

MCA
(SEM IV) THEORY EXAMINATION 2017-18
DATA WAREHOUSING AND MINING

Time: 3 Hours

Total Marks: 70

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

- 1. Attempt *all* questions in brief. 2 x 7 = 14**
- a. Define Data Warehouse.
 - b. What is Client Server Computing?
 - c. List various functionalities of Data Mining.
 - d. Differentiate between Inliers and Outliers.
 - e. How to handle missing values for data cleaning?
 - f. Define Bayes Theorem.
 - g. Define Numerosity Reduction.

SECTION B

- 2. Attempt any *three* of the following: 7 x 3 = 21**
- a. Explain Multidimensional Data Model with an example.
 - b. Explain 2-tier client server architecture. What are its characteristics.
 - c. What are different stages of Knowledge Discovery (KDD). Explain with the help of diagram.
 - d. What do you mean by Association Rules? For what purposes these are being used? Explain with an example.
 - e. List and explain various types of OLAP servers.

SECTION C

- 3. Attempt any *one* part of the following: 7 x 1 = 7**
- (a) Name four distinguishing characteristics of Data Warehouse architecture. Describe each component briefly.
 - (b) Differentiate between Star Schema & Snow Flake Schema.
- 4. Attempt any *one* part of the following: 7 x 1 = 7**
- (a) Describe various phases of data transformation. List the important types of transformation engines and explain any one of them.
 - (b) Why business organizations consider data warehousing as a critical need? Write and explain various phases involved in building of data warehouse.
- 5. Attempt any *one* part of the following: 7 x 1 = 7**
- (a) Explain ETL process in detail.
 - (b) Give a brief description of the following:
 - 1) Binning
 - 2) Regression

6. Attempt any *one* part of the following:

7 x 1 = 7

- (a) What do you mean by neural network? Explain multilayer Feed-Forward neural network.
- (b) What do you mean by decision tree? Describe ID3 algorithm of decision tree.

7. Attempt any *one* part of the following:

7 x 1 = 7

- (a) What is Web mining? What are the classification factors of web mining ?
- (b) Write short notes on the following:
 - 1) Slice & Dice Operation
 - 2) Testing of Data Warehouse

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