

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Sem-II Examination July 2010

Subject code: 721311

Subject Name: Geo- Spatial Techniques

Date: 09 / 07 /2010

Time: 11.00am – 1.30pm

Total Marks: 60

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. **06**
(b) Compare and discuss Maps and GIS. **06**
- Q.2** (a) Enlist components of GIS and describe data component. **06**
(b) Write short note on linear coordinate transformations. **06**
- OR**
- (b) What is map projection? Describe briefly properties of map projections. **06**
- Q.3** (a) Explain classification of map projection based on the type of developable surface of projection. **06**
(b) Write short note on Georeferencing. **06**
- OR**
- Q.3** (a) Discuss Geo-relational Data Model. **06**
(b) Write short note on geodetic and vertical datums. **06**
- Q.4** (a) Explain principle of Raster data compression. **06**
(b) Explain concept of topological map in vector data model. **06**
- OR**
- Q.4** (a) Discuss briefly components of Geographic Data Quality. **06**
(b) Compare and discuss Raster based data processing and digital image analysis. **06**
- Q.5** (a) Describe Spatial Autocorrelation. **06**
(b) Explain principle of Remote Sensing. **06**
- OR**
- Q.5** (a) How does GPS work? Write applications of GPS. **06**
(b) Explain functional segments of GPS. **06**
