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

Geoinformatic Engineering

SIXTH SEMESTER - (Regulation 2008)

**GI 9028 REMOTE SENSING AND GIS FOR URBAN AND REGIONAL PLANNING**

Time : 3 Hours

Maximum Marks: 100

Answer ALL questions

PART A – (10 X 2 = 20 marks)

1. Write the characteristics of settlements on medium resolution satellite imagery.
2. What are the advantages of texture based analysis on satellite imagery over tone based analysis?
3. How do you delineate CBD area from satellite imagery?
4. List any eight applications of High Resolution imagery in Urban Planning and Management.
5. Write the objectives of Regional Plan.
6. What are the contents of Detailed Development Plan?
7. Define Urban Sprawl.
8. Write the objectives of NUIS.
9. What is a Planning Support System?
10. List various applications of 3D city models.

PART B – (5 X 16 = 80 marks)

11. (i) Explain various visual interpretation elements used for analysis of satellite imagery. Write their significance in Urban scenario. 10
- (ii) Describe the scope and limitations of Remote Sensing data in Urban and Regional Planning. 6
- 12(a) What is Change Mapping? Describe various methods used for detecting change in urban landuse patterns using temporal remote sensing. Also discuss their limitations. 16

(OR)

- (b) (i) With neat sketch, Describe the different physical structures of Urban Area 6
- (ii) What is Urban Heat Island? How remote sensing helps in mapping and monitoring of 10

Urban Heat Island.

- 13(a) Describe the Master Plan Process. Explain the utility of Remote Sensing and GIS for formulation of Master Plan of a Metropolitan Area. 16

(OR)

- (b) (i) What is Internet GIS? Explain different architectures employed for implementing Internet GIS with neat sketches. 8
- (ii) Remote Sensing and GIS can help to improve Solid Waste Management Practices. Comment and Justify your comments. 8

- 14(a) What is Housing Typology? Explain any two applications of Housing Typology analysis in detail. 16

(OR)

- (b) (i) Discuss the utility of Land Suitability Analysis in Planning a green field airport at Chennai. 10
- (ii) How Geomatics will help in rationalizing the land valuation process? Which parameters are used in such process? 6

- 15(a) CMDA wants to prepare a Master Plan for Chennai. Explain the use of Urban Growth Models in the process of Master Plan preparation. 16

(OR)

- (b) (i) What is ALTM? With a neat sketch describe the working principle of ALTM. 8
- (ii) Describe any one case study that uses Urban Environmental Model. 8