)

The resources are mobilized according to the specified rules and regulations with the approval of the University authorities from time to time.

The financial resources are mobilized on the basis of the budgetary requirements received from individual departments and their priority-wise need-based assessment.

Besides, University adopted following measures for resource mobilisation;

- Revised fee structure from the current academic session i.e. 2015-16
- University has converted savings account in flexi account as the part of financial management
- Transferring surplus money in FDR
- Adopting austerity measures in financial transactions

6.4.6 Is there any provision for the University to create a corpus fund? If yes, give details.

Presently, there is no provision for the University to create a corpus fund but the University intends to set up University Development Corpus Fund in near future.

6.5 Internal Quality Assurance System

University has developed Internal Quality Assurance System and it is executed through Internal Quality Assurance Cell.

IQAC:

In pursuance of the National Action Plan of the National Assessment and Accreditation Council (NAAC), Bangalore, for performance evaluation, assessment and accreditation and quality up-gradation of institutions of higher education, the NAAC proposes that every accredited institution should establish an Internal Quality Assurance Cell (IQAC) as a post-accreditation quality sustenance measure. Since quality enhancement is a continuous process, the IQAC will become a part of an institution's system and work towards realizing the goals of quality enhancement and sustenance.

The primary aim of IQAC is:

- To develop a system for conscious, consistent and catalytic action to improve the academic and administrative performance of the University.
- To promote measures for institutional functioning towards quality enhancement through internalization of quality culture and institutionalization of best practices.

6.5.1 Does the University conduct an academic audit of its departments? If yes, give details.

The University has recently constituted IQAC to conduct academic audit of its departments and it will submit AQAR (Annual Quality Assurance Report) within stipulated time.

Besides, University plans to start Center for Academic Auditing. This center will be responsible for evaluation of all academic, research and associated activities of different Departments, Centers and Institutes of the University. It will also be tasked with setting up of future benchmarks for the University.

6.5.2 Based on the recommendations of the academic audit, what specific measures have been taken by the University to improve teaching, learning and evaluation?

The required measures shall be taken after preparation of AQAR (Annual Quality Assurance Report).

6.5.3 Is there a central body within the University to continuously review the teaching learning process? Give details of its structure, methodologies of operations and outcome?

The Internal Quality Assurance Cell (IQAC) in the University has been constituted in accordance with the guidelines provided by NAAC.

6.5.4 How has IQAC contributed to institutionalizing quality assurance strategies and processes?

Internal Quality Assurance Cell has been constituted quite recently i.e. on 20th Aug. 2015 and, therefore, IQAC shall endeavor to contribute significantly in institutionalizing quality strategies and processes.

6.5.5 How many decisions of the IQAC have been placed before the statutory authorities of the University for Implementation?

IQAC placed following proposals before the authorities for consideration:

1. Proposal for Constituting Committee for E-Waste and Hazardous Waste Management
2. Proposal to Constitute Central Research Cell
3. Proposal to Constitute Research Project Cell
4. Proposal to Constitute Central Committee for the Review of Teaching/Learning Process
5. Proposal to Constitute Complaint Committee for Examinations
6. Proposal to Constitute University Complaint Handling Committee/Redressal Cell
7. Proposal to Constitute International Students Cell
8. Proposal to Constitute University/Industry Liaisoning Cell
9. Proposal to Constitute Inter-Departmental Research Cell
10. Proposal to Constitute Cell for the Care and Promotion of Needy Children

6.5.6 Does the IQAC have external members on its committees? If so, mention any significant contribution made by such members.

Yes, IQAC has external members including the following:

- Prof. D.P.S. Verma, Professor (Retd.), Delhi School of Economics
- Prof. Vinay Kumar Gupta, Professor, Department of Physics Astrophysics, University of Delhi, Delhi
- Prof. Karampal Narwal, Professor of Management, GJUS&T, Hissar

- Prof. A.S. Mann, Professor of Physics, MDU, Rohtak.

The external members are instrumental in providing best of inputs on the basis of their expertise and experience of NAAC Accreditation at their parent organization.

6.5.7 Has the IQAC conducted any study on the incremental academic growth of students from disadvantaged sections of society?

IQAC shall initiate necessary steps towards assessing and studying the incremental academic growth of students from disadvantaged sections of society.

6.5.8 What policies are in place for the periodic review of administrative and academic departments, subject areas, research centres, etc.?

