D 1055   (Pages : 2)   Name.................................

Reg. No................................

EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, DECEMBER 2009

CE 04 804 (F)—REMOTE SENSING AND GIS

(2004 Admissions)

Time : Three Hours   Maximum : 100 Marks

Answer **all** *questions.*

1. (a) Define Remote Sensing.

    (b) What are the components of Remote Sensing ?

    (c) What is meant by spatial resolution ?

    (d) List out different IRS satellites.

    (e) What are the different data structures used in GIS ?

    (f) Differentiate Raster Image and Vector image.

    (g) What is image classification ? What are their types ?

    (h) Furnish the list of fields in which remote sensing and GIS can be used.

    (8 × 5 = 40 marks)

2. (a) (i) Explain Energy interaction with atmosphere and earth surface features.   (8 marks)

    (ii) Explain with example, different platforms available for remote sensing.   (7 marks)

    Or

    (b) (i) Write a detailed note on spectral response pattern of Vegetation, soil and water.

    (8 marks)

    (ii) State and explain different lairs of radiation which are useful for Remote sensing.

    (7 marks)

3. (a) (i) What are the various Indian Remote Sensing Satellites ? Furnish the orbital characteristics of any two.

    (8 marks)

    (ii) Write an exploratory note on data structures of GIS.   (7 marks)

    Or

    (b) (i) Distinguish between spectral remote sensing and micro-wave remote sensing.

    (8 marks)

    (ii) Distinguish between Image classification and Image Enhancement.   (7 marks)

Turn over

4. (a) (i) Explain the elements of visual Image Interpretation. (8 marks)

(ii) What are the hardware requirements for GIS and Remote sensing. (7 marks)

Or

(b) (i) Explain different types of map projection. (8 marks)

(ii) What are the various Remote sensing and GIS softwares available ? (7 marks)

5. (a) Explain various processes involved in digital Image processing. (15 marks)

Or

(b) Write how remote sensing and GIS can be effectively used in water resources applications and urban analysis.

(15 marks)

[4 × 15 = 60 marks]