

30/05/2019

Roll No. ....

Total Pages : 03

BT-6/M-19

36158

DATA WAREHOUSE AND DATA MINING  
IT-310N

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. What is Data Warehouse ? Elaborate the today's development environment in data warehouse. Draw and explain each component of conceptual data architecture.

15

2. State binary, ordinal and nominal data types along with their uses. Explore the crucial decisions as offered by Ralph Kimball (nine-step-method) in designing a data warehouse.

15

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## Unit II

3. How to design business information warehouse ? Elaborate the stages for implementing a data warehouse. What are the obstacles faced during implementation ? 15
4. What is meant by Data Warehouse Management ? State the organizational implications of data warehouse. How do you look the future of data warehouse ? 15

## Unit III

5. What are the motivations behind data mining ? List and explain data mining functionalities. How data mining system integrates with data warehouse ? 15
6. (a) Define Data Mining. What important fact justifies a pattern to be an interesting ? How data mining systems are classified according to techniques adopted ?  
(b) What is Data Cube ? Write the phases for development of data cube technology. Differentiate between OLAP and OLTP. 8+7=15

#### Unit IV

7. (a) What is meant by data reduction ? How PCA is implemented ?
- (b) Briefly explain generalization, summarization and aggregation with suitable example.
- (c) Why and how do we calculate expected information, entropy and information gain ?  $3 \times 5 = 15$
8. (a) Define support, confidence and itemset in association rule mining.
- (b) Write the different Boolean association rules generated from transactional databases.
- (c) What is meant by mining class comparison ? Elaborate.  $3 \times 5 = 15$