- Mechanism of Annual Performance Appraisal Report (APAR)
- Action Taken Report in response to the targets set and stated by the University in Vice Chancellors' Conference at Rashtrapati Bhawan, annually.
- Periodical Review Meetings and Interactions at the level of UGC and MHRD
- Through the meetings of University Court, Academic Council, Executive Council, Finance Committee, Building Committee and academic bodies like Board of Studies and School Board.

Any other information regarding Governance, Leadership and Management which the University would like to include.

CRITERION-VII

INNOVATIONS AND BEST PRACTICES

CRITERION-VII: INNOVATIONS AND BEST PRACTICES

7.1 ENVIRONMENTAL CONSCIOUSNESS

7.1.1 Does the University conduct a Green Audit of its campus?

Green and beautiful campus of Central University of Haryana is located at Jant-Pali villages on Narnaul-Dadri State Highway which is at the distance of 12 Kms from Mahendergarh. The University campus is in its growing phase and presently it consists of four blocks (one block each for Academics, Administration, Girls Hostel and Boys Hostel), semi-permanent staff quarters, Vice Chancellor's cottage, Student Utility Centre, library, lawns and gardens, sports ground etc. Central Public Works Department (CPWD) has already submitted for Green Rating for Integrated Habitat Assessment (GRIHA) certification for the four permanent blocks.

University has got environmental clearance for the first and second phase of construction. University is following the concept of green buildings for the proposed construction and developmental activities of the University. The second phase of construction work includes academic blocks, administrative block, Vice-Chancellor's house, permanent staff quarters, central library, sports complex etc. and these are being constructed by National Buildings Construction Corporation Ltd. (NBCC) and CPWD.

To make the campus clean and green in tune with *Swachh Bharat Abhiyan*, the Eco Club, NSS, Youth Red Cross Units and *Unnat Bharat Abhiyan* (UBA) Cell of the University launch special campaigns with the participation of students and faculty. University organizes various environmental awareness and sensitization programmes for the students and local community of adopted villages.

The University is in the process of setting up a Green Audit Committee for carrying out the Green Audit of the Campus.

7.1.2 What are the initiatives taken by the University to make the campus eco-friendly?

Some of the activities which are regular features of the University towards maintaining the green campus are as follows:

- i. Plantation drives in campus
- ii. Special lectures on environmental issues and “*Swachh Bharat Abhiyan*”
- iii. Cleanliness, Tree-Plantation and Sanitation drives in campus.

- iv. Formation of Eco-Club to create awareness regarding conservation of various resources.
- v. The University is also planning to set up a Herbal Garden with various species of medicinal plants in campus.
- vi. Department of Environmental Sciences organizes activities related to environment awareness.
- vii. The University has its own sewage treatment plant and treated water is used for horticulture.
- viii. Hostels are equipped with solar heater systems to save the energy and more and more use of solar energy is planned in the future for other buildings also.
- ix. The University is also planning for rainwater harvesting system.
- x. To reduce air pollution, NBCC is following the policy to minimize the air pollution and adopting best management practices for efficient water use during construction at construction site.
- xi. University is also using non-toxic, low-Volatile Organic Compounds (VOCs) paints/adhesives/sealants to improve the indoor air quality.
- xii. The University has got the grants of 4.5 Crores under Deen Dayal Upadhyaya Kaushal Kendra Scheme of UGC to run B.Voc programmes in Bio-Medical Techniques, Bio-Chemical Treatment and Industrial Waste Management Programme.

7.1.3 What are the initiatives taken by the University to make the campus eco-friendly?

Following initiatives have been taken by the University to make the campus eco-friendly:

7.1.3.1 Energy conservation:

University is conscious of its commitment towards energy conservation and various initiatives are taken for conserving the energy. Some of these include—

- i. Replacement of conventional fluorescent tubes, incandescent bulbs and CFLs with LEDs to save great amount of energy in campus.
- ii. Installation of all electrical appliances with 5 Star BEE rating since the time the University has shifted to its permanent campus.
- iii. Hostel buildings make use of solar energy to meet the partial energy demand of campus.
- iv. The University fraternity follows the 'switch off' policy of the electrical appliances when not in use and ensures minimum use of air-conditioners (star-labeled) and energy consuming appliances in campus.

- v. Our buildings (classrooms, offices, labs etc.) are designed in such a way that maximum daylight can be used and the thermally insulated double glass units are being installed in all windows which reduces the air-conditioning load.

