Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER–IV • EXAMINATION – WINTER 2017

Subject Code: 2640005   **Date: 06/01/2018**
Subject Name: Data Warehousing and Data Mining (DWDM)
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.**

Q.1	**(a)**	Define and explain the following terms.
		  i. Data Mart
		  ii. Virtual Warehouse
		  iii. Data Sources
		  iv. Snowflake Schema
		  v. Smoothing
		  vi. Clustering
		  vii. Bitmap indexing
			07

	(b)	i. Define Data Warehousing. And explain the key Features of Data Warehousing.	**05**
		ii. Define Full Forms: 1) ETL 2) AOI	**02**
Q.2	**(a)**	What is multidimensional data analysis? Explain its techniques.	**07**
	(b)	Explain KDD process with its steps.	**07**
		OR	
	(b)	Compare between OLTP & OLAP.	**07**
Q.3	**(a)**	Discuss the various ways of handling missing value during data cleaning.	**07**
	(b)	Explain with figure: 3-Tire Data Warehouse Architecture.	**07**
		OR	
Q.3	**(a)**	List and describe the primitives for specifying a data mining task.	**07**
	(b)	What is Apriori Property? Explain Apriori algorithm.	**07**
Q.4	**(a)**	State and explain the Bayesian classification.	**07**
	(b)	Explain the various methods which evaluate the accuracy of a classifier or a predictor.	**07**
		OR	
Q.4	**(a)**	What is decision tree? Describe tree pruning methods.	**07**
	(b)	List and explain describe major issues in data mining.	**07**
Q.5	**(a)**	Discuss the application of Data Mining in Retail Industry.	**07**
	(b)	What all features should a good data mining system include?	**07**
		OR	
Q.5	**(a)**	How the data mining will be used in the telecommunication industry.	**07**
	(b)	What are the techniques used in data reduction? Explain one of them in detail.	**07**

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