

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII • EXAMINATION – WINTER 2013****Subject Code: 171601****Date: 26-11-2013****Subject Name: Data Warehousing and Data Mining****Time: 10:30 TO 01:00****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 Data Mining. Explain various application area of Data Mining Techniques and Knowledge Discovery Process in brief. **07**  
(b) Explain Data Cube with all OLAP Operations in brief. **07**
- Q.2** (a) Explain Following: **07**  
1. Binning method  
2. How to handle missing values in Data Set.  
(b) Explain Three tier architecture of Data Warehouse. **07**
- OR**
- (b) Explain Star, Snowflake, Fact Constellation Schema for Multidimensional Database. **07**
- Q.3** (a) Explain Data Discretization and Concept Hierarchy Generation in brief. **07**  
(b) Explain Market Basket Analysis with its use and Association Rules in brief. **07**
- OR**
- Q.3** (a) Explain Apriori Algorithm for finding Frequent Item-sets. **07**  
(b) Explain Classification with Decision Tree Induction method. **07**
- Q.4** (a) Explain Bayes's Theorem and Naïve Bayesian Classification. **08**  
(b) Differentiate Classification and Clustering. **06**
- OR**
- Q.4** (a) Explain Outlier Analysis Techniques. **07**  
(b) Explain use of Data Mining techniques in Web/Internet Technology. **07**
- Q.5** (a) Explain Following terms: **07**  
1. Information Gain  
2. Mean, Median, Mode.  
(b) Explain Linear Regression with example. **07**
- OR**
- Q.5** (a) Explain k-means and k-medoids algorithm for clustering. **08**  
(b) Explain mining in following Databases with example. **06**  
1. Temporal Databases  
2. Sequence Databases  
3. Spatial Databases and Spatiotemporal Databases.

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