

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-VII • EXAMINATION – SUMMER • 2015**

**Subject Code: 170606****Date: 06/05/2015****Subject Name: Application of Geo-Informatics in Civil Engineering****Time: 02.30pm-05.00pm****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) Justify the role of GIS for decision making in civil engineering? Give suitable example. **07**
- (b) What is Remote sensing? Describe the role of remote sensing in Geo-informatics. **07**
- Q.2** (a) Differentiate between the Raster and Vector Model **07**
- (b) Define spectral reflectance curve and discuss its importance by the sketches of spectral reflectance curves for vegetation and water. **07**
- OR**
- (b) Explain the Photogrammetry alongwith various types of photo used in Photogrammetry **07**
- Q.3** (a) What does image interpretation mean? Enlist and explain various keys of image interpretation. **07**
- (b) Describe Spatial data and Attribute Data of GIS. **07**
- OR**
- Q.3** (a) Write short notes on : **07**
- (1) Flight Planning
- (2) Comparison of aerial photo and satellite image.
- (b) Write short notes on : **07**
- (1) Overlapping and its necessity in Photogrammetry
- (2) Softwares used for Remote Sensing.
- Q.4** (a) Define GIS? Enlist and explain various components of GIS. **07**
- (b) Write various applications of GPS in Civil Engineering **07**
- OR**
- Q.4** (a) How does GPS work? Explain with neat sketch. **07**
- (b) Differentiate between Active and Passive Remote Sensing. **07**
- Q.5** (a) How would you integrate the Remote sensing and GIS for the planning of waste disposal facility in urban area? **07**
- (b) Write short notes on : **07**
- (1) Ground truth
- (2) Image Enhancement
- OR**
- Q.5** (a) Write various applications of Geo-informatics in Civil Engineering. **07**
- (b) Enlist various softwares used for GIS. Explain any one in detail. **07**

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