Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER – III (New) • EXAMINATION – WINTER - 2020

Subject Code: 3730507 Date:02/01/2021

Subject Name: Remote Sensing

Time: 10:30 AM TO 12:30 PM Total Marks: 56

Instructions:

1. **Attempt any FOUR questions out of EIGHT questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	What is Remote Sensing? Explain the physics of remote sensing.	**07**
	(b)	Explain the atmospheric influence on spectral response patterns in detail.	**07**
Q.2	**(a)**	Explain energy interaction with surface features in detail.	**07**
	(b)	Explain the types and characteristics of different platforms: INSAT, IKONOS and QUICKBIRD	**07**
Q.3	**(a)**	Explain across track and along track scanners in detail.	**07**
	(b)	What are photographic products? Explain B/W film and their characteristics.	**07**
Q.4	**(a)**	Explain the thermal scanners. Also explain the calibration of the same.	**07**
	(b)	Explain the altimeter LiDAR remote sensing	**07**
Q.5	**(a)**	Compare air-borne and space-borne sensors in detail	**07**
	(b)	What is scattering system? Explain microwave scatterometry.	**07**
Q.6	**(a)**	What is principal of spectroscopy? Further explain image spectroscopy in detail.	**07**
	(b)	Explain the spectral library and radiative models in detail.	**07**
Q.7	**(a)**	Explain opto-mechanical electro-optical sensors in detail.	**07**
	(b)	Explain the basic principles of data processing. Also explain radiometric correction.	**07**
Q.8	**(a)**	Explain the Aerial Laser terrain mapping in detail.	**07**
	(b)	What is derivative spectrometry? Explain in detail.	**07**