

**[ Total Marks : 80 ]**

**( 3 Hours )**

**Notes :**

- 1. Question No 1 is compulsory**
- 2. Attempt any THREE questions out of five questions**
- 3. ASSUME any additional data if necessary and state it clearly**
- 4. Draw FIGURES wherever necessary .Figures to the right indicate full marks**
- 5. WRITE proper question / sub question numbers on the left margin allotted in answer sheet.**

- 1. Attempt any 4 [20]**
  - a) What are Types and Elements of Maps
  - b) Map Projections
  - c) Types of Spatial Data
  - d) overlaying analysis
  - e) Write a short note on History Geographic Information Systems
  - f) TIN Model
- 2. a) Explain Projection Coordinate System: Geographic, rectangular & Polar [10]**  
**b) What are the different types of DBMS [10]**
- 3. a) Non spatial data and its Types [10]**  
**b) Short Note on Data Base Management Systems [10]**
- 4. a) Short Note on Vector & Raster Analysis Methods [10]**  
**b) What are the different components of GIS [10]**
- 5. a) Short note on : a) Objective of GIS [10]**  
**b) Coordinate Systems [10]**  
**b) Short Note : Meta data [10]**
- 6. Write Short Note on (any 4) [20]**
  - a) Spatial Analysis (Dem Analysis)
  - b) Error in GIS
  - c) GIS Output Design and Presentation
  - d) Functions of DBMS
  - e) Web GIS
  - f) Network Analysis

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