

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**