7.1.3.2 Use of renewable energy:

The University has installed solar water heating system that is sufficient to meet the demands of hot water supply in boys and girls hostel within the campus and we are following the same in the buildings to be constructed in future.

7.1.3.3 Water harvesting:

Lots of efforts have been done to conserve the water in buildings and its use in gardens and parks for plantation by adopting water recycling strategies. Water wastages are minimized by checking the leakages regularly. Rain water harvesting recharge pits are being provided at appropriate places for disposal/collection of roof top rain water of buildings & rain water from drains/pavement area in the campus. Pot irrigation techniques are being used to reduce water usage by plants. The sewage treatment plant has been installed and the treated water is reused in horticulture to reduce stress on water resources.

University is also planning for large-scale rain water harvesting system as a future project.

7.1.3.4 Check dam construction: Planned in Future Projects

7.1.3.5 Efforts for carbon neutrality: The following steps have been taken by the University:

- i. Thousands of plants of various species and varieties including decorative/ornamental, bushes, shrubs, etc. have been planted around the four building and residential areas of the campus during the last two years with the help of Forest and Horticulture Department, Mahendergarh, Haryana.
- ii. Use of fossil fuels is banned in the houses and hostels within the campus
- iii. Construction of two new garden cum park for beautification of the campus
- iv. University has declared the campus as “No Smoking Zone”
- v. Burning of plastic and other waste material has been banned
- vi. New projects for hazardous waste and e-waste management are in pipeline \

7.1.3.6 Plantation:

The University has earmarked significantly large area for indigenous flora in Campus master plan. Large number of plants have been planted this year with tree guards.

7.1.3.7 Hazardous waste management:

The hazardous waste in the form of used chemicals from labs is diluted many times in water and disposed carefully. The University adopts the policy of minimal use of hazardous chemicals in labs.

7.1.3.8 e-Waste management:

All e-waste materials (old computers, CDs, Cartridges, electronic components etc.) are stored in separate room. After bulk collection, it is sold to authorized buyers of e-waste in accordance with the guidelines of Central Pollution Control Board.

7.1.3.9 Any other (please specify)

- i. In future, University is planning to make the campus 'polythene free' and the entry of cars and motorcycles shall be permitted in the restricted area only.
- ii. Plantation drives, Sanitation drives and Awareness rallies in the six adopted villages of the University.

Celebration of World Environment Day in Partnership with Villagers:

Central University of Haryana has taken proactive role in creating a healthy and ecologically sustainable campus. This year, University celebrated World Environment Day on 5th June 2015. On this occasion, various programmes like plantation drive, screening of a documentary on environmental issues, drawing competition (by students from elementary schools of adopted villages) and exhibition were organized. The event concluded with the lectures of eminent speakers on the issues concerning environmental awareness not only for the students but also for the villagers who were invited to participate in the event as special invitees.

The master plan of the University campus has been developed with the futuristic vision to minimize the impact on environment. Students and staff are educated towards minimizing wastage of food, water and electricity, and keep the campus clean, green and healthy. All the University fraternity is environmental conscious and most of them use paperless E-resources/digital resources. With the active involvement of various cells, University is making an eco-

friendly campus. Various cells and clubs of the University hold street plays, rallies, health and hygiene campaigns, and exhibitions to promote eco-friendly practices.

Formation of Eco-Club:

University has constituted an Eco Club dedicated to environmental issues and to conduct sensitization and awareness programmes within and outside the campus. It aims to achieve the following objectives:

- i. Motivating the students to keep their surroundings green and clean by undertaking plantation of trees.
- ii. Promoting ethos of conservation of water by minimizing the wastage of water.
- iii. Motivating the students to imbibe habits and life style for minimum waste generation, source separation of waste and disposing the waste to the nearest storage point.
- iv. Educating the students to create awareness amongst public to stop the indiscriminate burning of waste.
- v. Sensitizing the University fraternity and neighbouring community to minimize the use of plastic bags, not to throw them in public places as they choke drains and sewers, cause water logging and provide breeding ground for mosquitoes.
- vi. Organizing drives on Tree Plantation, Cleanliness, Health, Hygiene and Sanitation at regular intervals.
- vii. Organising awareness programmes through quiz, essay-competition, painting competitions, rallies, models, exhibitions, street plays etc. on various environmental issues and educating the children about re-use of waste material & preparation of products out of waste.

