

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2023****Subject Code:3150617****Date:05-12-2023****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) What are the Elements of Remote Sensing?	03
	(b) “RS & GIS - The IT of Civil Engineering” Explain.	04
	(c) Discuss Application of Remote Sensing in Land use and Land Cover Mapping.	07
Q.2	(a) Explain about Temporal and Spatial resolution.	03
	(b) Differentiate between Active remote sensing and Passive Remote sensing.	04
	(c) Discuss Application of RS/GIS in Watershed Management.	07
	OR	
	(c) Discuss the Role of Spectral Reflectance Curves in Remote Sensing with Neat Sketch, including Spectral Reflectance of Soil, Water and Vegetation.	07
Q.3	(a) Explain error in GIS data.	03
	(b) What are the advantages and limitations of raster and vector data model?	04
	(c) Describe elements of visual image interpretation.	07
	OR	
Q.3	(a) Explain in Detail: Electromagnetic Radiation.	03
	(b) Classify and explain various sensors in detail.	04
	(c) Describe about Digital image processing.	07
Q.4	(a) Enlist Input and Output Devices in GIS.	03
	(b) List out the GIS analysis functions. Describe an overlay analysis.	04
	(c) Enlist various GIS and Remote sensing software packages and explain one from both in detail.	07
	OR	
Q.4	(a) What is a projection? Explain the different types of map Projections.	03
	(b) Explain Neighborhood Operations.	04
	(c) Define GIS? Describe the components of GIS with suitable examples?	07
Q.5	(a) List out various GIS spatial data sources from internet.	03
	(b) Explain procedure of georeferencing in any GIS Software.	04
	(c) Describe the application of GIS in flood hazard management with suitable example	07
	OR	
Q.5	(a) What are the important components of ISRO Bhuvan Geo-portal?	03
	(b) What are the different file formats used to store Raster data and Vector data?	04
	(c) Discuss Application of Remote Sensing in Geology.	07
