Printed pages: 02 **Sub Code: ECS019**

Paper Id | | | | | **Roll No.** | | | | | | | | | | |

B. TECH.
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 x 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 x 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 x 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 x 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.