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	D and Roll No. to be filled in your Answer Books)
Paper ID : 214407	Roll No.

M.C.A.

Theory Examination (Semester-IV) 2015-16 DATA WAREHOUSING & MINING

Time: 3 Hours Max. Marks: 100

Note: Attempt questions from all Sections as per directions.

Section-A

Attempt all parts of this section. Answer in brief. $(10 \times 2 = 20)$

- 1. (a) What do you mean by Data cleaning?
 - (b) Explain the use of Neural network in Data Mining.
 - (c) What is clustering? How clustering is different from classification?
 - (d) Describe the basic operations performed on data cube.

- (e) What is data-mart? Explain its role in Data Warehousing.
- (f) What are the one, two and three dimensional data? Explain.
- (g) Discuss various types of web mining techniques.
- (h) What are outliers? How outliers analysis can be done?
- (i) Write the differences between Data Warehouse and Database System.
- (j) How is Data Mining different from KDD?

Section-B

2. Attempt any five questions from this section.

 $(10 \times 5 = 50)$

- (a) What is OLAP? Differentiate among OLAP, ROLAP and MOLAP servers.
- (b) How is nearest neighbour prediction algorithm used in Data Mining?

- (c) Determine a Clustering method suitable for finding clusters in large database. Explain its working.
- (d) Draw and explain the three-tier architecture of Data Warehouse model.
- (e) What is a Decision tree? Explain the classification by decision tree induction. Describe the tree pruning.
- (f) Explain the mining multidimensional association rules from relational databases and Data Warehouses.
- (g) What do you mean by neural network? Explain multilayer Feed-Forward neural network. Differentiate between Feed-Forward and Feedback system.
- (h) How frequent item set are generated using Apriori algorithm? Explain the method.

Section-C

Note: Attempt any two questions from this section.

 $(15 \times 2 = 30)$

3. (i) How ID3 algorithm create a decision on given database? Assume a database to explain your answer.

- (ii) How association rules can be formed on hierarchal data? Discuss various approaches.
- 4. (i) What is hierarchal clustering method? Explain its advantages over non-hierarchal clustering method.
 - (ii) Explain K-means clustering algorithm.
- 5. Write short notes on any three of the following:
 - (i) Data Mining Interfaces
 - (ii) Data Visualization
 - (iii) Testing of Data Warehouses
 - (iv) Data Transformation Tools