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B.E/B.TECH. (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL/MAY 2013.
CIVIL ENGINEERING BRANCH, SIXTH SEMESTER REGULATION-2008
CE 9355- FUNDAMENTALS OF REMOTE SENSING AND GIS

Time :3hrs

Max Mark : 100

Part A (10X2=20 marks)

1. What are the properties of Electromagnetic waves?
2. Write down the role of atmosphere to the radiation from the sun?.
3. Differentiate between sun synchronous and geosynchronous orbits.
4. What are the advantages of Microwave remote sensing over Optical remote sensing?
5. Write down the necessity of the principal component analysis?
6. How will you identify the clouds in the satellite images?
7. What are the spatial entities used in GIS?
8. List out the sources of spatial data..
9. What are the demerits of digitizer board?
10. What do you mean by Douglas peukar algorithm?

Part-B (5X16=80 marks)

11. (i). Explain with neat sketch about the Run length and Quad tree compression techniques. (8)
(ii) Explain in detail about the utilization of Remote sensing and GIS techniques for Least cost highway alignment modeling. (8)
12. a. (i) Discuss in detail about the factors affecting the spectral reflectance of Vegetation, Soil and Water. (10)
(ii) Write with neat sketch about the interaction of electromagnetic energy with earth surface features. (6)
(OR)
b. Discuss in detail about the basic components of Remote sensing system. (16)
13. a. Explain in detail about the characteristics and applications of Landsat 4 and IRS 1C missions (16)
(OR)
b. (i) Write with neat sketch about the Across Track MSS system (10)
(ii) Write short notes on Resolution concepts. (6)
14. a. Explain in detail about the Supervised Classification of satellite images? (16)

(OR)

b. Discuss in detail about the Contrast stretching and Spatial Filtering Techniques (16)

15. a. i) Explain in detail about the Common Map Projection Techniques (8)

ii) Explain in detail about the Relational Data base Management System with example. (8)

(OR)

b. Discuss in detail about the basic components of Geographical Information System. (16)