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B.E./B.Tech. (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL/MAY 2013

Geoinformatics Engineering

FIFTH SEMESTER - (Regulation 2008)

**GI 9403 GEOGRAPHIC INFORMATION SYSTEM APPLICATIONS**

Time : 3 Hours

Maximum Marks: 100

Answer ALL questions

**PART A – (10 X 2 = 20 marks)**

1. List applications of GIS for watershed management.
2. Write the contents of a typical Resource Information System.
3. What is Tower Spotting?
4. Write the advantages of using GIS for Utility Management.
5. Differentiate AVL and Vehicle Navigation.
6. List the advantages of GSM based communication for Vehicle tracking.
7. What is LIS?
8. Write the parameters used in GIS for pipeline routing.
9. What are the advantages of Web GIS?
10. List the use of GIS in managing urban floods.

**PART B – (5 X 16 = 80 marks)**

- 11(a) (i) Chennai Corporation wants to monitor the malaria occurrences in the city for better management of the disease prone areas. Discuss how GIS helps in this task. 10
- (ii) List the various applications of GIS in Health Care systems. 6
- 12(a) Explain the process of Forest Fire Growth Modelling with GIS. What are the parameters considered in the model? How will they influence the spread of forest fire? 16

(OR)

27

- (b) (i) Describe the parameters influencing artificial recharge of ground water. 8
- (ii) Explain the use of GIS in land use change detection and monitoring. 8  
Suggest indicators for quantifying the land use change.
- 13(a) Tamilnadu Electricity Board is developing a GIS based Electric Distribution Management System for Chennai. Discuss in detail, typical applications of distribution management system in managing electricity network. 16

(OR)

- (b) (i) Explain the use of GIS in modeling the area catered by a Cell Phone tower. 10  
What parameters will influence the area covered from a tower?
- (ii) Discuss the parameters used for locating a bus stop in an urban area when the study is conducted with the help of GIS. 6
- 14(a) Explain the components of a Automatic Vehicle Location system with a neat sketch. 16

(OR)

- (b) (i) What is fleet management? Discuss the use of GIS in fleet management for a large transport agency. 10
- (ii) Discuss the advantages of GPS and GIS Integration? 6
- 15(a) Describe the use of Remote Sensing and GIS for improving the tax collection of a large city. What are the characteristics of satellite imagery required for the study? Indicate the GIS analysis used for the study. 16

(OR)

- (b) (i) An expressway is planned from Chennai to Tiruchi. Explain the detailed methodology for planning of the expressway using GIS. 12
- (ii) List various applications of LIS. 4