

B.E. (Computer Engineering) Seventh Semester (C.B.S.)

Elective - I : Data Warehousing & Mining

P. Pages : 2

Time : Three Hours



NRT/KS/19/3598

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.

1. a) Discuss the components of data warehouse in detail. **7**
b) Differentiate between data warehouse and operational database. **7**

OR

2. a) Define and explain Decision Support System (DSS). **7**
b) Draw and explain data warehouse life cycle. **7**
3. a) What is OLAP? What are different operations that can be performed on multidimensional data model. **8**
b) Write OLAP characteristics along with its features. **5**

OR

4. a) Explain the following OLAP servers. **6**
i) ROLAP ii) MOLAP
iii) HOLAP
b) What are multi dimensional database? How do these data store? Give an example. **7**
5. a) Write the following terms with example:- **7**
i) Data Cube ii) Fact table
iii) Dimension table.
b) Describe the STAR schema and SNOWFLAKE schema with neat sketch. **6**

OR

6. a) Explain the various types of data and their use with example. **6**
b) How we can convert the data from table & spread sheets to data cubes? **7**
7. a) Give the classification of datamining system. **7**
b) Draw and explain KDD process. **7**

OR

8. a) Discuss the major issues in Data mining. 7
- b) List and explain various data mining functionalities. 7
9. a) Consider the following transactional data set. Find frequent item set & association rules using apriori algorithm with support = 30% & confidence = 70% 9
- | TID | List of items |
|-------------------|---|
| T ₁₀₀ | I ₁ , I ₂ , I ₅ |
| T ₂₀₀ | I ₂ , I ₄ |
| T ₃₀₀ | I ₂ , I ₃ |
| T ₄₀₀ | I ₁ , I ₂ , I ₄ |
| T ₅₀₀ | I ₁ , I ₃ |
| T ₆₀₀ | I ₂ , I ₃ |
| T ₇₀₀ | I ₁ , I ₃ |
| T ₈₀₀ | I ₁ , I ₂ , I ₃ , I ₅ |
| T ₉₀₀ | I ₁ , I ₂ , I ₃ |
| T ₁₀₀₀ | I ₂ , I ₃ , I ₄ |
- b) Write in brief about constraint based association mining. 4
- OR**
10. a) Define the following terms with example:- 7
- Frequent item sets
 - Closed item sets
 - Support & confidence
- b) Describe about classification by Back propagation. 6
11. a) Illustrate & explain positioning method for clustering. 6
- b) Define and explain cluster analysis & outlier analysis. 7
- OR**
12. a) Explain Grid based methods. 6
- b) How high dimensional data is clustered? Explain in detail. 7
