

26/10/13

Roll No.																				
----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

B.E. / B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV/DEC 2013

CIVIL ENGINEERING BRANCH
SIXTH SEMESTER – (REGULATIONS 2004/2008)
CE473/ CE 9355 Fundamentals of Remote Sensing and GIS

Time: 3hrs

Max Marks: 100

Answer ALL Questions
Part – A (10 x 2 = 20 Marks)

1. What is remote sensing? What are its components?
2. Why sky looks blue in color and red color in the morning and evening.
3. Why sun synchronous orbit is chosen mostly for remote sensing satellites and geosynchronous orbit is chosen for meteorological satellites?
4. What do you understand by the term "resolution concept".
5. Write short note on basic elements of image interpretation.
6. Distinguish between supervised and unsupervised classification.
7. Define map and GIS.
8. Write short note on Map projections.
9. List out various applications of GIS in civil engineering.
10. Write short note on data compression.

Part B (5 X 16 = 80)
Answer All Questions

11. i) Discuss in detail the energy interaction with the atmosphere with neat sketch. 8
ii) Describe the Electromagnetic radiation (EMR) diagram in detail with neat sketch. 8
- 12a. i) Discuss in detail the working principles and characteristics of any one of the meteorological and one of the earth resources satellites with their payloads. 16
(OR)
- 12b. i) Differentiate between active and passive sensors. 3
ii) Discuss in detail the working principles of any one of the TIR and one of the microwave sensors with neat sketch 13
- 13a. i) What is preprocessing? Discuss in detail how the radiometric error in the satellite image can be corrected. 16
(OR)
- 13b. i) Explain in detail various supervised classifiers used to classify the satellite image. 16
- 14a. i) What are the various components of GIS? Discuss them in detail. 14
ii) Differentiate between spatial and non spatial data. 2
(OR)
- 14b. i) Explain different types of map projections in detail with neat sketch 8
ii) What is DBMS? Explain various components of DBMS 8
- 15a. i) Discuss different data input methods used in GIS with neat sketch 8
ii) Describe in detail different methods of analyzing GIS data. 8
(OR)
- 15b. i) Explain in detail how highway alignment can be carried out using Remote sensing and GIS 16