



B.E/B.Tech(Full Time) DEGREE END SEMESTER EXAMINATIONS, APR/MAY 2011

CIVIL ENGINEERING BRANCH

36

SIXTH SEMESTER

CE 9355 FUNDAMENTALS OF REMOTE SENSING AND GIS

(REGULATIONS 2008)

Time : 3 hrs

Max Marks : 100

Answer ALL Questions

Part – A (10 x 2 = 20 Marks)

1. What is meant by spectral signature?
2. What are the causes of haze in satellite imageries?
3. Distinguish between spectral resolution and radiometric resolution.
4. A satellite wishes to orbit the earth at a height of 150 km above the surface of the earth. Determine the speed and orbital period of the satellite.
5. What is meant by geometric correction in image processing?
6. Mention any two types of contrast manipulation techniques.
7. What are thematic maps?
8. Distinguish between raster data and vector data.
9. List out any four software commonly deployed for GIS.
10. What is meant by digital terrain model?

Part – B (5 x 16 = 80 Marks)

11. Explain the interaction of EMR with the following earth surface features.
 - (i) Vegetation
 - (ii) Water

(2 x 8 = 16)

12(a) With neat sketches and example, explain the two types of orbits.

(Or)

12(b) Describe the principle of different types of optical-infrared remote sensors.

13(a) What are the basic elements of visual interpretation? Explain, how would you apply these elements for visual interpretation?

(Or)

13(b) Explain the following algorithms used in supervised classification.

(i) Minimum distance to mean classifier

(ii) Parallelepiped classifier

(2 x 8 = 16)

14(a) Explain the various steps involved in map production.

(Or)

14(b) What is DBMS? Describe the concept of various types of DBMS.

15(a) With neat sketches, explain the concept of different raster data compression techniques.

(Or)

15(b) (i) Explain the different types of attribute data analysis techniques.

(8)

(ii) How would you carryout buffer analysis in GIS?

(8)