(3 Hours)   **Total Marks: 80**

N.B. : 1) Question No.1 is **compulsory.**
     2) Attempt any **THREE** from the remaining questions.
     3) Figures to the right indicate full marks.

Q1. (a) What is GIS? Explain the components & integration of GIS. [10]

    (b) Define Vector Data Model. Explain the different types of Vector Data Model. [10]

Q2. (a) What is topology? Using a simple diagram explain the three types of topological [10]
        relationships in geographic data representation.
    (b) What are the different types of elements of Raster Data Model? Explain briefly. [10]

Q3. (a) Write the differences between Raster Data Model & Vector Data Model. [10]
    (b) Define Remote Sensing Technologies. What are different types of Remote [10]
        Sensing Technologies?

Q4. (a) What do you understand by Satellite Images? Explain in detail. [10]
    (b) Describe Terrain Mapping with its features. [10]

Q5. (a) Explain Watershed Analysis in detail with suitable example? [10]

    (b) What are the different applications of Geocoding? Explain briefly. [10]

Q6. **Short Note (Solve Any Four)** [20]
    a) TIN
    b) Optical Sensor in Digital Elevation Models
    c) Variations of Geocoding
    d) Dynamic Segmentation
    e) Types of remote sensing

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