

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – SUMMER • 2014

Subject code: 1721311

Date: 25-06-2014

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.**

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|------------|------------|---|-----------|
| Q.1 | (a) | Show divisions of electromagnetic spectrum and discuss on suitability of different wave length groups for remote sensing. | 07 |
| | (b) | Differentiate and explain active and passive remote sensing. | 07 |
| Q.2 | (a) | Define: Arc, Attribute, Azimuth, Geoid, Layer, Pixel, Tessellation. | 07 |
| | (b) | Describe different spectral bands with their applications in remote sensing. | 07 |
| | | OR | |
| | (b) | Enlist various elements of image interpretation and briefly explain each of it. | 07 |
| Q.3 | (a) | Discuss properties of RS. | 07 |
| | (b) | Enlist applications of GIS in various fields. | 07 |
| | | OR | |
| Q.3 | (a) | Elaborate on DBMS and RDBMS. | 07 |
| | (b) | How to minimize errors in GIS database? Explain for various error types. | 07 |
| Q.4 | (a) | Explain the concept of geo-referencing. | 07 |
| | (b) | Classify maps. Also, discuss various map scales used in GIS. | 07 |
| | | OR | |
| Q.4 | (a) | Write short note on: Cartography. | 07 |
| | (b) | Explain the run-length, chain, block and quad tree encoding. | 07 |
| Q.5 | (a) | Explain the working principle of GPS. | 07 |
| | (b) | What are proximity polygons? How these are useful in GIS? | 07 |
| | | OR | |
| Q.5 | (a) | Elaborate in detail: Geodesy. | 07 |
| | (b) | Briefly explain: (1) DGPS; (2) DTM. | 07 |
