[5254]-25

B.E. (Civil) (Semester - II)
GEOINFORMATICS
(2008 Pattern) (Open Elective)

Time : 3 Hours]   *[Max. Marks : 100*

Instructions to the candidates:

1) *Answer three questions from each section.*
2) *Answers to the two sections should be written in separate books.*
3) *Neat diagrams must be drawn wherever necessary.*
4) *Figures to the right indicate full marks.*
5) *Assume suitable data if necessary.*

SECTION - I

Q1) a)   Describe characteristics of LANDSAT.   **[8]**

b)   Discuss Visual Image Interpretation. Write the Elements of Visual Image Interpretation.   **[8]**

OR

a)   Explain EMR. State the characterization for different frequencies on images.   **[8]**

b)   Define resolution and explain any 4 types.   **[8]**

Q2) a)   What is false colour composite (FCC) Images? What are its advantages?
                                                                                   [8]

b)   Write a note on :   **[8]**
   i)   Image Rectification.
   ii) Thermal & Infra Red Satellite

OR

a)   Explain any two satellite images and its application.   **[8]**

b)   Write a note on :   **[8]**
   i)   Supervised Classification.
   ii) Unsupervised Classification.

Q3) a) Describe Characteristics of IR Images. **[10]**

b) "Geometric" Corrections in Images under processing. **[8]**

<div align="center">OR</div>

a) What is Digital Image processing and briefly explain its application. **[10]**

b) Discuss the flow chart application of remote sensing in ground water assessment. **[8]**

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SECTION - II

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Q4) a) Define GIS? Explain in detail its components. **[8]**

b) Explain. **[8]**
   i) Vector Model
   ii) Map Resolution

<div align="center">OR</div>

a) What is 'MAP'? Describe different types of maps in brief. What are its limitations? **[8]**

b) Write a note on : **[8]**
   i) Hardware and Software for GIS
   ii) Attributes.

Q5) a) What is GPS? Explain its importance in GIS tooling. **[8]**

b) What is RDBMS? Explain the Normal form with one example. **[8]**

<div align="center">OR</div>

a) Write a note 'Buffering'. **[8]**

b) Describe 'Raster' data structure. Write advantages and disadvantages.**[8]**

Q6) a) Explain application of Geo Informatics in following areas : **[10]**
   i) Geotechnical Engineering.
   ii) Water Resource management through canal irrigation.

b) Write in detail Digital Image Processing. **[8]**

<div align="center">OR</div>

a) Explain application of Geo Informatics with working flow charts in following areas : **[10]**
   i) Road Survey and Investigations.
   ii) Infrastructure Development.

b) Write a brief note on "Role of GIS in Terrain Analysis" . **[8]**

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