



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

PAPER ID : 121651

Roll No.

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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 'P1' and not on 'P2'.

- (iii) Delete the record of employee whose employee no is 'E 1' .
- (c) Discuss various serializability 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.
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