

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
ME Semester –II Examination Dec. - 2011

Subject code: 1721311

Date: 19/12/2011

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) What do you understand by Electromagnetic radiation? Discuss the use of EMR in remote sensing. **07**
(b) Write a note on 'Linear Co-ordinate Transformation' **07**
- Q.2** (a) Discuss various map scales used in GIS **07**
(b) Explain various components of Geographic data quality **07**
- OR**
- (b) Explain briefly why sky appears blue during the day and orange/red at dark or sunset **07**
- Q.3** (a) Describe the steps involved in the modeling process. **07**
(b) What is data model? Describe geographic matrix with neat sketch. **07**
- OR**
- Q.3** (a) How does an index model differ from a binary model? **07**
(b) Explain with examples 'Error propagation and error management' **07**
- Q.4** (a) Explain the methods of computation of the 3D location of GPS receiver **07**
(b) Write the applications of GPS and also explain the factors affecting it. **07**
- OR**
- Q.4** (a) Discuss GPS error budget **07**
(b) Explain various types of Resolution **07**
- Q.5** (a) Write short note on Image-to-Map Rectification **07**
(b) Discuss various applications of Remote sensing and GPS in Civil Engineering. **07**
- OR**
- Q.5** (a) Explain Raster data compression **07**
(b) Write a note on geodetic and vertical datum **07**
