



AAH-003-003621 **Seat No. _____**

B. C. A. (Sem. VI) (CBCS) Examination

March / April - 2016

CS-32 : Data Warehousing & Data Mining

Faculty Code : 003

Subject Code : 003621

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70]

1 Attempt the following MCQs. : **20**

- (1) A data warehouse is like a container of all the data needed to carry out _____ operations.
(A) Business Intelligence
(B) Information Intelligence
(C) Artificial Intelligence
(D) Testing Intelligence
- (2) In 1962, Rosenblatt introduced the first machine learning model is called _____
(A) TRANSFORMATION (B) DECISION
(C) PERCEPTION (D) REGRESSION
- (3) The data cannot be _____ in the data warehouse in real time.
(A) Shifted (B) Edited
(C) Inserted (D) Deleted
- (4) The _____ manage performs all the operation associated with the management of data in warehouse.
(A) data mart manager (B) query manager
(C) load manager (D) warehouse manager
- (5) DSS stand for _____
(A) decision support system
(B) decide support system
(C) divisive system support
(D) division support system
- (6) Which of the following is a type of data mart structure?
(A) star join (B) snowflake
(C) (A) and (B) (D) none

(7) _____ use a "Divide and Conquer" technique to split the problem search space into subsets.

(A) Data Mart (B) Decision tree
(C) Histogram (D) FP -Tree

(8) Snowflake structure is the _____ of the dimension table in STAR SCHEMA.

(A) Generalization (B) Centralization
(C) Normalization (D) Decentralization

(9) _____ Key is used as the primary key in the dimension table.

(A) Primary (B) Reference
(C) Foreign (D) Surrogate

(10) _____ is an iterative clustering algorithm in which items are moved among sets of clusters until the desired set is reached.

(A) Divisive Clustering (B) K- Means Clustering
(C) Nearest Neighbor (D) Apriori

(11) OLAP performs _____.
(A) analysis (B) transaction
(C) schema (D) multidimensional

(12) Rejection of the null hypothesis causes another hypothesis, called the _____ hypothesis.

(A) additive (B) alternative
(C) collective (D) supportive

(13) OLAP store _____.
(A) current data (B) historical data
(C) both (A) and (B) (D) none

(14) Which of the following part consist by Genetic Algorithm?

(A) Starting set (B) Mutation algorithm
(C) Fitness Function (D) All of above

(15) In vertical partitioning mode, HOLAP stores aggregation in _____ and detailed data in _____.

(A) ROLAP, MOLAP (B) OLAP, MOLAP
(C) MOLAP, ROLAP (D) ROLAP, OLAP

(16) In association analysis the antecedent and consequent are set of items that are _____.

(A) joint (B) disjoint
(C) common (D) associated

(17) The _____ algorithm is well known association rule algorithm.

(A) Apriori (B) Sampling
(C) Pincer -Search (D) FP - Tree Growth

3 (a) Attempt the following : (any **three**) 6

- (1) Give full name of following :
 - (1) DBSCAN
 - (2) WEKA
 - (3) ARFF
 - (4) CURE
- (2) What is Dendrogram ?
- (3) Define Linkage and its types.
- (4) Explain Diameter in terms of clustering techniques.
- (5) What is MSE?
- (6) Define surrogate key. Where it is used?

(b) Attempt the following : (any **three**) 9

- (1) Write a Short note: Machine Learning Data Mining Technique.
- (2) Explain Partition Algorithm.
- (3) Describe usage and security in a DATA MART
- (4) Explain architectural components of Data Warehouse.
- (5) Describe data transformation in detail.
- (6) Give difference: Supervised V/s Unsupervised Data mining techniques.

(c) Attempt the following : (any **three**) 10

- (1) Explain K – Means Clustering Technique.
- (2) In Online Shopping applications, How Data Mining is useful? Highlight the major points of case study.
- (3) Short Note : KDD Process
- (4) Explain different phases of data mining process.
- (5) Attempt following :
 - (a) List the steps of Divisive Clustering.
 - (b) Calculate average distance of given matrix.
 - (c) Clusters it using divisive clustering algorithm.
 - (d) Create two clusters.

$$\begin{array}{cccc}
 a_1 & a_2 & a_3 & a_4 \\
 a_1 & \begin{bmatrix} - & 3 & 5 & 8 \end{bmatrix} \\
 a_2 & \begin{bmatrix} 3 & - & 2 & 1 \end{bmatrix} \\
 a_3 & \begin{bmatrix} 5 & 2 & - & 4 \end{bmatrix} \\
 a_4 & \begin{bmatrix} 8 & 1 & 4 & - \end{bmatrix}
 \end{array}$$
