**Printed Pages : 3**

**ECS019**

(Following Paper ID and Roll No. to be filled in your Answer Book)

**PAPER ID : 121651**

**Roll No.**

# B. Tech.

## (SEM. VI) THEORY EXAMINATION, 2014-15

## DATABASE MANAGEMENT SYSTEM, DATA MINING AND WAREHOUSING

Time : **3** Hours] [Total Marks : **100**

**Note:** Attempt all Questions.

**1** Answer **any four** parts. **4×5=20**

(a) Explain the following DDL statements – Create, Alter and Drop.

(b) List the advantages and disadvantages of database systems.

(c) Explain the integrity rules to be satisfied by any relation. Give examples.

(d) Explain the tasks of a database administrator.

(e) What are main differences between File Processing System and DBMS?

(f) Differentiate between Specialization, Generalization and Aggregation.

2 Answer **any two** parts. **2×10=20**

(a) What are Views? How is a View defined? Explain various types of Joins.

(b) A University has many departments. Each department may have many full-time and part-time students. Each department may float multiple courses for its own students. Each department has staff members who may be full time or part-time. Draw an ER-Diagram for the above; also show generalization, specialization hierarchy for the University.

(c) Differentiate among candidate key, primary key, super key and foreign key. Define triggers with the help of an example and explain its purpose.

3 Answer **any two** parts. **2×10=20**

Consider the following schema for Project database.

Project (Project_No, Project_Name, Project_Manager)

Employee(Emp_No, Emp Name)

Assigned_To(Project_No, Emp_No)

a) Give SQL DDL definitions of the above mentioned database.

(b) Write the following queries in SQL and relational algebra.

(i) Get the details of employees working on both projects '131' and '132'.

(ii) List the names of employees working on Project 'Pl' and not on 'P2'.

(iii) Delete the record of employee whose employee no is `E 1' .

(c) Discuss various serializibility issues.

4 Compare and Contrast **any two**. **2×10=20**

(a) OLTP and OLAP

(b) ROLAP and MOLAP

(c) Fact data and dimension data.

5 Answer **any two** parts. **2×10=20**

(a) Explain the database architectures for parallel processing.

(b) Differentiate between Dataware house and Data Mining. What is metadata? Why is it used?

(c) Give a brief overview of DBMS vendors for parallel database processing.