

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER-V • EXAMINATION – WINTER 2015

Subject code: 2650013

Subject Name: Geographical Information Systems (GIS)

Date: 10/12/2015

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 alpha index and Gamma index? Explain in detail. | 07 |
| | (b) | What is Map Projection? List all types of Projections and explain in detail. | 07 |
| Q.2 | (a) | What is GIS? Explain measurement levels for cartographic objects in GIS. | 07 |
| | (b) | Explain the Raster and Vector methods for representing geographic space. | 07 |
| | | OR | |
| | (b) | Explain vector models. | 07 |
| Q.3 | (a) | Explain methods of compacting raster data to preserve storage. | 07 |
| | (b) | Explain Metadata and metadata standards. | 07 |
| | | OR | |
| Q.3 | (a) | Explain Hybrid & Integrated GIS. | 07 |
| | (b) | Explain Remote sensing in detail. | 07 |
| Q.4 | (a) | List all types of Errors. Explain entity errors. | 07 |
| | (b) | Explain Edge Matching in detail. Also Explain Conflation. | 07 |
| | | OR | |
| Q.4 | (a) | What is Overlay? Explain line-in-polygon in Raster and Vector. | 07 |
| | (b) | What is Filter? Explain all types of filters in detail. | 07 |
| Q.5 | (a) | Explain Map Design Controls in GIS output. | 07 |
| | (b) | Write a detail note on Geospatial Database Design. | 07 |
| | | OR | |
| Q.5 | (a) | Explain Nontraditional Cartographic Output. | 07 |
| | (b) | Explain GIS application s/w development strategies. Also explain s/w testing methodology for GIS applications. | 07 |
