



Reg. No. : .....

Name : .....

Branch : CIVIL ENGINEERING  
Geomatics

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions.

1. What are the components of GIS ?
2. Describe any two common types of field data that can be used for a GIS project.
3. What mechanisms are available for the delivery of GIS output ?
4. Explain atmospheric windows and common remote sensing systems based on atmospheric windows.
5. Explain the Indian Remote Sensing System.
6. Write short note on the control segment of GPS.
7. Write short notes on advantages and limitations of GPS surveying over traditional methods.
8. What is the difference between absolute positioning and relative positioning ?  
(8×5=40 Marks)

PART – B

Module – I

9. a) Describe the three types of map projections by the developable surface. **10**
- b) Explain the differences between vector data and raster data. **10**

OR

P.T.O.



10. Write short notes on :

- i) Triangulated Irregular network
  - ii) Data input methods
  - iii) Vector data analysis
  - iv) Projected coordinate system.
- 10**

**Module – II**

11. a) Explain electromagnetic spectrum and its interactions with earth surface features. **10**
- b) With a neat sketch, differentiate the reflectance patterns of soil, vegetation and water and explain why Infrared region of EM spectrum is used for mapping vegetation. **10**

OR

12. a) Explain the principle of across track scanning with the help of a neat sketch. **10**
- b) Write short notes on :
- i) Thermal detection
  - ii) Visual image interpretation.
- 10**

**Module – III**

13. a) What is Dilution of Precision and explain different types ? **10**
- b) What are the different modes of positioning techniques used for GPS ? **10**

OR

14. a) Explain pre-processing for GPS phase adjustments and processing by differencing. **10**
- b) Write short notes on :
- i) WAAS system
  - ii) Static method of GPS surveying.
- 10**
-