Initiatives Taken By the University

- i. Student's study material is provided in electronic format which has reduced the printing of these documents /manuals to reduce the consumption of paper.
- ii. Use of paper is also minimized in the day-to-day functioning of the University by using scanners and email facilities for electronic communication and online submission of documents.
- iii. Promoting the culture of innovations for Energy Harvesting and Environmental Management among the students, students from M.Sc. (Environmental Science), Mr. Sunil Kumar and his team prepared a working model of 'Future Car—A Hybrid Technology for

Future’ under the guidance of Dr. Mohini Singh (Asstt. Professor, Environmental Science). It demonstrates a car that uses a combination of renewable energy resources viz. solar, wind, sound and mechanical stress to replace fossil fuel for vehicle propulsion.

- iv. The Department of Environmental Science contributes in enhancing environmental awareness and requisite skills for environmental conservation by offering elective courses such as Foundation course in Ecology and Environment, General Environmental issues etc. to students of other departments.
- v. Plantation—As trees are an important part of the biosphere supporting the eco-system, a massive Plantation drive was launched on August 15, 2015 in which saplings were planted in the University Campus with the help of NSS volunteers.
- vi. The Sewage Treatment Plant has been installed in the campus for wastewater treatment and its subsequent reuse in order to reduce the stress on water resources.
- vii. Efforts are made for water conservation in buildings and gardens by adopting water recycling and minimization strategies are adopted.
- viii. The ‘Waste to Resource’ approach has been adopted in the campus for recycling of wood waste into useful decorative items.
- ix. The students and employees are encouraged to use bicycle in the campus for maintaining the pollution free environment.
- x. Sprinkler systems are also installed for garden irrigation in University Campus to have greater water savings.

Future Plans

- i. To take ‘Green Campus Initiative’ by organizing ‘Plantation Week’ that would invite the participation of all Faculty members, students and administrative staff of the University.
- ii. To design a ‘Composting Unit’ for the management of solid waste generated in the University premises.
- iii. To implement ‘Plastic Free Campus’ drive in the University.
- iv. University plans to organize the series of lectures on ‘Climate Change’.
- v. To organize Nature Trail in Wild Life Sanctuaries/Parks/Forest areas to know about the Bio-diversity such as Keoladeo National Park, Bharatpur (Rajasthan), Sultanpur Bird Sanctuary (Haryana), Jim Corbett National Park, Nainital (Uttarakhand), Sariska National Park, Alwar (Rajasthan).
- vi. To develop one ‘Herbal garden’ and ‘Biodiversity park’ for endangered species.

- vii. Installation of 'Water Harvesting Unit' and construction of 'Check Dams' in the University campus to recharge the ground water level.

Environmental consciousness: Celebration of important environment related days is the regular feature and these efforts are crucial to create a healthy and environmentally sustainable campus. As elaborated above, World Environment Day was celebrated in the University with bouquet of other programmes such as Plantation drive, documentary movie on environmental issues, drawing competition (by students from elementary schools of adopted villages) and extension lectures to sensitize and create environmental awareness.

7.2 INNOVATIONS

7.2.1 Establishment of Centre for Entrepreneurship, Skills and Innovations that has performed following functions:

- i. Students and faculty of the University took the initiative to make the 'best out of waste'.
- ii. Student innovator, Mr. Sunil, M.Sc., Environmental Science, designed a project "Future Car-Hybrid Technology for Future" which got wide appreciation in a National Exhibition and Symposium on Innovative and Futuristic Approaches in Science and Technology (iFast) on 26-28th Feb. 2014 held at Maulana Azad NIT, Bhopal.
- iii. Innovation Club published a booklet dedicated to the grassroots innovators and organized an exhibition based on the innovations on the occasion of the first Convocation of the University on March 1, 2014.
- iv. Organized *Shodh Yatra* in collaboration with National Innovation Foundation (May 22-23, 2014)
- v. Recently, on the occasion of Environment Day (5th June 2015), University organized an exhibition on the theme "Innovations and Environment".

