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GEOINFORMATICS ENGINEERING BRANCH

FIFTH SEMESTER

GI 9305 - GEOGRAPHIC INFORMATION SYSTEM I

(REGULATIONS 2008)

Time : 3 Hours

Answer ALL Questions

Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. List the different types of maps.
2. Distinguish information system and GIS.
3. What are the advantages of using the database approach for data processing?
4. What is nominal, ordinal levels of measurement?
5. What is topology and list its three basic elements?
6. State Euler equation?
7. What is similarity and affine transformation?
8. List the file formats used for vector data storage?
9. What is slope and aspect?
10. Write the general equation for IDW?

Part – B (5 x 16 = 80 marks)

- 11 i. Explain in detail about the basic components of GIS. (8)
- ii. Describe the different types of map projections based on aspect. (8)
- 12 a) i. What is normalization and explain the different types of normalizing a table with suitable example (16)
- OR**
- b) i. Discuss the different types of database structures in detail. (16)
- 13 a) i. List the fundamental considerations to be examined regarding grid cell data organization. (8)
- a) ii. Compare the raster and vector data structures. (8)
- OR**
- b) i. Explain about the chain coding and quadtree coding techniques used for raster data compression. (8)
- b) ii. Explain in detail about the arc-node topology data model. (8)
- 14 a) i. What is resampling and discuss the three commonly used resampling methods. (8)
- a) ii. Discuss about the scanner and its specifications used for mapping process. (8)
- OR**
- b) i. Explain the steps used involved in vector data input used for digitization process (16)
- 15 a) i. Explain the characteristics of TIN. (8)
- a) ii. Discuss the uses of DEM in natural and management applications (8)
- OR**
- b) i. Explain the different sources of DEM generation. (16)