

END TERM EXAMINATION**EIGHTH SEMESTER [B.TECH] JULY 2023****Paper Code: ETIT-422****Subject: GPS & GIS****Time: 3 Hours****Maximum Marks: 75**

Note: Attempt five questions in all including Q. No.1 which is compulsory. Select one question from each unit.

Q1 Attempt all questions:-

- (a) Define the terms: scale, accuracy and error. (6)
- (b) Give difference between Raster Model and Vector Model. (6)
- (c) Explain the difference between continuous and discrete data. (6)
- (d) Define and explain Radiometric Resolution and Temporal Resolution? (7)

UNIT-I

- Q2** (a) What are map projections? What are the map types? (10)
 (b) Define the term: resolution. (2.5)
- Q3** (a) Explain cartographic Modeling and Topographic mapping in detail. (6)
 (b) Give various classes of Map. Explain Visualization of geographic information. (6.5)

UNIT-II

- Q4** (a) What do you understand by Latitudes and Longitudes? (4)
 (b) How the vector data model uses geometric objects: point, line and area? (3)
 (c) What are geoids, spheroids and ellipsoids? (5.5)
- Q5** (a) Define the following term in the context of geographic coordinate system of Earth : latitude, longitude, parallel, meridian. (6)
 (b) Describe the importance of image classification in Remote Sensing. Explain briefly the categories of image classifications used and distinguished among each other. (6.5)

UNIT-III

- Q6** (a) What are the components of GPS? List its applications. (10)
 (b) What is spectral signature in remote sensing? (2.5)
- Q7** (a) List out various applications of remote sensing and GIS in agriculture sector. (5)
 (b) Explain electromagnetic spectrum. (3.5)
 (c) What are the remote sensing requirements for land use/ land cover mapping? (4)

UNIT-IV

- Q8** (a) Explain Characteristic Interpolators, Deterministic Interpolators and Evaluating Interpolators in detail. (7)
 (b) Explain difference between dependent and independent variables used in context of spatial statistics. Explain their applications and usage. (5.5)
- Q9** (a) What is spatial autocorrelation? Explain difference of spatial autocorrelation with thematic autocorrelation. (6)
 (b) Differentiate between Correlation and Regression. (6.5)
