

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**
