

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA – SEMESTER – V • EXAMINATION – WINTER 2017

Subject Code: 650013

Date: 30/11/2017

Subject Name: Geographical Information System

Time: 10.30 am to 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.

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|------------|------------|---|-----------|
| Q.1 | (a) | What is GIS? Explain any six applications of GIS. | 07 |
| | (b) | Explain Metadata and Metadata Standard with all its categories. | 07 |
| Q.2 | (a) | What do you mean by Projection? Explain any two Map Projections. | 07 |
| | (b) | What is Spatial Measurement Level? Explain different type of it. | 07 |
| OR | | | |
| | (b) | Explain Sliver Polygons and Wired Polygons with figure. | 07 |
| Q.3 | (a) | Explain Alpha Index and Beta Index in details. | 07 |
| | (b) | Explain any two devices useful for input to GIS. | 07 |
| OR | | | |
| Q.3 | (a) | Explain Higher Level Line Object with its different types of network. | 07 |
| | (b) | Explain various types of Buffers of reclassification process. | 07 |
| Q.4 | (a) | Explain file structures with suitable figure. | 07 |
| | (b) | Explain different types of Centroid in Higher Level Point Objects with diagram. | 07 |
| OR | | | |
| Q.4 | (a) | Explain Topological Vector Overlay in details. | 07 |
| | (b) | How to calculate Perimeter and Length of Polygons. | 07 |
| Q.5 | (a) | Describe Digital Elevation Model (DEM) in detail. | 07 |
| | (b) | Explain various overlay methods used for comparing variables among maps. | 07 |
| OR | | | |
| Q.5 | (a) | Explain Inductive and Deductive Modeling in details. | 07 |
| | (b) | Explain Non-Cartographic outputs available for GIS. | 07 |
