

**B. TECH IN COMPUTER SCIENCE  
ENGINEERING (BTCSEVI)**

**Term-End Examination**

**December, 2012**

**BICS-020 : DATA WAREHOUSING AND MINING**

*Time : 3 hours*

*Maximum Marks : 70*

*Note : Answer any seven questions.*

*Assume suitable missing data, if any.*

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1. (a) Differentiate between OLAP and OLTP. 5
  - (b) "Object - relational data model inherits the essential concepts of object - oriented databases". Justify your answer. 5
  2. (a) Describe why concept of hierarchies are useful in data mining. 5
  - (b) Write the application of data warehouse. 5
  3. (a) Define fact table with examples. 5
  - (b) How you develop a test plan for data warehouse ? Explain. 5

4. (a) Describe the architecture of data warehouse with neat diagram. 5
- (b) Describe star schema with suitable example. 5
5. (a) Describe Qualitative and Quantitative attribute with suitable example. 5
- (b) Define Metadata. 5
6. (a) "Data Mart is a part of data warehouse". Justify your answer. 5
- (b) Describe the strategies for testing data warehouse application. 5
7. (a) Define Linear transformation. How min-max normalization is associated with this transformation ? 5
- (b) Explain Data Classification and prediction in datamining technique. 5
8. (a) What is data reduction ? Define Numerosity and Dimensionality reduction with example. 5
- (b) Given minimum and maximum values for the attribute income are Rs. 12,000/- and Rs. 98,000/- respectively mapping of income to the range is 0.0 to 1.0. The value of income to be transformed is Rs 73,600/-. Find the min-max normalization for it. 5

9. (a) Explain any classification algorithm with suitable example. 5
- (b) Explain "mining single dimension association rules" for transactional databases. 5
10. Write short notes on *any two* : 5x2=10
- (a) Data warehouse architecture
- (b) Data preprocessing
- (c) Data Mining functionalities
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