7.2.2 Innovation with Nature :

In tune with its vision and mission, University has always endeavoured to contribute to the environment by planting trees and making the campus neat and clean. University has always been in favour of sustainable development in harmony with nature and, therefore, a special committee is looking after University's initiatives towards "***Innovation with Nature***" by utilizing waste wood as a natural resource. The committee has successfully made the wooden decorative items with the waste and deformed dry woods. The market value of these waste

materials was almost zero as it was not usable for making of furniture. That was the concept of optimum utilization of the natural resources, in which different accent tables, wall hangings, tree trunk garden furniture including garden benches made out from pallets, tree stump wooden stools and stump end tables, flower pitchers, vase, lighting accent with wreath of tree branches, decorative trees, books & book shelves, tree hangings, wooden outdoor garden swings, driftwood art, tree stump planters, wooden showcases etc. were prepared from waste wood using paints, clay and adhesives. Now the market value of these products is more than 1.5 lakh rupees. Committee has put all the items in the campus only after an exhibition and it is adding to the beauty of inner and outer campus. The work has resulted in bringing the students closer to the Mother 'Nature' and helping them learn the value and basis of recycling. In view of the appreciable work, the committee was awarded with Rs. 10,000/- by the University.

7.2.3 Promoting Science Education through Rashtriya Avishkar Abhiyan

In pursuance of the focus on connecting school-based knowledge to life outside the school while making learning of Science and Mathematics a joyful and meaningful activity and to bring focus on innovation and use of technology, the Ministry of Human Resource Development has set up the *Rashtriya Avishkar Abhiyan* (RAA)- a convergent framework that aims at nurturing a spirit of curiosity and creativity, love for Science and Mathematics and application of technology amongst children and encourage those who show an inclination and talent for these subjects to heights of academic excellence and research.

The University is the first among all newly established central universities to launch the *Rashtriya Avishkar Abhiyan* with the involvement of schools of adopted villages, colleges and local communities. University has sent a proposal to Department of Science and Technology for certain grants. Though the grants are yet to be received, University has initiated the campaign with the organisation of a Science Exhibition for School students on 11th September 2015. Under the same programme, University is going to organise a Science Conclave in the month of January 2016. It is being planned as a mega event attracting and inviting the participation of more than thousand participants. Besides, University is committed to extend all possible support to the Government Senior Secondary Schools in the adopted villages in establishment of Science Laboratories.

7.2.4 Remedial Classes:

Since the day University got shifted to its permanent campus it is a regular feature of the University that the students voluntarily conduct free remedial classes in the evening for the school students from the neighbouring villages. This is a purely student-centric initiative.

7.2.5 Innovators Meet

The University had organized State level Innovators Meet and Exhibition to promote grass root innovation with the help of National Innovation Foundation and Global Initiatives of Academic Network (GIAN). Eleven grassroots innovators exhibited their innovations. Hon'ble Governor, Chief Minister and Ministers were the chief guests on the occasion.

7.2.6 Community Development through *Unnat Bharat Abhiyan*

The University is the first among all newly established central universities that has launched *Unnat Bharat Abhiyan* on large scale and proposed many activities for coming session and also initiated the following proposed initiatives launched/to be launched to realise the objectives of *Unnat Bharat Abhiyan*:

Sr. No.	Name of the Event	Venue	Date	Remarks
1.	Adoption of villages under <i>Unnat Bharat Abhiyan</i>	---	7 th July 2015	University has adopted six villages—Jant, Pali, Bhurjat, Dholi, Lawan and Malda.
2.	Formal Announcement of the proposed events of Community Development Cell in adopted villages by Hon'ble Vice Chancellor	Central University of Haryana	15 th August 2015	Representatives of the adopted villages were invited and various issues were discussed on the occasion
3.	Plantation Drive in and around the University Campus	Central University of Haryana	15 th August 2015	The representatives from the adopted villages participated in the drive.
4.	Awareness Programme on the issues concerning education with special	Jant-village— one of the adopted villages	5 th Sept. 2015	Dr. Meenu Goyal, Faculty from the Department of Biotechnology visited the

	focus on women education			village to motivate the villagers towards women education.
5.	Science Exhibition for the school children from the adopted villages in tune with <i>Rashtriya Avishkar Abhiyan</i>	In the University Campus	11 th September 2015	To demonstrate the working models and scientific experiments to the school students to inculcate scientific temper and to orient them towards basic sciences
6.	Aadhar Card Camp for the adopted villages under the banner of THE UNIVERSITY Legal-Aid Clinic	Central University of Haryana	September 2015	i. The villagers were transported to University Campus by University Bus ii. Dr. Ashok Dahiya, Chairperson, Sub-Division Legal Services Authority, and Block Development Officer, Mahendergarh was invited on the occasion to ensure the participation.
7.	Free Evening Coaching Classes for the school students from the neighbouring village-Jant	University Campus	Throughout the year	Coaching is provided by the teachers & motivated students of the University
8.	Awareness programmes on <i>Swachh Bharat Abhiyan</i> in the schools of adopted villages	Schools of Adopted Villages	24 th Sept. 2015	As part of NSS Day Celebration, NSS Units approached the adopted villages for sensitisation programme.
9.	Health, Sanitation and Hygiene Camp in all the adopted villages on the occasion of International Day of Girl Child	In all the adopted villages	9 th Oct. 2015	Various programmes were organised in all the adopted villages. Resource Persons were invited from Hospitals, NGOs and organisations working on Health, Hygiene and Sanitation
10.	Blood Donation Camp with the participation of adopted villages	University Campus	15 th Oct. 2015	NSS and Youth Red Cross Units of the University organised the Blood Donation Camp
11.	Installation of Solar Panel-based Street LED	In the adopted villages	In phased-manner	University shall initiate the installation of Solar street lights

