P1797

[4859]-199

B.E (Information Technology)
c:GEO INFORMATICS SYSTEM
(2008 Pattern) (Elective - IV) (Semester - II)

Time : 3 Hours]

[Max. Marks :100

Instructions to the candidates:

1) *Answer any three questions from each section.*
2) *Answers to the two sections should be written in separate answer - books.*
3) *Figures to the right indicate full marks.*
4) *Assume suitable data, if necessary.*

SECTION - I

Q1) a) What is image registration? Explain logarithmic and exponential contrast stretch in detail? **[8]**

b) Explain A to D conversion process in digital image processing of remotely sensed data? **[8]**

OR

Q2) a) What is image preprocessing? Explain in detail with example? **[8]**

b) Explain visual interpretation technique to be applied on digital images? Explain all the basic element of image interpretation with example. **[8]**

Q3) a) Define remote sensing? With the help of a block diagram explain the steps involved in remote sensing? **[8]**

b) Explain the radar principal with required formula? What are the factors affecting microwave? **[10]**

OR

Q4) a) What are the different groups of earth resource satellites? Name the satellites in each group and mention their tasks? **[6]**

b) Draw the wave model of electromagnetic radiation? Explain radar scattering mechanism? Differentiate between basic principles of SAR and SLAR? **[12]**

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Q5) a) Define GIS and explain the architecture of GIS system? **[10]**

b) Explain map projections used in GIS? Write with example types of maps. **[6]**

OR

Q6) a) Give reasons for using computers in the process of making maps? **[8]**

b) What is entity and field is GIS? How entity and field is modeled in GIS? Elaborate with example. **[8]**

SECTION - II

Q7) a) Explain in detail the process of affine transformation? **[8]**

b) What are the sources of errors in GIS? **[8]**

OR

Q8) a) Explain topological error and location error? **[8]**

b) Explain attribute data and attribute table in context of GIS? **[8]**

Q9) a) What are different techniques of graphic representation of spatial data exploration? **[8]**

b) Elaborate overlay and buffering in the context of vector data representation with example. **[10]**

OR

Q10) a) What are neighbourhood operations and zonal operations in context of raster data representation? **[6]**

b) Compare raster and vector data analysis? **[6]**

c) What are the types of GIS queries. Elaborate? **[6]**

*Q11)*a) Explain how GIS is used in Major river valley projects? **[10]**

b) Explain hybrid database model of GIS in detail. **[6]**

OR

*Q12)*a) Discuss the implementation issues of GIS project? What tests will be performed in evaluating any GIS project? **[10]**

b) Explain the software model useful for a GIS project design? **[6]**

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