

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI(NEW) EXAMINATION – WINTER 2022****Subject Code:3161613****Date:15-12-2022****Subject Name:Data Analysis and Visualization****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) Discuss inferential statistics in data analysis.	03
	(b) Write a note on data visualization.	04
	(c) Briefly discuss: linear, non-linear and multi-linear regression methods.	07
Q.2	(a) Discuss probability.	03
	(b) Write a note on outliers with its detection methods.	04
	(c) Explain working of k-nearest neighbor algorithm with suitable example.	07
OR		
	(c) Explain working of random forest algorithm.	07
Q.3	(a) Briefly discuss classification technique.	03
	(b) Explain DBScan method for clustering.	04
	(c) Explain working of average nearest neighbor algorithm.	07
OR		
Q.3	(a) Write a note on nearest neighbor analysis.	03
	(b) Write the differences between clustering and classification.	04
	(c) Briefly discuss k-means clustering algorithm with its pros and cons.	07
Q.4	(a) Write a note on time series analysis.	03
	(b) Briefly discuss use of D3.js for data visualization with its pros and cons.	04
	(c) Write a note on big three principles of data visualization.	07
OR		
Q.4	(a) Discuss: “how to pick the most appropriate design style in data visualization”.	03
	(b) Briefly discuss comparative graphics.	04
	(c) Write a note on D3-DOM selection methods with appropriate examples.	07
Q.5	(a) Write a note on “Plotly” for data visualization.	03
	(b) Explain analyzing spatial data	04
	(c) Explain HTML and DOM in Data Visualization with the help of appropriate example.	07
OR		
Q.5	(a) Write a note on “Tableau Public”.	03
	(b) Explain popular web analytics applications used by data scientist.	04
	(c) Discuss various points to design dashboard for data visualization.	07
