GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VII (NEW) EXAMINATION – SUMMER 2022

Subject Code:2170715   **Date:08/06/2022**

Subject Name:Data Mining and Business Intelligence

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)**	List and discuss data mining issues.	**03**
	(b)	Discuss Business Intelligence and its applications.	**04**
	(c)	Draw and explain the three tier architecture of data warehouse.	**07**
Q.2	**(a)**	Briefly discuss the need of data preprocessing.	**03**
	(b)	Write a note on binning method.	**04**
	(c)	Draw and explain each step of KDD process.	**07**
		OR	
	(c)	Briefly discuss normalization techniques using suitable example.	**07**
Q.3	**(a)**	Define: support and confidence.	**03**
	(b)	Elaborate information gain.	**04**
	(c)	Discuss the working of Apriori algorithm to generate frequent item set using suitable example.	**07**
		OR	
Q.3	**(a)**	Discuss concept hierarchy.	**03**
	(b)	Write a note on tree pruning.	**04**
	(c)	List the limitations of the Apriori approach for mining. Briefly describe the techniques to improve the efficiency of Apriori algorithm.	**07**
Q.4	**(a)**	List and discuss the issues of classification.	**03**
	(b)	Briefly explain Linear and Non-linear regression.	**04**
	(c)	Explain working of k-Means clustering algorithm.	**07**
		OR	
Q.4	**(a)**	Discuss : training and test dataset	**03**
	(b)	Compare supervised with unsupervised learning.	**04**
	(c)	Write a note on hierarchical clustering with suitable example.	**07**
Q.5	**(a)**	Write a note on web mining.	**03**
	(b)	Write the differences between OLAP and OLTP.	**04**
	(c)	Explain Hadoop Architecture.	**07**
		OR	
Q.5	**(a)**	Discuss big data analytics.	**03**
	(b)	Write the differences between ROLAP and MOLAP.	**04**
	(c)	Discuss the main features of Hadoop Distributed File System.	**07**

****