CENTRAL UNIVERSITY OF HARYANA

Second Semester Term End Examinations July 2023

Programme: M.Sc. Geoinformatics **Session: 2022-23**

Semester: Second **Max. Time: 3 Hours**

Course Title: Application of Geoinformatics in Disaster Management **Max. Marks: 70**

Course Code: SBS GEO 3 2 0 3 GE 3 1 0 4

Instructions:

1. Question no. 1 has seven parts and students are required to answer any four. Each part carries three and half Marks.

2. Question no. 2 to 5 have three parts and student are required to answer any two parts of each question. Each part carries seven marks.

Q 1. (4X3.5=14)

a) Explain the Concept of Hazard.

b) Distinguished Risk and Vulnerability.

c) Discuss the Concept of Disaster Preparedness.

d) Explain various types of Early Warning Systems for Disaster Management in India?

e) Explain key highlights of International Programmes on Disaster Management?

f) Explain the role of NGOs/Civil Societies in Disaster Preparedness.

g) Explain the concept of Geological Disaster.

Q 2. (2X7=14)

a) Explain the difference between hazard and disaster with suitable examples. Discuss the elements of disaster resilience in detail.

b) Discuss the different types of natural disasters with appropriate examples.

c) Elaborate on various types of Manmade Disasters with relevant examples.

Q 3. (2X7=14)

d) Discuss the Role of ICT in Disaster Preparedness with suitable examples.

e) Discuss the National Policy on Disaster Management in detail.

f) Elucidate the significance of multiple stakeholders, psychological and medical health in disaster response efforts.

Q4. (2X7=14)

a) Examine the diverse initiatives undertaken to facilitate post-disaster reconstruction and rehabilitation as pathways to development.

b) Describe the different approaches utilized for assessing damage during disaster.

c) Elaborate on long-term recovery and the planning process to counter disasters.

Q 5. (2X7=14)

a) Examine the applications of Geoinformatics in the field of Disaster Management.

b) Elucidate the significance of Geoinformatics in addressing hydro-meteorological disasters.

c) Explain the applications of Geoinformatics in addressing environmental disasters.

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Second Semester Term End Examinations July 2023

Programme: M.Sc. Geoinformatics **Session: 2022-23**

Semester: Second **Max. Time: 3 Hours**

Course Title: Fundamentals of Digital Image Processing **Max. Marks: 70**

Course Code: SBS GEO 320 7C 3104

Instructions:

1. Question no. 1 has seven parts and students are required to answer any four. Each part carries three and half Marks.

2. Question no. 2 to 5 have three parts and student are required to answer any two parts of each question. Each part carries seven marks.

Q 1. (4X3.5=14)

a) Define Digital Image.

b) Explain Analog versus digital image.

c) Define mosaicking.

d) What is Edge enhancement?

e) What is Histogram?

f) Discuss advantages of Colour Enhancement.

g) Explain the concept of Information Class.

Q 2. (2X7=14)

a) What is Digital Image Processing? Explain the various characteristics, advantages and limitations of Digital Image Processing.

b) Discuss the various types of Digital Image Data Format with suitable illustrations.

c) Explain the various characteristics of Analog image processing versus digital image processing.

Q3. (2X7=14)

a) Discuss Radiometric Errors and Corrections in detail with suitable diagrams.

b) Discuss Geometric Errors and Corrections in detail with suitable diagrams.

c) What is Image Transformation? Explain the various types of Image Transformation.

Q 4. (2X7=14)

a) What do you mean by Image Enhancement Techniques? Explain the various Types of Image Enhancement Techniques with special reference to Contrast Enhancement, Band Rationing and Spatial filtering.

b) What is Principal Component Analysis? Explain the various characteristics of Principal Component Analysis.

c) Discuss the various types of Colour Enhancement Techniques in detail.

Q 5. (2X7=14)

a) Explain the Principles of Image Classification. Discuss the various characteristics and algorithms of Supervised Image Classification in detail.

b) Discuss the various characteristics and algorithm of Unsupervised Image Classification in detail.

c) What is Fuzzy classification? Discuss the various characteristics and algorithm of Fuzzy Image classification in detail.

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Term End Examinations, June/July 2023

Programme: M.Sc. Geoinformatics Session: 2022-23

Semester: 2nd Max. Time: 3 Hours

Course Title: Law and Policy for Maps and Remote Sensing Data Max.Marks:70 Course

Code: SBS GEO 3201 DCEC 3104

Instructions:

1. Question no. 1 has seven parts and students are required to answer any four. Each part carries three and half Marks.
2. Question no. 2 to 5 have three parts and students are required to answer any two parts of each question. Each part carries seven marks.

