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Sub Code: ECS019

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B. TECH.
(SEM-II) THEORY EXAMINATION 2017-18
DATABASE MANAGEMENT SYSTEM AND DATA MINING AND
WAREHOUSING

Time: 3 Hours**Total Marks: 100****Note:** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief. $2 \times 10 = 20$**

- a. Explain DML.
- b. Explain Normalization.
- c. What is an instance and schema of the database?
- d. What is Joins & Unions?
- e. Explain second normal form.
- f. What do you mean by data mining
- g. Explain OLAP.
- h. Define super key concept.
- i. Explain data integrity.
- j. Explain any two SQL commands.

SECTION B**2. Attempt any three of the following: $10 \times 3 = 30$**

- a. What do you mean by Multivalued Dependency and Join Dependency? Discuss with suitable example.
- b. Discuss the data types that are allowed for SQL attributes. Explain cursors in SQL with suitable example.
- c. Explain Data warehouse architecture. Briefly describe Four distinguishing characteristics of data warehouse architecture.
- d. Differentiate between database System and File System. Explain the database system concept & architecture in detail.
- e. Discuss the following terms (i) Schema (ii) Instances (iii) Data Warehousing (iv) Metadata

SECTION C**3. Attempt any one part of the following: $10 \times 1 = 10$**

- (a) Explain ER model with various actions for ER diagram with suitable example.
- (b) Explain Generalization and Aggregation with one example.

4. Attempt any one part of the following: $10 \times 1 = 10$

- (a) Explain BCNF with suitable example.
- (b) What do you mean by distributed DBMS? Also discuss the distributed DBMS implementation.

- 5. Attempt any one part of the following:** **10 x 1 = 10**
- (a) Write short notes on following (i) Data Extraction (ii) Data Cleanup (iii) Referential Integrity (iv) Relational Algebra
 - (b) Explain how metadata is critical for data warehouse development and administration. Also discuss the concept that metadata is like a nerve center.
- 6. Attempt any one part of the following:** **10 x 1 = 10**
- (a) Define the three level architecture of data base management system. What is the role of Database Administrator?
 - (b) How mapping of data warehouse can be done to a multiprocessor architecture.
- 7. Attempt any one part of the following:** **10 x 1 = 10**
- (a) Explain the DBMS schemas for decision support system in detail.
 - (b) What are the different parallel server hardware options? List the benefits and limitations of any one of these options.