	lights in the adopted villages in phased-manner			in the adopted villages with the support of District Rural Development Authority, Mahendergarh (at Narnaul)
12.	Soil and Water quality-testing in the adopted villages	The samples shall be collected from the adopted villages	December 2015	Department of Environmental Science, Microbiology, Geography and Chemistry shall conduct the testing in their respective labs.
13.	Organising the Science Conclave to be sponsored by the Department of Science and Technology, Government of Haryana	In participation with the school/college students of the neighbouring area	Proposed to be held in early 2016	University shall organise "Science Conclave" on having the financial support from the Government of Haryana
14.	Workshop on handicraft	For the villagers from the adopted villages	Jan. 2016	Women Empowerment Cell and Group for the Promotion of Art, Culture and Heritage shall coordinate with District Rural Development Authority to organise the workshop.
15.	Adopting strategies for waste-water reuse	With the focus on adopted villages	Feb. 2016	Department of Environmental Science, Microbiology, Geography and Chemistry shall contribute in this initiative.
16.	Awareness Programmes for improving the standards of education	In the adopted villages	At regular intervals (In the beginning of each semester)	University shall initiate the awareness programmes with focus on formal as well as informal education along with counselling on job opportunities
17.	Short-term skill-based Courses including IT Applications, culinary skills, knitting, embroidery, stitching, pottery making, beautician-courses, animal husbandry,	For the aspiring students from the adopted villages	In the next semester	These courses shall run under <i>Deen Dayal Upadhyaya Kaushal Kendra</i> scheme awarded to the University

	cooperative management etc.			
18.	Frequent visits by Community Development and <i>Unnat Bharat Abhiyan</i> Cell to the adopted villages to address the issues concerning cleanliness, sanitation, health, hygiene etc.	In the adopted villages	At frequent intervals	Community Development Cell, <i>Swachh Bharat</i> Cell and <i>Unnat Bharat</i> Cell shall coordinate for the same.
19.	Promoting agriculture and allied activities in the neighbouring areas	Particularly in the adopted villages	Starting from Jan. 2016	Department of Geography and Microbiology shall initiate the activities.
20.	Promotion of Bio-gas generation	Facilitating the infrastructure for bio-gas plants in coordination with concerned authorities	May be initiated in coming six months	Department of Chemistry, Environmental Science and Bio-Technology shall coordinate.
21.	Environment Awareness Campaigns	In the adopted villages	At regular intervals	Eco- Club of the University shall initiate and organise the awareness programmes.
22.	Awareness programmes regarding Rural Financing	In the adopted villages	At regular intervals	Department of Economics shall initiate the awareness programmes

Planning: University is planning to hold a meeting with the district administration to chalk out the issues and its implementation mechanism. University shall prepare its comprehensive Action-Plan in consultation with district authorities, respective gram panchayats and the participating Departments/Cells/Centres of study. The same shall be communicated by the stipulated time.

Coordination: Coordinated efforts shall be made to implement the various initiatives proposed under *Unnat Bharat Abhiyan* as mentioned above.

Funding: University shall approach the concerned authorities as mentioned in the concept note to procure funding for the implementation of the proposed initiatives.

Monitoring: University shall ensure the monitoring of the proposed initiatives once in every quarter in coordination with other agencies.

7.3 BEST PRACTICES

7.3.1 Initiatives for Development of Academic and Administrative environment

Objectives of the Practice:

- i. To strive to create a learning ambience with diverse cultural backgrounds and enhance students acquisition of useful knowledge, skills and analytical abilities through innovative teaching and holistic learning environment
- ii. Development of holistic personality of the students is the prime motive of the University and it believes in the ideology that scholarship is meant primarily for the cause and welfare of the students.
- iii. To constantly engage in capacity building measures for the faculty members, administrative and technical staff with the sole objective to enhance the academic and research environment and promotion of extension activities.

