

GUJARAT TECHNOLOGICAL UNIVERSITY**MCA - SEMESTER-V • EXAMINATION – WINTER • 2014****Subject Code: 2650013****Date: 08-12-2014****Subject Name: Geographical Information System****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 Various Geographic Data Collection methods. **07**
(b) Describe UTM grid system. **07**
- Q.2** (a) Explain Entity error with reference to island pseudo node, dangling node, sliver polygon, weird polygon. **07**
(b) Write a note on remote sensing as a special case of raster data input. **07**
- OR**
- (b) Explain various methods of raster input. **07**
- Q.3** (a) Explain high level area object in context to types of regions with its diagram. **07**
(b) How will you measure complexity of network with the help of gamma index and alpha index? **07**
- OR**
- Q.3** (a) Explain how you will measure polygon shape with context to Euler number and convexity index. **07**
(b) Explain cartographic model with its types. **07**
- Q.4** (a) How is reclassification performed in raster as well as in vector data? **07**
(b) Explain various methods of non linear interpolation. **07**
- OR**
- Q.4** (a) How will you find directionality of linear and areal objects? **07**
(b) Explain various types vector overlay. **07**
- Q.5** (a) Explain cartographic output. **07**
(b) How will you carry out user requirements with JAD? **07**
- OR**
- Q.5** (a) Explain Map Design Controls. **07**
(b) Write steps involves in conceptual data modeling. **07**
