Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER- II • EXAMINATION - SUMMER - 2017

Subject Code: 2724803 Date:29/05/2017 **Subject Name: Geospatial Techniques and Planning** Time: 02:30 PM to 05:00 PM **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. 0.1 (a) Write Short notes on: (A) Active Remote Sensing, (B) Passive Remote Sensing, 07 (C) history of remote sensing. **(b)** Explain interaction of electromagnetic radiation with the target. 07 0.2 (a) Describe divisions of electromagnetic spectrum and explain suitability of **07** different wavelengths groups for remote sensing. (b) Elaborate on sets of GIS interrelated subsystems. Also, mention different 07 functions of GIS. OR **(b)** Which are the application areas of GIS? Prepare a detailed note. 07 Differentiate between spatial data and attribute data. Also, explain the concepts 0.3 07 of schema and sequel. (b) What is metadata and what are its roles in GIS? Explain it in the context of 07 RDBMS. OR (a) What are various types of resolutions for an image? 07 Q.3 **(b)** Differentiate between raster and vector models of GIS. 07 How to analyze the continuous surface data in GIS? Also, Discus linear **07** 0.4 (a) coordinate transformations. **(b)** Which statistical methods are useful for spatial data interpolation? 07 OR **Q.4** Elaborate on concept of proximity polygons. Also mention its utility in GIS. 07 (b) Find out the area of a simple polygon from the given node coordinate data: 07 **NODE** Xi Yi 1 2 1 2 1 4 3 3 6 5 5 4 4 3 **Q.5** Explain on working principle of GPS. 07 What is Digital Terrain Model? Explain its applications. 07 Discuss "Geographic coordinate system of earth". 07 Q.5 How the error is generated in a GPS? Also, mentioned means to eliminate the **(b)** 07 same.
