

M. Sc. 2nd Semester Examination, 2021

GEO-INFORMATICS

[Introduction to Geographical Information System & Spatial Modelling]

Course Code: GI 202T

Course ID: 23152

Time: 2 Hrs.

Full Marks: 40

The figures in the margin indicate full marks

Candidates are require to give their answers in their own words as far as practicable

All questions are of equal marks

*Answer any **four** questions selecting at least one from each unit*

Unit-1 (History and Principle of Geographical Information System)

1. Briefly explain the basic components of GIS. What are the major limitations of GIS?
6+4=10
2. What are the three basic elements for preparing vector database in GIS? Differentiate between DSM and DTM. Write a short note on functionality of GIS.
3+2+5=10

Unit-2 (Data Management in GIS)

3. What are the different sources of data in GIS? Mention the application of proximity analysis? What do you mean by topology? Write down four different methods of surface representation.
4+2+2+2=10
4. Explain the geometrical concept of Thiessen polygon with appropriate illustration (consider at least five points). Explain the military application of viewshed analysis. Explain with illustration the dangle node and clustered node.
3+3+4=10

Unit-3 (GIS Modelling for Decision Support)

5. Write a short note on different mapping techniques in open GIS platform. What do you mean by dynamic mapping and hyper maps?
6+4=10
6. What do you understand by virtual reality in GIS? Which computer language is used to represent virtual reality in GIS? Explain the physical model of spatial data with suitable example and illustration.
3+1+6= 10

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