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B.E DEGREE END SEMESTER EXAMINATIONS, APRIL/MAY 2011

AGRICULTURAL AND IRRIGATION ENGINEERING BRANCH

SIXTH SEMESTER

AI 9352 GEOGRAPHICAL INFORMATION SYSTEM

(REGULATIONS 2008)

Time : 3 Hours

Max. Marks : 100

(Answer All Questions)

Part – A (10 x 2 = 20 Marks)

1. What are the observations you could make about the definitions of GIS?
2. What do you understand by scale-related generalization?
3. State the use of 'surface' entity
4. When will you choose object-oriented database structure?
5. What is the function of spatial query?
6. Distinguish between DEM and DSM.
7. How will you test the internal consistency of non-spatial data?
8. Highlight the use of animated map for agricultural process.
9. What are the spatial data needed for assessing the pesticide losses?
10. Mention the use of agricultural drought vulnerability map.

Part – B (5 x 16 = 80 Marks)

- 11 (i) How does GIS aid in agriculture and economic development? (6)
- 11(ii) Enlighten the application of GIS for planning the cold storage infrastructure for horticulture crops. (10)
- 12a (i) How will you represent the real world features in map/computer? Also, state the problems associated with it? (6)
- 12a (ii) Define spatial referencing and explain any two methods of it. (10)

(OR)

- 12 b (i) Highlight the relations of traditional disciplines with GIS. (4)
12 b (ii) Explain the software components of GIS. (12)

- 13 a (i) How does the real world is modeled by raster approach? (4)
13 a (ii) Describe the structure of Arc-Node topological data model and its salient features. (12)

(OR)

- 13 b (i) Mention the functions of a database management system. (4)
13 b (ii) Explain briefly about the relational database structure (12)

- 14(a) Describe the network analysis functions of GIS and highlight their relevance to agro-marketing. (16)

(OR)

- 14 b (i) What are the various application of DEM for your specialization? (4)
14b (ii) Explain the point interpolation techniques and their usefulness for agriculture resource mapping. (12)

- 15 (a) Discuss about the different output products generated by GIS for mapping, monitoring, modelling and management of agricultural system. (16)

(OR)

- 15 b (i) Explain the macro level components that affects the data quality. (12)
15 b (ii) What do you understand by logical consistency. Cite examples (4)