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B.E / B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, MAY 2013

GEO INFORMATICS ENGINEERING

Semester - VI

GI-9353 Geographical Information System II

(Regulation 2008)

Time: 3 Hours

Answer ALL Questions

Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. List the categories of raster data analysis operations
2. What is a regional operation? And list the regional operations.
3. List the different possibilities of attribute data selection by querying?
4. What is meant by topological relationship? And list their types.
5. Define the data modeling.
6. What is meant by AM and FM related to GIS? And give examples.
7. List the factors that determine the data quality.
8. What is meant by logical consistency?
9. What is customization?
10. What are the advantages and disadvantages of WEB GIS?

Part – B (5 x 16 = 80 marks)

11. i) Explain the extended neighborhood operations in raster data analysis (8)
ii) Discuss about Map Algebra operations and functions in raster data analysis (8)
12. a) i) Explain the address geocoding with example. (8)
ii) Discuss the following topological analysis of vector data with examples (8)
 - > Reclassification
 - > Overlay of point on polygon, Overlay of line on polygon

OR

- b) i) Discuss about Dijkstra's Shortest Path Algorithm with an example network. (12)
ii) Explain about buffering in vector analysis with example (4)
13. a) i) Explain the External, Conceptual, Logical and Internal data models (8)
ii) Discuss Electrical utility application with GIS implementations (8)

OR

b) i) Explain Land Information system using GIS (8)

ii) Discuss how GIS can help in business application (8)

14. a) Discuss in detail about the components of geographic data quality (16)

OR

b) i) Discuss about assessment of positional and attribute accuracy in GIS data (10)

ii) Discuss the sources of errors related to GIS data (6)

15. a) i) Discuss in details customization in GIS with necessary coding examples (10)

ii) Explain the mobile mapping architecture and applications (6)

OR

b) i) Explain WEB GIS architecture and applications (10)

ii) Discuss object oriented GIS (6)