22/11/13

Roll No. | | | | | | | | |

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

GEO INFORMATICS ENGINEERING

FIFTH SEMESTER

GI 9030 REMOTE SENSING & GIS FOR AGRICULTURE AND FORESTRY

(Regulation 2008)

Time : 3 Hours Answer ALL Questions Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. List the bands which are most useful for agriculture
2. List any five applications of hyper spectral RS in agriculture.
3. Draw neatly the spectral signature curve for dry and moisture soil.
4. Write the size of soil particle of clay, silt and sand
5. What do you understand from sustainable agriculture?
6. What is land degradation?
7. List the limitations of optical remote sensing for flood mapping.
8. List the drought indicators.
9. Define afforestation and deforestation
10. Write the types of forest fire.

Part – B (5 x 16 = 80 marks)

11. i) Explain the factors affecting leaf optical properties with sketch (12)

    ii) Describe the spectral signature curve of vegetation. (4)

12. a) i) Describe the factors affecting soil reflectance. (10)

    ii) Write short notes on saline and alkali soil characteristics. (6)

    OR

    b) Discuss about the assessment of soil erosion using remote sensing and GIS (16)

13. a) Explain the different land evaluation methods in detail. (16)

    OR

    b) Discuss about the decision support system for land use planning with case study.(16)

14. a) Explain the concept of thermal crop water stress indices. (16)

    OR

    b) Discuss about the flood hazard zone mapping using remote sensing and GIS.(16)

15. a) i) Discuss about forest fire risk area mapping using remote sensing and GIS with flow chart. (10)

ii) Suggest the forest fire prevention mechanism in high risk zone.(6)

OR

b) i) Explain the procedure to identify and mapping of different forest type using remote sensing. (10)

ii) Suggest your idea to conserve the natural forest (6)