

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VI EXAMINATION – WINTER 2025

Subject Code:3160714

Date:21-11-2025

Subject Name:Data Mining

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) What is data mining? List out the data mining functionality.	03
	(b) Briefly explain the issues in data mining.	04
	(c) Explain frequent item-set mining algorithm with suitable example.	07
Q.2	(a) Explain k-fold cross validation.	03
	(b) Discuss dimensionality reduction techniques.	04
	(c) Explain KDD process.	07
OR		
	(c) Explain data pre-processing functionalities.	07
Q.3	(a) What is spatial data mining? Explain with its application.	03
	(b) Discuss support, confidence, frequent item-set and strong association rules.	04
	(c) Explain decision tree algorithm with suitable example.	07
OR		
Q.3	(a) Explain classification Vs. Prediction.	03
	(b) Explain proximity measures used in distance based classifiers.	04
	(c) Explain ANN.	07
Q.4	(a) What is missing values and noise? How to handle them?	03
	(b) Differentiate linear and logistic regression.	04
	(c) Explain hierarchical and agglomerative method of clustering.	07
OR		
Q.4	(a) What is closed item-set and maximal frequent item-set?	03
	(b) Define accuracy, precision, recall and G-mean.	04
	(c) Discuss spatial Data Mining, Temporal Mining, and Multimedia Mining with their application.	07
Q.5	(a) Briefly explain outlier analysis.	03
	(b) Differentiate clustering and classification.	04
	(c) Explain K-means algorithm.	07
OR		
Q.5	(a) How to evaluate clustering algorithm?	03
	(b) Discuss application of web mining.	04
	(c) Explain PAM algorithm.	07
