

GEO INFORMATICS ENGINEERING

EIGHTH SEMESTER

GI 9030 RS & GIS FOR AGRICULTURE AND FORESTRY

(REGULATIONS 2008)

Time : 3 hr

Max Mark : 100

Answer ALL QuestionsPart – A (10 x 2 = 20 Mark)

1. What is vegetation Index? write its significance.
2. What are the advantages of microwave remote sensing?
3. How do you identify saline and alkaline soils through remote sensing?
4. What is Soil Survey? Write the different types of soil surveys.
5. What is land degradation? List the most important types of degradation.
6. Write the purposes of Land evaluation.
7. List the drought indicators.
8. List the limitations of optical remote sensing for flood mapping.
9. What are the factors that cause forest degradation?
10. What are types of forest fires?

Part – B (5 x 16 = 80 Mark)

11. i. Explain in detail about the optical properties of vegetation with a sketch. (10)
ii. Describe the factors affecting leaf optical properties. (6)
12. a. i. Describe the factors affecting soil reflectance. (10)
ii. Write short notes on soil genesis and soil classification. (6)

OR

- b. Explain the soil erosion mapping with universal soil loss equation, remote sensing and GIS. (16)
13. a. Discuss the Land use and Land cover classification system for use with remote sensing data. (16)

OR

- b. Explain in detail about the land evaluation methods. (16)
14. a. Explain the methodology for crop damage assessment by flood using remote sensing and GIS with flow chart. (16)

OR

- b. i. Describe the remote sensing capabilities for drought management with example. (10)
 - ii. How the damages caused due to pests and diseases can be detected from satellite images. (6)
15. a. Discuss the estimation procedure to the timber volume of a forest area using Remote Sensing? (16)

OR

- b. Discuss a flow chart for preparing the Forest Fire Risk Zone Map using both meteorological and remote sensing data under GIS environment. (16)