Q 1. Explain the followings: (4X3.5=14)

a) RSDP
b) Legal Trouble
c) Land Law
d) Geospatial
e) Accessibility
f) International Carriage
g) NGP-2016

Q 2. (2X7=14)

a) Discuss the Mapping the legal journey of geospatial in detail.
b) Discuss the guidelines of Survey of India.
c) Explain the Google`s mapathon.

Q3. (2X7=14)

a) Discuss the Indian forest Act. 1927 in detail.
b) Examine the Wildlife protection Act. 1972.
c) Discuss the Intellectual property Law in detail.

Q 4. (2X7=14)

a) Critically examine the National drone policy.

b) Give a detail note on the Remote Sensing data policy-2001-2011.

c) Explain the National Map policy-2005.

Q 5. (2X7=14)

a) Discuss the convention on International liability and damage caused, 1972.

b) Discuss the Montreal convention on International carriage, 1999.

c) Give the detail account of UN principles relating to Remote Sensing.

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Second Semester Term End Examinations July 2023

Programme: M.Sc. Geoinformatics **Session: 2022-23**

Semester: Second **Max. Time: 3 Hours**

Course Title: Spatial data Modeling and its Applications **Max. Marks: 70**

Course Code: SBS GEO 320 6C 3104

Instructions:

1. Question no. 1 has seven parts and students are required to answer any four. Each part carries three and half Marks.

2. Question no. 2 to 5 have three parts and student are required to answer any two parts of each question. Each part carries seven marks.

Q 1. (4X3.5=14)

a) Define Geospatial Data.

b) What is Overlay in GIS?

c) Define Intersection Method?

d) What do you mean by Symmetrical Difference in GIS?

e) Explain the concept of Digital Elevation Model.

f) Discuss the Concept of Network Analysis in GIS.

g) Explain the concept of TIN in surface Analysis.

Q 2. (2X7=14)

a) Discuss the significance and importance of Geospatial data with suitable examples.

b) Explain the ways of handling Geospatial Data with special reference to spatial and non-spatial data.

c) Explain the various tools of Geospatial Analysis with suitable examples.

Q3. (2X7=14)

a) Describe the various types of overlay operation in detail with suitable diagrams.

b) What do you mean by Proximity analysis in GIS? Explain the various tools of Proximity analysis with suitable diagrams.

c) Explain the Raster based overlay in GIS with suitable examples.

Q 4. (2X7=14)

a) Explain the various types of Network Analysis in GIS with suitable examples.

b) Discuss the various types of Point Pattern Analysis in GIS with suitable examples.

c) Discuss the various types of Surface Analysis in GIS with suitable diagrams.

Q 5. (2X7=14)

a) Explain the applications of Remote Sensing and GIS in Land Resource Management.

b) How Geospatial Modelling is helpful in Water Resource Planning and Management?

c) Discuss the various applications of Geospatial Modelling in Urban Planning with suitable examples.

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End-Semester Examinations, June-2023 (Regular/Re-Appear)

Programme: M.Sc. Geoinformatics
Semester -II
Course Name: Research Methodology and Report Writing
Course Code: SBS GEO 3208 C3104

Session: 2022-23
Max. Time: 3 Hours
Max. Marks: 70

Note: There are total **five questions** in this question paper and all are ***compulsory***, each **Question carries *Fourteen Marks*. Maps /diagrams are required in answers.**

Question No. 1. Write short note on ***any four*** of the following: (4x3.5=14)

a. Research Question
b. Arithmetic Mean
c. Ratio scale
d. Plagiarism
e. Cluster and Area sampling
f. References
g. Questionnaire and Schedule

Note: Question number Two to Five have three sub parts and students need to answer any ***two-sub part*** of each question. Each sub part carries ***seven*** marks.

Question No. 2 (2X7=14)

a. Discuss the type and significance of research in Geoinformatics.

b. Discuss the characteristics and steps in formulation of research problem.

c. What do you mean by hypothesis and describe the process of hypothesis testing.

Question No.3 (2X7=14)

a. Write an essay on salient features of qualitative research design.

b. Discuss the structure and components of scientific report writing.

c. Elucidate the techniques of data collection with appropriate examples.

Question No.4 (2X7=14)

a. Write in brief about (a) Mean (b) median and (c) mode and their geographical significance

b. Explain standard deviation and standard error mean with a suitable example.

c. Describe the effective presentation of data through diagrams and graphs.

Question No.5 (2X7=14)

a. Describe the significance and process of geo-spatial survey of any hypothetical region.

b. Elaborate salient aspects of field-Survey report in geographical research.

c. "Questionnaire design is an art it is useless to follow a rigid set of guidelines. Rather the process should be left entirely to the creativity and ingenuity of the researcher". Examine the relevance of this statement and give some guidelines on how a good questionnaire is constructed?