

**B.Tech. – VIEP – COMPUTER SCIENCE AND  
ENGINEERING (BTCSVI)**

00486

**Term-End Examination**

**December, 2014**

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

*Time : 3 hours*

*Maximum Marks : 70*

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**Note :** *Attempt any seven questions. Assume suitable missing data, if any. All questions carry equal marks.*

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1. (a) Explain data mining functionalities. 5  
(b) Describe KDD process. 5
  
2. (a) Differentiate between Fact Constellation and Snow Flake schemas with example. 5  
(b) What is dimension in a multi-dimensional data model ? Explain data cube with suitable example. 2+3=5
  
3. (a) What is concept hierarchy ? How are concept hierarchies useful in OLAP ? 2+3=5  
(b) Explain the various OLAP operations with example. 5

4. (a) Define Data Mart. 5
- (b) What are the various issues we need to consider during data integration ? Explain each. 5
5. (a) What do you mean by Task-relevant data in the context of data mining ? Explain. 5
- (b) Why is it important to have a data mining query language ? 5
6. (a) Generate the frequent itemset and association rules by using Apriori algorithm on the dataset given below with support 20% and confidence 60% : 7
- | <u>TID</u> | <u>Items</u> |        |        |       |
|------------|--------------|--------|--------|-------|
| 100        | Bread        | Cheese | Eggs   | Juice |
| 200        | Bread        | Cheese | Juice  |       |
| 300        | Bread        | Milk   | Yogurt |       |
| 400        | Bread        | Juice  | Milk   |       |
| 500        | Cheese       | Juice  | Milk   |       |
- (b) Explain multilevel association rule mining. 3
7. (a) What is a decision tree ? Explain classification by decision tree. 1+4=5
- (b) Mention the different criteria based on which classification and prediction method can be evaluated. 5

8. (a) Differentiate between classification and clustering techniques. 5
- (b) Explain K-Means clustering technique. 5
9. (a) How do you develop a test plan for data warehouse ? Explain. 5
- (b) Describe the qualitative and quantitative attributes with suitable example. 5
10. Write short notes on any *two* of the following : 5+5=10
- (a) Metadata
- (b) Text mining
- (c) Data warehouse architecture
- (d) Data reduction
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