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BRAINWARE UNIVERSITY

Term End Examination 2025-2026

Programme – Dip.CSE-2022/Dip.CSE-2023

Course Name – Data Warehousing and Data Mining

Course Code - DCSE-PE602B

(Semester VI)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Identify from the following is a benefit of using data warehousing for reporting and analysis?

a) Decreased data availability	b) Limited data accessibility
c) Improved decision-making processes	d) Slower data retrieval
- (ii) Selecting the best option from the following OLAP operations involves viewing data from different angles or perspectives.

a) Slice	b) Dice
c) Drill Down	d) Roll up
- (iii) Identify the data is stored, retrieved & updated in _____.

a) A. OLAP.	b) B.. OLTP.
c) C.SMTP.	d) D. FTP.
- (iv) Select an attributing a data warehouse is an _____.

a) A. Updated end users.	b) B.Containsnumerousnamingconventions and formats
c) C. Organized Subject area.	d) D. Contains only current data.
- (v) Identify the approach commonly used to solve a classification problem

a) Supervised learning	b) Unsupervised learning
c) Reinforcement learning	d) Semi-supervised learning
- (vi) Identify the classification technique constructs a decision tree based on the attributes of the dataset

a) K-Nearest Neighbor	b) Support Vector Machine
c) Decision Trees	d) Naive-Bayes Classifier
- (vii) Selecting the correct one of the following is not a type of Web Mining in the given list.

a) Web Content Mining	b) Web Structure Mining
c) Web Usage Mining	d) Web Searching
- (viii) Identify the sentence that Web Structure Mining match with:

- a) Mining the structure of the internet
- b) Mining the structure of web documents
- c) Mining the structure of web usage patterns
- d) Mining the structure of web servers
- (ix) Identify not a step in the Web Mining process.
 - a) Preprocessing
 - b) Pattern Discovery
 - c) Pattern Analysis
 - d) Pattern Recognition
- (x) State which algorithm is commonly used for document clustering in text mining?
 - a) K-means
 - b) Decision Trees
 - c) Support Vector Machines
 - d) Naive Bayes
- (xi) Select the role of distance metrics in clustering algorithms.
 - a) Measure dissimilarity between data points
 - b) Determine optimal number of clusters
 - c) Optimize cluster centroids
 - d) Assess clustering quality
- (xii) Identify the significance of outlier detection in clustering.
 - a) Ensure the quality of clusters
 - b) Improve computational efficiency
 - c) Enhance interpretability
 - d) Optimize clustering parameters
- (xiii) Identify a technique for dimensionality reduction.
 - a) PCA (Principal Component Analysis)
 - b) Decision Trees
 - c) K-Means
 - d) Support Vector Machines
- (xiv) Select a key issue in hierarchical clustering.
 - a) Determining optimal number of clusters
 - b) Handling noisy data
 - c) Managing computational complexity
 - d) Dealing with non-linear data
- (xv) Identify the primary goal of classification. A) Predicting continuous values B) Sorting data into groups based on similarity
 - a) Predicting continuous values
 - b) Sorting data into groups based on similarity
 - c) Reducing the dimensionality of data
 - d) Clustering data based on features

Group-B

(Short Answer Type Questions)

3 x 5=15

- 2. Discuss main objective of classification. (3)
- 3. Discuss the application of text mining in real-world scenarios. (3)
- 4. Identify the key steps involved in concept hierarchy generation. (3)
- 5. Define Data Warehouses and their types in detail. (3)
- 6. Discover the various techniques of data summarization in a data warehouse with a neat diagram. (3)

OR

Analyse and design a data warehouse schema for an extensive, complex data set. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

- 7. Write about the challenges associated with mining association rules in large databases. (5)
- 8. Explain Data Warehouses with their types in detail. (5)
- 9. Explain the Evolution of Data Warehouses in detail. (5)
- 10. Compare and Discuss the Key Concepts of Dataware House components in real-world (5)
- 11. Differentiate fact and Dimensional table in Dataware house with example (5)
- 12. Illustrate the main objectives of text mining. (5)

OR

Compare and contrast agglomerative and divisive methods in hierarchical clustering. (5)