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

Geoinformatic Engineering

FIFTH SEMESTER - (Regulation 2008)

GI 9305 GEOGRAPHIC INFORMATION SYSTEM I

Time : 3 Hours

Maximum Marks: 100

Answer ALL questions

PART A – (10 X 2 = 20 marks)

1. What are different types of Maps?
2. Write about the People component of GIS.
3. Differentiate Ordinal and Interval levels of measurement of non-spatial data.
4. Why Normalization is required for databases?
5. Write any four rules of topological consistency.
6. What is Euler's Equation?
7. Define ODBC.
8. Write the characteristics of typical scanner used for creating Raster Maps.
9. Differentiate DEM and DEM.
10. List various applications of Digital Terrain Models.

PART B – (5 X 16 = 80 marks)

- 11(a) (i) Explain various Projections used in Maps with their advantages and limitations. 10
- (ii) Write a short note on History of GIS. 6
- 12(a) (i) Explain various levels of measurement used for non-spatial data. Quote two examples for each level of measurement. 12
- (ii) What is E-R Diagram? How it is useful in design of databases. 4

(OR)

- (b) Describe different types of database structures used to represent non-spatial data in GIS. 16

13(a) Explain various data compression techniques used for efficient storage of Raster Data. Give their limitations. 16

(OR)

(b) (i) Describe the Arc-Node Data Structure with neat sketch. 8

(ii) Compare and contrast Vector and Raster data models used in GIS. 8

14(a) Explain different Raster file formats used for data storage. 16

(OR)

(b) (i) Describe various errors that may occur in digitization. 8

(ii) How GPS integration with GIS helps to improve efficiency of mapping? 8

15(a) Explain different sources of DEM used in GIS. Explain their applicability and limitations. 16

(OR)

(b) (i) Differentiate Gridded DEM from TIN DEM 8

(ii) Explain any four parameters that can be extracted from DEM. 8