

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA SEM-V Examination- Dec.-2011

Subject code: 650013**Date: 21/12/2011****Subject Name: Geographical Information Systems (GIS)****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)** Answer the following question in short. **07**
- (1) What do you mean by Geographical Information System?
 - (2) Define term : Spatial Data
 - (3) What is entity and attribute in real world?
 - (4) Which are the basic geographic features? Give only name of them.
 - (5) What is centroid? Give only name of different types.
 - (6) What is the main different between Cartographic output and Non Cartographic output?
 - (7) What do you mean by digitizing process?
- (b)** Attempt the following
- (1) What is meridians and Equator? **02**
 - (2) Differentiate Raster Input & Vector Input. **02**
 - (3) Explain three point distribution patterns. **03**
- Q.2 (a)** What is spatial measurement level? Explain different types of it with example. **07**
- (b)** What do you mean by Map Projection? Explain different types with example. **07**
- OR**
- (b)** Write short note on Nonlinear Interpolation methods in surface with types. **07**
- Q.3 (a)** Explain different file structure for data storage. **07**
- (b)** Write short note on Map Design control in GIS output. **07**
- OR**
- Q.3 (a)** Write short note on calculating polygon length & perimeter with example. **07**
- (b)** Explain Gravity Model with suitable example **07**
- Q.4 (a)** Explain any two input device to provide primary data to GIS. **07**
- (b)** Explain Higher level Line object with its different types of network. **07**
- OR**
- Q.4 (a)** Explain Line in Polygon overlay calculation with diagram. **07**
- (b)** Explain different methods of compacting raster data. **07**
- Q.5 (a)** Write short note on Raster attributes error with example. **07**
- (b)** What is Trapezoid rule for finding centroid in polygon & also define terms : **07**
center of gravity and weighted mean center.
- OR**
- Q.5 (a)** Explain over view of four subsystems of GIS. **07**
- (b)** Explain different types of buffers of reclassification process. **07**