The Context:

There is a need of shifting in focus from teacher-centric to student-centric approach, which allows the students to choose innovative curriculum through, inter and multi-disciplinary courses, skill oriented papers. This will encourage more and more flexibility for students. It also makes education broad-based and at par with global standards. Choice Based Credit System (CBCS) provides mobility to our students. Faculty development programmes provide opportunities for the faculty to abreast themselves with latest innovative pedagogies, research methodology and professional skills by providing training through various programmes. It will encourage innovative thinking, incubate ideas, change mind-set and increase the employability of the students. There will be regular interactions between the academia and the industry. Tie-ups will be made with both public and private partners to provide vocational and entrepreneurial training to the students. Special emphasis will be laid for developing soft skills of the students including communication, team building, leadership and domain skills.

The Practice

Post dinner talks, verbal duels on relevant issues and open discussions etc. are regular features of the University. Science exhibitions are organized by science departments under *Rastriya*

Avishkar Abhiyan especially for easy understanding of science, awareness, technical knowledge and inculcate scientific temper among school children of adopted villages.

Group discussions, Presentations and Quiz are regular features in the University, which results in improving the academic functioning of the University. Humanities, Social Sciences, Commerce and Management departments give more emphasis on group discussions and quizzes while Science departments give more emphasis on demonstration of scientific concepts.

Orientation courses of the faculty members and the administrative and technical staff are regularly conducted for ensuring smooth and efficient functioning of the University.

Multidisciplinary Approach and CBCS system:

The University is following multi-disciplinary approach in all the Post Graduate and M.Phil. programmes. Choice Based Credit System (CBCS) was also visible in the pedagogy of the University since its beginning and is following it to provide academic freedom to students.

Scholarships for students

Following are some of the Schemes provided/facilitated to the students.

Scholarship to Differently-abled Students

Differently-abled students face several physical, financial, psychological and mental barriers while pursuing their studies. At times, such students are deprived of harnessing their latent skills and thereby lose the opportunity to earn their livelihood and find a dignified place for themselves in the society. University is taking all kinds of infrastructural and monetary measures, which may bring all these students in the mainstream. It facilitates the students in getting fellowships and scholarships to differently-abled students provided by National Handicapped Finance and Development Corporation (NHFDC), Ministry of Social Justice & Empowerment, UGC and MHRD.

Merit-cum-Means Scholarships by the University

A Merit-cum-Means scholarships has been launched by the University for the meritorious students scoring the CGPA of 06.00 and above. The payment of the scholarship is governed by the rules of the University (amended from time to time).

Non-NET/JRF Fellowship to M.Phil./Ph.D. Scholars

Non-NET/JRF Fellowships are provided to bonafide M.Phil./Ph.D. Scholars who are pursuing research as per UGC norms, subject to change from time to time. Currently, M.Phil. and Ph.D. students are given the Non-NET/JRF Fellowship @ Rs. 5000/- and Rs. 8000- per month, respectively.

Earn While You Learn Scheme

University provides monetary help to poor and deserving bonafide students of the University under 'Earn While You Learn Scheme'. This scheme is being run to encourage and support the students from low income background and also to develop professional and leadership skills. Under the scheme, a student may be assigned a task for a maximum of 10 hours per week with the honorarium of Rs. 100 per hour before and after his/her classes. This includes assistance in Library, various Laboratories, Departments/Centres, Sections, Hostels and other areas where student may contribute and learn simultaneously.

Capacity Building:

Central University of Haryana with its focus on the multidisciplinary approach strives hard for the development of overall personality of the students. University has established Career Counseling, Training and Placement Cell and Quality Management Cell for Skills and Proficiency Building and Opportunity Creation for ensuring quality education, skill development and student placement in reputed organizations/institutes/NGOs. For the smooth functioning of the cell one faculty member from each department has been nominated. To oversee the functioning of the above said cell another apex cell i.e. *Quality Management Cell for Skills & Proficiency Building and Opportunity Creation* has been constituted. The cell is running UGC-NET classes for the Post Graduate/M.Phil./PhD students and special classes for various other competitive examinations like SSB.

