

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- VIIth SEMESTER-EXAMINATION – MAY/JUNE- 2012****Subject code: 171601****Date: 24/05/2012****Subject Name: Data Warehousing and Data Mining****Time: 02:30 pm – 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) What is Data Mining? Explain Data mining as one step of Knowledge Discovery Process. **07**
- (b) What is Cuboid? Explain various OLAP Operations on Data Cube with example. **07**
- Q.2** (a) Explain following Terms: **07**
1. Concept Hierarchy.
 2. Histogram.
- (b) Explain Mean, Median, Mode, Variance & Standard Deviation in brief. **07**
- OR**
- (b) Explain Information Gain, Gain Ratio & Gini Index. **07**
- Q.3** (a) Compare OLTP & OLAP systems. **07**
- (b) Explain Star, Snowflake, Fact Constellation Schema for Multidimensional Database. **07**
- OR**
- Q.3** (a) Explain BUC algorithm for the Computation of Sparse or Iceberg Cube. **07**
- (b) Explain the Classification by Decision Tree Induction Algorithm. **07**
- Q.4** (a) Write & Explain Apriori algorithm for discovering frequent itemsets for mining Boolean Association Rules. **08**
- (b) What is Market Basket Analysis? Explain Association Rules with Confidence & Support. **06**
- OR**
- Q.4** (a) Explain Linear & Non-Linear Regression methods of Predictions. **07**
- (b) Explain k-means and k-medoids algorithm of clustering. **07**
- Q.5** (a) Explain Data Cleaning process for missing values & Noisy data. **07**
- (b) Explain different types of Web Mining with example. **07**
- OR**
- Q.5** (a) Explain different types of data on which mining can be performed. **07**
- (b) Explain Rule-based Classification in brief. **07**
