



12. (a) Explain the various data models (conceptual, logical and physical models.)

Or

- (b) Explain the raster data structures with merits and demerits.

13. (a) Explain the Universal Transverse Mercator (UTM) projection with sketch.

Or

- (b) Discuss the topological elements and consistency in GIS environment with sketch.

14. (a) Explain the various accuracy concepts in GIS.

Or

- (b) Describe about open Geospatial Consortium (OGC) and Spatial Data Infrastructure (SDI)?

15. (a) Discuss the challenges in Raster to vector conversion and vice versa.

Or

- (b) Describe the enterprise GIS, Desktop GIS and distributed GIS.

PART C — (1 × 15 = 15 marks)

16. (a) Discuss the four-lane national highway alignment design using Remote Sensing and GIS.

Or

- (b) Explain the importance of GIS data standards in national level project implementation.