Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – I • EXAMINATION – WINTER • 2014

Subject code: 711206N **Date: 05-12-2014**

Subject Name: Remote Sensing and Its Application

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)**	Define Remote Sensing and Explain its Principles in details.	**07**
	(b)	Explain the terms supervised and unsupervised classification with suitable example.	**07**
Q.2	**(a)**	Enlist Various Applications of Remote Sensing in Water Resources and Explain any one in detail.	**07**
	(b)	Explain the significance of spectral reflectance Curves in Remote Sensing .Draw and discuss the spectral reflectance curves for Soil, Water and vegetation.	**07**
		OR	
	(b)	Enlist and justify the various advantages and disadvantages of Remote Sensing.	**07**
Q.3	**(a)**	How GPS Can be integrated with Remote Sensing. Support your answer with one of the application of water resources management.	**07**
	(b)	Write Short note on : (1) Multi temporal images (2) Image Enhancement	**07**
		OR	
Q.3	**(a)**	Enlist and explain various elements of Image interpretation in brief.	**07**
	(b)	What is SLAR ? Explain the working of SLAR.	**07**
Q.4	**(a)**	Explain various functions of software used in Remote Sensing Support your answer with one of the application of water resources in brief.	**07**
	(b)	Differentiate (1) Active and Passive Remote Sensing (2) Across Track Scanning & Along Track Scanning	**07**
		OR	
Q.4	**(a)**	Enlist various softwares used in Remote Sensing with their salient features and capabilities.	**07**
	(b)	Write Short note on (1) True and False Colour Composite (2) Integration of GIS in Remote Sensing.	**07**
Q.5	**(a)**	Explain various types of sensors and platforms used in remote sensing.	**07**
	(b)	Explain the significance of terms Image Rectification and Ground truth in remote sensing.	**07**
		OR	
Q.5	**(a)**	What do you know about National Remote Sensing Centre (NRSC) and Indian Space Research Organization (ISRO).	**07**
	(b)	Explain the following Terms: (1) Radiometric resolution (2) Spectral Resolution (3) Spatial Resolution	**07**

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