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END SEMESTER ARREAR EXAMINATIONS NOV/DEC 2011

REGULATIONS 2008

ANNA UNIVERSITY

B.E. GEOINFORMATICS VI SEMESTER

GI 9353 GEOGRAPHICAL INFORMATION SYSTEM II

Max. Marks 100

Max. time 3 Hrs.

Note: Answer ALL Questions

PART A (10 X 2 = 20 Marks)

1. Explain the formula using which area and perimeter of a polygon is calculated in GIS.
2. With a neat sketch explain the operation window(kernel dimension) dimensions of Neighbourhood and Extended Neighbour hood Operations.
3. What is address geocoding and cite an example which warrants address geocoding.
4. Differentiate Topological and Non-topological analysis with an example for each.
5. Explain the significance of customer geolocation in business GIS with an example
6. Differentiate Fiscal and Legal Cadastre used in Land Information System
7. What is the procedure used for assessing Positional Accuracy
8. What is meta data and explain the parameters collected as part of meta data
9. List any two scripting languages used for Customisation of GIS
10. With an example explain where mobile mapping is used.

PART B (5 X 16 = 80 Marks)

11. Explain with an example how Web based GIS application could be designed for E-Governance. For the chosen example, explain the spatial and non-spatial data to be collected, sequence of analysis of to be carried out, hardware-software requirements and the functionalities to be provided in the Web GIS Graphical User Interface

- 12.a. Discuss in detail with neat sketches the Neighborhood operations such as Filtering, Slope and Aspect Map and Extended Neighborhood operations such as Proximity and Viewshed analysis used in GIS. Illustrate each operation with an example.

(OR)

- 12.b. What is map algebra and explain each of the arithmetic, trigonometric and logical functionalities under map algebra with an example

- 13.a. With neat sketches explain the algorithm used for overlay of two polygon thematic layers. Illustrate the usage of above algorithm for Intersection and Clip Operations.

(OR)

- 13.b. With an example and neat sketches explain the algorithm used for point-in-polygon and line-in-polygon overlaying

- 14.a. Describe in detail how high resolution satellite data derived thematic layer along with non-spatial attribute data, could be used to develop a Tax Mapping Application for a metropolitan city.

(OR)

- 14.b. Illustrate with neat sketches any two commercial GIS applications in Business Sector

- 15.a. Describe in detail the various parameters used for assessing the Data Quality of a Thematic Layer used in GIS.

(OR)

- 15.b. Discuss in detail the various sources of error in the data input, data conversion, data analysis and data output stages of a spatial modelling application.