

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2024

Subject Code:3164009

Date:20-05-2024

Subject Name:Remote Sensing and GIS

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.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Define (i) RS, (ii) GIS and (iii) GPS	03
	(b) List the various types of Sensors.	04
	(c) Explain the working of Active and Passive Sensors.	07
Q.2	(a) Explain atmospheric window.	03
	(b) Explain the concept of LiDAR.	04
	(c) Differentiate between visual and digital image interpretation	07
	OR	
	(c) Differentiate between multi spectral and hyper spectral imagery.	07
Q.3	(a) Write the full form of any three (i) Albedo, (ii) CIR, and (iii) HDOP	03
	(b) Explain how trilateration is used in global positioning system.	04
	(c) Differentiate between Raster and Vector data.	07
	OR	
Q.3	(a) Define Image Classification.	03
	(b) Explain semi-synchronous orbit for a satellite and its importance as compared to other orbits for a GPS	04
	(c) Explain the various components of GIS.	07
Q.4	(a) List the various map elements in cartography.	03
	(b) Discuss about the different types of artificial satellites	04
	(c) Describe the Components of GPS in details	07
	OR	
Q.4	(a) List the different map elements.	03
	(b) Explain any four types of map projections in short.	04
	(c) Explain geographic co-ordinate system used for spatial referencing	07

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| Q.5 | (a) | Explain the function of DBMS. | 03 |
| | (b) | List at least five applications of GPS. | 04 |
| | (c) | Explain any one type of methods of storing raster data. | 07 |
| OR | | | |
| Q.5 | (a) | Explain the concept of DEM. | 03 |
| | (b) | List the various components of GIS | 04 |
| | (c) | Application of GIS in Transportation Engineering | 07 |
