

[Time: 2½ Hrs]

[ Marks: 75 ]

Please check whether you have got the right question paper.

- N.B:
1. All question are compulsory.
  2. Figures to the right indicate full marks.
  3. Students answering in the regional language should refer in case of doubt to the main text of the paper in English.

- Q1. Attempt any three of the following** **15**
- a. What is GI science, GI system, and GIS Application?
  - b. Explain Temporal dimension with example
  - c. Define GIS. Explain capabilities of GIS
  - d. How modelling help in representing real world
  - e. Define Geographic field. Explain different data types and values.
  - f. What is geo-spatial data and geo-information?
- Q2. Attempt any three of the following** **15**
- a. Why one should use DBMS in GIS?
  - b. Write a note on spatial data functionality
  - c. What is SDI? explain in brief
  - d. What is Root Mean Square error in geometric transformation?
  - e. Explain bilinear interpolation sampling method.
  - f. Differentiate between raster data and vector data.
- Q3. Attempt any three of the following** **15**
- a. What is Satellite-based positioning? Explain its Application
  - b. Write a note on Global Navigation Satellite System (GLONASS)
  - c. Explain Code versus phase measurements
  - d. What are the types of spatial data?
  - e. Explain data preparation in detail.
  - f. What are the different types of coordinate system?
- Q4. Attempt any three of the following** **15**
- a. Explain classification of analytical GIS capabilities
  - b. What are the Vector overlay operators?
  - c. Explain neighbourhood functions
  - d. Explain error propagation in spatial data processing
  - e. What are the causes of error propagation?
  - f. Explain spatial queries?
- Q5. Attempt any three of the following** **15**
- a. Explain the relationship between map & GIS
  - b. Write a note on Map cosmetics
  - c. Explain the working of the cartographic toolbox
  - d. How to map quantitative data
  - e. How to map the terrain elevation
  - f. Suppose one has two maps, one at scale 1:10,000 and another at scale 1:1,000,000. Which of the two maps can be called a large-scale map and which is a small scale map?