

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – SUMMER 2024****Subject Code: 3170617****Date: 22-05-2024****Subject Name: Application of GIS in Civil Engineering****Time: 02:30 PM TO 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.
4. Simple and non-programmable scientific calculators are allowed.

		Marks
Q.1	(a) Write a note on GIS.	03
	(b) Enlist the application of GIS in Civil Engineering.	04
	(c) Explain GIS Use in, (i) Urban planning (ii) hydrology and flood Controlling.	07
Q.2	(a) Explain the procedure of Georeferencing in QGIS.	03
	(b) Explain TIN analysis.	04
	(c) Give classification of map projection and explain cylindrical map projection in detail.	07
	OR	
	(c) Explain how GIS can be utilized in Water Resources management.	
Q.3	(a) List open-source software for GIS.	03
	(b) Explain Spatial overlay operator.	04
	(c) Compare the salient feature of ArcGIS and QGIS.	07
	OR	
Q.3	(a) Difference between spatial and non spatial data operation?	03
	(b) Explain ArcGIS desktop.	04
	(c) Write down full form of QGIS and Salient Feature of QGIS.	07
Q.4	(a) Enlist various spatial analyst tool commands used in ArcGIS.	03
	(b) Differentiate TIN and DEM.	04
	(c) Write a note on GIS post-processing and output generation.	07
	OR	
Q.4	(a) Explain GIS interfaces.	03
	(b) Explain use of GIS as Decision making tool with example.	04
	(c) Explain dynamic Visualization concept in GIS modelling.	07
Q.5	(a) Define Cadastral maps, metadata, and Thematic maps.	03
	(b) Explain linking of spatial and attribute data in GIS for Further analysis.	04
	(c) Explain data accuracy and Data redundancy	07
	OR	
Q.5	(a) Define Topographical maps, attribute data and spatial data.	03
	(b) List out agency which provides free GIS data on internet.	04
	(c) Enlist all the types of data errors. Explain any three.	07
