Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA SEMESTER—IV –EXAMINATION –SUMMER-2016

Subject code: 2640005 **Date: 04-06-2016**

Subject Name: Data Warehousing & Data Mining

Time: 10.30a.m. To 01.00p.m. **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 the following terms: **07**

(i) Fact table (ii) Data Warehouse
(iii) Bitmap indexing (iv) Data cube
(v) Outlier (vi) Concept description
(vii) Linear regression

(b) What are the different types of multidimensional schemas? Explain any one schema in detail with proper diagram. **07**

Q.2 **(a)** Explain OLAP operations in the multidimensional data model. **07**

(b) What do you mean by data transformation? Explain different methods of data transformation. **07**

OR

(b) What do you mean by data reduction? Explain different strategies for data reduction. **07**

Q.3 **(a)** Explain the major issues in data mining. **07**

(b) Discuss the variations of the Apriori algorithm to improve the efficiency. **07**

OR

Q.3 **(a)** Draw and explain the data mining architecture. **07**

(b) Explain the Apriori algorithm for finding frequent itemsets without candidate generation. **07**

Q.4 **(a)** Explain the following as attribute selection measure: **07**

(i) Gini Index
(ii) Gain Ratio

(b) State and explain the Bayesian classification. **07**

OR

Q.4 **(a)** Explain the various methods which evaluate the accuracy of a classifier or a predictor. **07**

(b) Describe and explain the partitioning based clustering method. **07**

Q.5 **(a)** Explain the typical requirements of clustering in data mining. **07**

(b) What all features should a good data mining system include? **07**

OR

Q.5 **(a)** Explain the types of data in cluster analysis. **07**

(b) How data mining use in intrusion detection? **07**

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