

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. - SEMESTER – II • EXAMINATION – WINTER 2012****Subject code: 1722304****Date: 01-01-2013****Subject Name: Data Warehouse and Data Mining****Time: 10.30 am – 01.00 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)** Define the following terms: **07**
i) Data warehouse ii) Data cube
iii) Data mart iv) Metadata
v) Bitmap indexing vi) Fact table
vii) Dimensional table
- (b)** Draw and explain the three-tier data warehousing architecture. **07**
- Q.2 (a)** Give the comparison between OLTP and OLAP systems. **07**
(b) What are the different types of multidimensional schemas? Explain any one schema in detail with proper diagram. **07**
- OR**
- (b)** List and describe the different issues in data mining. **07**
- Q.3 (a)** Explain KDD process with diagram. **07**
(b) Explain the different types of OLAP servers. **07**
- OR**
- Q.3 (a)** Draw and explain the architecture of a typical data mining system. **07**
(b) Write and explain partition clustering algorithm. **07**
- Q.4 (a)** Write and explain the FP – tree growth algorithm. **07**
(b) Describe the issues regarding classification and prediction. Write an algorithm for decision tree. **07**
- OR**
- Q.4 (a)** Write and explain Apriori algorithm. **07**
(b) Write and explain SPADE algorithm (Sequential Pattern Mining Algorithm). **07**
- Q.5 (a)** Write a short note of followings: **07**
i) Web content mining
ii) Web usage mining
- (b)** Explain different approaches for text mining based on the kinds of data they take as input. **07**
- OR**
- Q.5 (a)** Explain following clustering algorithm in details: **07**
i) CLARA
ii) BIRCH
- (b)** Explain the typical requirements of clustering in data mining. **07**
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