Seat No.: _____ Enrolment No._____

# GUJARAT TECHNOLOGICAL UNIVERSITY

**M.E –I$^{st}$ SEMESTER–EXAMINATION – JULY- 2012**

**Subject code: 711206 N** **Date: 11/07/2012**

**Subject Name: Remote Sensing and its Application**

**Time: 2:30 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.**

| | | | |
|---|---|---|---|
| **Q.1** | **(a)** | Explain characteristics of electromagnetic spectrum with respect to use in water resources management. | **07** |
| | **(b)** | Explain elements of visual interpretation. | **07** |
| **Q.2** | **(a)** | Explain thermal infra red remote sensing and detectors. | **07** |
| | **(b)** | Explain preprocessing of remotely sensed data. | **07** |
| | | **OR** | |
| | **(b)** | Explain roll of IRS satellites in management of ground water. | **07** |
| **Q.3** | **(a)** | Explain supervised and unsupervised image classification. | **07** |
| | **(b)** | Define various types of resolutions and their importance. | **07** |
| | | **OR** | |
| **Q.3** | **(a)** | Explain true color composite and false color composite. | **07** |
| | **(b)** | Explain the integration of remote sensing and GIS. | **07** |
| **Q.4** | **(a)** | How multispectral scanning helps in recognition of objects. | **07** |
| | **(b)** | Give point wise details of use of remote sensing in watershed management. | **07** |
| | | **OR** | |
| **Q.4** | **(a)** | Write in detail the characteristics of surface water and ground water in remote sensing images. | **07** |
| | **(b)** | How remote sensing could be a handy tool in environmental monitoring. | **07** |
| **Q.5** | **(a)** | Write capabilities of the software ENVI used in the field of RS. | **07** |
| | **(b)** | Explain synthetic aperture radar (SAR) with its working. | **07** |
| | | **OR** | |
| **Q.5** | **(a)** | Write capabilities of the software ERDAS used in the field of RS. | **07** |
| | **(b)** | Explain side looking air borne radar system (SLAR) with its working. | **07** |

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