Evidence of Success:

Through various Social outreach and extension programmes including NSS, *Swachh Bharat Abhiyan*, *Unnat Bharat Abhiyan*, Community Development Cell, *Rashtriya Avishkar Abhiyan*. there has been large-scale participation of the students. The students of the University, through these programmes and activities, participated in various National, State and District level events and have brought laurels to the University.

Various scholarships being provided by the University to empower the deserving students particularly from the economically weaker sections have succeeded in achieving their objectives. This is reflected in the fact that a number of students have benefitted from these schemes and have pursued their studies also.

Different remedial, coaching classes and orientation programmes contributed towards enhancing the required knowledge and skill-sets of teaching, non-teaching and student community.

Problems Encountered and Resources required:

No efforts have been made for any kind of Academic Auditing, which poses a challenge in ensuring the overall academic development and also in identifying the areas, which require improvement for developing world-class teaching-learning facilities.

Another important challenge is implementing the academic reforms particularly in orienting and sensitizing the teaching, learning and non-teaching community particularly regarding the provisions and implementation of Choice Based Credit System (CBCS).

Being a newly established Central University with minimal infrastructure development, attracting the best talent in teaching and learning community is a major challenge.

7.3.2 Digital India:

Objectives of the Practice:

- i. To improve its administrative functioning, create a fair and transparent governance mechanism and a credible and result oriented feedback mechanism.
- ii. To ensure that all the student dealing is online.
- iii. To provide all student related issues, information and resources on the University website.
- iv. To provide e-learning facilities through Open Educational Resources and various MHRD schemes like INFLIBNET, e-PG Pathshala, NME-ICT, etc.

The Context:

The University needs to expedite the digitization process for bringing its entire functioning under the ambit of e-governance. For this the entire University needs to be linked through internet so that all the schools, departments and centres will be on a common network.

Apart from acquiring new and existing titles and increasing the subscription of Journals, one of the priority areas will be to link the library to the National Grid so that access to all the e-journals and e-books that are subscribed through INFLIBNET and its affiliated universities and institutions are also available to the University students. This will also result in saving precious national resources.

The Practice:

The University is following Digital India Campaign for e-Governance to improve its administrative functioning. Most of the administrative transactions of the University are computerized. The computerized processes include admissions, documentation, examination related works, financial matters (salaries, preparation of balance sheet, fee collection, etc.), administrative communication, notifications and circulars, library, and all other day to day functions. University believes in transparent administration and, therefore, it maintains a dynamic website which displays all the information which may be relevant for students, staff, parents and other stakeholders. To receive the feedback and to address the day-to-day problems of the students, University maintains its blog on University website. University is capable to provide useful information, including examination, information regarding any events, scholarships, syllabi, results, etc. on its website. Central Universities Act 2009, Ordinances, programmes offered, faculty profile, events, advertisements and other University related information is available on website of the University. The agenda and minutes of the meetings of University statutory bodies like Finance Committee, Academic Council and Executive Council are regularly put on the website.

All tenders, notices and advertisements are also posted on the University website. Since beginning, University is well-connected with National Knowledge Network (NKN).

We are living in the digital age and the University has digital library, which is fully computerized, and it provides the learning community all library services easily and effectively. University library has subscription of many Journals in print form as well as in e-form and it has access to various e-journals and e-resources, etc. University library has automated system to track and borrow books.

Evidence of Success:

Almost the entire process of admission is online. All University updates, notifications, circulars, student performance evaluation system and most of the student related resources like library, e-resource centre, deposition of fees, etc. are through the University website. All student related forms and administrative Proforma are available on the University website.

Considering the information regarding vision, mission and objectives, courses, academic calendar, reservation policy, anti-ragging policy, number of seats, faculty position, cells and clubs and academic structure as very much crucial, University website provides each and every information that may keep the students informed including e-prospectus on University website.

The University has well maintained Internet Lab with all relevant software and facilities which is open even on holidays for the benefit of the students. University Library is connected with UGC-INFLIBNET Net Digital Library.

University campus is Wi-Fi enabled and every one in campus is connected with this network. All the departments, administrative block, residential area and hostels are connected to the campus network with good speed.

Problems:

Due to constraint of space there are only limited number of terminals available in e-resource centre and Computer Lab because of which a large number of students and research scholars have to wait for a long time to get access to the said resources.

The process of redesigning of a full-fledged dynamic website is in process, which has restricted the amount of information and utility features being offered through it.

Capacity building in the area of e-learning, e-resources and e-governance has to be given a fillip for which the logistics need to be worked out.