

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.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain basics of relief and rescue operation by disaster assessment. **07**
(b) Enlist types of natural disasters, India is prone to? How can geospatial technique minimize natural disasters in general? **07**
- Q.2** (a) Explain the concept of supervised and unsupervised classification. Give the importance of ground truth verification. **07**
(b) Write a short note on: i) ESRI, ii) Network analysis. **07**
- OR**
- (b) Explain the systems of image classification in remote sensing. **07**
- Q.3** (a) What are the advantages of GIS over map and Computer Aided Designs? **07**
(b) Explain basic concept of Metadata? Mention its importance in GIS in detail. **07**
- OR**
- Q.3** (a) Write down type of GPS receivers and discuss basic components of generic receiver. **07**
(b) What is Sensor? Describe Air Born and Space Born sensors. **07**
- Q.4** (a) What is resolution for sensor and pixel in image? Explain in detail spectral resolution and temporal resolution. **07**
(b) Explain different resolutions with their significance. **07**
- OR**
- Q.4** (a) What do you mean by image enhancement in digital image processing? Write in detail about contrast enhancement. **07**
(b) Write salient features of GIS tool GeoMedia or ArcMap. **07**
- Q.5** (a) Draw a sketch to explain how a remote sensing system works to capture data and transfer it to the user. State the specific practical application of the infrared region of the electromagnetic spectrum. **07**
(b) What are raster and vector? Write the basic differences between raster and vector. **07**
- OR**
- Q.5** (a) Explain various interaction of incident of Electromagnetic energy with the atmosphere in detail. **07**
(b) Why analysis of Geospatial Data is required? Enumerate the methods used for the same and explain each method in short. **07**
