

Roll No.

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**B.E / B.Tech ( Full Time ) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2014**

**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 regional operations on raster data analysis and give their meaning
2. What are extended neighborhood operations? List them.
3. What is meant by topological relationship? And list their types.
4. What is SQL? Give its standard format with an example.
5. List the types of GIS modeling.
6. What is meant by data modeling?
7. What is data quality? List its general scope.
8. List the selection criteria on selecting "well defined" sample points to check the positional accuracy
9. What is customization? List its need.
10. List the merits and demerits of web-GIS

**Part – B ( 5 x 16 = 80 marks)**

11. i) Explain the following in raster data analysis (8)
    - Local operations
    - Viewshed analysis
  - ii) What is Map Algebra in raster analysis? Explain its operations and functions (8)
  12. a) i) Explain 2D affine coordinate transformation (6)
    - ii) Discuss the Dijkstra's Shortest Path Algorithm and solve the network given in fig 1 using the same. (10)
- (OR)**
- b) i) Explain Address Geocoding (6)
    - ii) Discuss about different surface interpolation methods (10)
  13. a) i) Explain how GIS can be applied in crime mapping analysis (8)
    - ii) Discuss Resource management application using GIS (8)

(OR)

- b) i) Explain the External, Conceptual, Logical and Internal data models (8)  
ii) Explain Land Information system using GIS (8)
14. a) Explain the Lineage, positional accuracy; attribute accuracy, logical consistency and completeness with respect to geographic data. (16)  
(OR)  
b) i) Explain how the positional accuracy and attribute accuracy is checked in geographic data. (10)  
ii) Discuss the factors that help to determine the data quality (6)
15. a) i) Explain how customization in GIS can be possible with necessary coding examples (10)  
ii) What is object oriented GIS? Explain (6)  
(OR)  
b) i) Discuss how the internet can be used in GIS by its architecture and applications (10)  
ii) Explain mobile mapping architecture and applications (6)

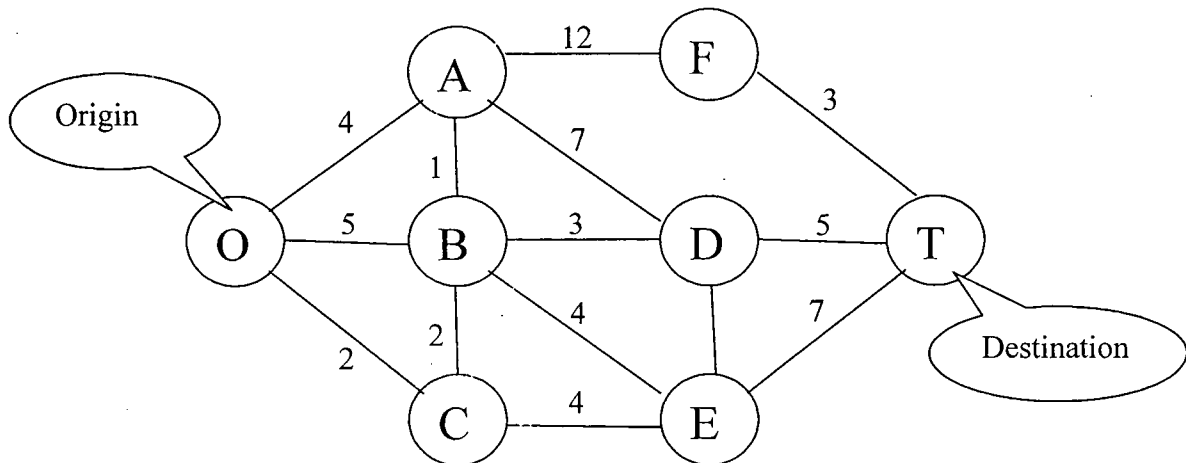


Fig 1