Avinashilingam Institute for Home Science and Higher Education for Women

Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD (now MoE)
Re-accredited with A++ Grade by NAAC. CGPA 3.65/4, Category I by UGC
Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Examination – November 2025
V Semester

Class : III UG
Major : Computer Applications

Time: 3 Hours
Max. Marks: 100

23BCADE3 Data Mining and Warehousing

Course Outcomes:
CO1: Understand the basic concepts and the functionality of data mining component.
CO2: Apprehend the concepts of Data mining system architectures.
CO3: Analyse the principles of association rules
CO4: Analyse the analytical idea on Classification and prediction methods.
CO5: Apprehend on the concepts of data warehousing.

Part A — 10 x 1 = 10
Choose the correct answer

1. What is the primary goal of data mining? CO1 K1
   a. To store large volumes of data
   b. To manipulate data for better visualization
   c. To extract meaningful patterns and knowledge from large datasets
   d. To secure data from unauthorized access

2. The role of data pre-processing in data mining is _____ CO1 K2
   a. To enhance the security of the data
   b. To clean and transform raw data into an understandable format
   c. To visualize the data
   d. To store the data efficiently

3. The types of data which cannot be used for mining is _____ CO2 K2
   a. Database data b. Data warehouse data
   c. File System data d. Transactional data

4. The main goal of data generalization in data mining is _____ CO2 K3
   a. To identify specific individual data points
   b. To summarize data by replacing low-level details with higher-level concepts
   c. To find anomalies and outliers in the data
   d. To predict future values based on past data

5. Association rule mining in data mining is _____ CO3 K1
   a. Finding interesting correlations between different sets of data
   b. Predicting future trends based on historical data
   c. Classifying data into different categories
   d. Estimating missing values in the dataset

6. The algorithm that is used for mining association rules in large databases using a level-wise approach is _____ CO3 K2
   a. CURE b. BIRCH
   c. DBSCAN d. Apriori

7. The _____ is not a type of decision tree node. CO4 K2
   a. Root node b. Leaf node
   c. Decision node d. Branch node

8. Which of the following is not a type of ensemble learning? CO4 K1
   a. Bagging b. Boosting
   c. K-means clustering d. Random forest

9. The data is stored, retrieved and updated in _____ CO5K2
   a. SMTP b. OLTP
   c. OLAP d. FTP

10. Identify the type of relationship between fact and dimension table in a star schema. CO5K1
   a. one to many b. many to many
   c. one to one d. many to one

Part B — 5 x 6 = 30

Answer ALL questions

Each answer should not exceed 400 words or two pages

11.a. Write on the functionalities of data mining system.	CO1 K2
(or)	
11.b. Discuss classification of data mining system.	CO1 K2
12.a. Explain on analytical characterization.	CO2 K1
(or)	
12.b. Write on Data Mining Query Language(DMQL).	CO2 K2
13.a. Discuss basic concepts of association rule mining.	CO3 K2
(or)	
13.b. Explain multilevel association rules from transaction databases.	CO3 K3
14.a. Describe Bayesian classification with example dataset.	CO4 K2
(or)	
14.b. Explain classification of back propagation with example.	CO4 K3
15.a. Write on schema design in data warehouse.	CO5 K2
(or)	
15.b. Describe OLAP server architecture.	CO5 K1

Part C — 5 x 12 = 60

Answer ALL questions

Each answer should not exceed 800 words or four pages

16.a. Explain on data pre-processing, data cleaning, data Integration and transformation.	CO1 K2
(or)	
16.b. Write on data reduction, data discretization and concept hierarchy generation.	CO1 K3
17.a. Write on data mining primitives and architecture of data mining systems.	CO2 K1
(or)	
17.b. Discuss on mining class comparison and statistical measures.	CO2 K1
18.a. Write on single dimensional Boolean association rules from transaction databases.	CO3 K2
(or)	
18.b. Discuss multi-dimension association rules from relational databases.	CO3 K2
19.a. Describe in detail decision tree induction with example.	CO4 K2
(or)	
19.b. Discuss ensemble methods for classifier accuracy in prediction.	CO4 K2
20.a. Write on data warehouse architecture, characteristics and its components.	CO5 K2
(or)	
20.b. Describe ETL and data modelling.	CO5 K3

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