

**B. TECH COMPUTER SCIENCE AND
ENGINEERING (BTCSVI)**

Term-End Examination

June, 2013

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) | Draw and explain the architecture of typical data mining system. | 5 |
| | (b) | Differentiate OLTP and OLAP. | 5 |
| 2. | (a) | Briefly explain about data cleaning. | 5 |
| | (b) | Why Preprocessing of data is needed ? Explain. | 5 |
| 3. | (a) | List and describe any four primitives for specifying a data mining task. | 5 |
| | (b) | Why concept hierarchies are useful in data mining ? | 5 |
| 4. | (a) | List the major benefits of data mining. | 5 |
| | (b) | What is dimension modelling ? Explain. | 5 |

5. (a) What is ETL (Extraction/ Transformation/ Loading) process ? 5
- (b) What do you mean by relational database, traditional database and advanced database ? 5
6. (a) Define the following terms : 5
- (i) Smoothing,
 - (ii) Snow-flake schema
 - (iii) Facts
 - (iv) Data cube
 - (v) Operational database
- (b) Define the concept of classification. 5
7. What do you mean by data reduction ? What are the strategies of the data reduction ? 10
8. (a) What are multi-dimensional association rules ? 5
- (b) Mention few approaches to mining Multi-level Association Rules. 5
9. (a) How a database design is represented in OLAP systems ? Explain briefly. 5
- (b) What is metadata ? 5

10. Write short notes on *any two*.

5x2=10

- (a) Cluster analysis
 - (b) Data warehouse architecture
 - (c) Data mining techniques.
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