

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. - SEMESTER – II • EXAMINATION – WINTER • 2014****Subject code: 1721311****Date: 08-12-2014****Subject Name: Geo - Spatial Techniques****Time: 02:30 pm - 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.

- Q.1** (a) Define GIS and discuss GIS as a special class of information systems. **07**
 (b) Explain the principle of Remote Sensing. **07**
- Q.2** (a) Explain in detail the geographic mapping process **07**
 (b) Describe briefly properties as well as classification of map projections **07**
- OR**
- (b) Compare between spatial data standards and metadata standards **07**
- Q.3** (a) Discuss Geo-relational Data Model. **07**
 (b) Explain principle of Raster data compression. **07**
- OR**
- Q.3** (a) Describe Spatial Autocorrelation. **07**
 (b) Explain Applications of digital terrain model **07**
- Q.4** (a) Explain buffering. **07**
 (b) Explain the concept of quadrant counts and nearest neighbour analysis with respect to GIS data processing **07**
- OR**
- Q.4** (a) What do you mean by data error? Explain how the data errors can be managed in GIS. **07**
 (b) Write short note on Image-to-Map Rectification. **07**
- Q.5** (a) Explain functional segments of GPS. **07**
 (b) Explain the accessories and setup of GPS **07**
- OR**
- Q.5** (a) Discuss the applications of GPS in Civil Engineering **07**
 (b) Discuss any one case study based on GPS application **07**
