Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V • EXAMINATION - SUMMER • 2014

Subject Code: 150606 Date: 24-06-2014 **Subject Name: Disaster Assessment using Geospatial Techniques** Time: 10.30 am - 01.00 pm **Total Marks: 70 Instructions:** 1. Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. **Q.1** Explain basics of relief and rescue operation by disaster assessment. **07** (a) Enlist types of natural disasters, India is prone to? How can geospatial 07 **(b)** technique minimize natural disasters in general? **Q.2** Explain the concept of supervised and unsupervised classification. Give the 07 (a) importance of ground truth verification. Write a short note on: i) ESRI, ii) Network analysis. **07 (b) (b)** Explain the systems of image classification in remote sensing. **07** What are the advantages of GIS over map and Computer Aided Designs? Q.3 07 (a) Explain basic concept of Metadata? Mention its importance in GIS in detail. **(b) 07** Write down type of GPS receivers and discuss basic components of generic **Q.3** (a) 07 receiver. What is Sensor? Describe Air Born and Space Born sensors. **07 (b)** 0.4 What is resolution for sensor and pixel in image? Explain in detail spectral **07** (a) resolution and temporal resolution. Explain different resolutions with their significance. **(b) 07** OR What do you mean by image enhancement in digital image processing? Write in 0.4 **07** (a) detail about contrast enhancement. **(b)** Write salient features of GIS tool GeoMedia or ArcMap. **07** Draw a sketch to explain how a remote sensing system works to capture data 07 **Q.5** (a) and transfer it to the user. State the specific practical application of the infrared region of the electromagnetic spectrum. What are raster and vector? Write the basic differences between raster and **(b) 07** vector. OR **Q.5** Explain various interaction of incident of Electromagnetic energy with the 07 (a) atmosphere in detail. Why analysis of Geospatial Data is required? Enumerate the methods used for **(b)** 07 the same and explain each method in short.
