



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
&
DEPARTMENT OF INFORMATION TECHNOLOGY
CONTINUOUS ASSESSMENT TEST – I**

**Subject: Database Management Systems
Sub. Code: CS8492
Year/ Sem: II/IV Branch: CSE**

**Date/Session: 24.3.2021/FN
Time duration: 1 ½ hrs Marks: 50**

Answer All Questions

PART – A (5x2=10Marks)

1. Define Entity – Relationship Model. Remember (CO1)
2. Discuss about relational data model. (Understand) (CO1)
3. What is normalization ? Remember (CO2)
4. What is Transitive Functional Dependency? Remember (CO2)
5. List the DDL Statements. Remember (CO3)

PART – B (2X13=26 Marks)

6. (a) With the help of the block diagram, describe the basic architecture of a database management system.
Remember (CO1) (13).

OR

- (b) (i) Draw an E-R diagram for a banking enterprise with almost all components and explain.
Remember (CO1) (13)

7. (a) (i) Briefly discuss about the functional dependency concepts. (7) (Understand) (CO2)
(ii) What is Normalization? Explain the need for normalization.(6) (Understand) (CO2)

OR

- (b) Describe in detail about the following with suitable examples.
(i) Non loss decomposition. (7) Remember (CO2)
(ii) Lossy decomposition. (6) Remember (CO2)

PART C (1x14=14 MARKS)

8. (a) Consider the relational table given below and assess about the following SQL queries. Evaluating (CO5)
Employee (Empno, Name, Department, Salary).

- (i) Create the Employee Table and insert some sample records. (4)
- (ii) list all the employees whose name starts with the letter 'L'. (2)
- (iii) Find the maximum salary given to employees in each department. (2)
- (iv) Find the number of employees working in 'accounts' department. (2)
- (v) Find the second maximum salary from the table. (2)
- (vi) Find the employee who is getting the minimum Salary. (2)

OR

(b) Consider the employee database and Write the SQL Queries for the following.

employee(empname,street,city)

works(empname,companyname,salary)

company(companyname,city)

manages(empname,management)

1) Find the names of all employees who work for First Bank Corporation.(4)

2) Find the names, street addresses and cities of residence of all employees who work for First Bank Corporation and earn more than 200000 per annum.(5)

3) Find the names of all employees in this database who live in the same city as the company for which they work.(5)

COURSE OUTCOME(s):

CO1: Discuss the concepts of database to apply the Relational, ER model for design and SQL for implementation of the database.

CO2: Recognize and identify the use of normalization and functional dependencies to refine the database system

CO3: Execute various SQL queries for the Transaction Processing & Locking using concept of Concurrency control.

CO4: Evaluate the query processing techniques for the optimization of SQL queries

CO5: Implement the indexing and hashing techniques for the organisation of database records

CO6: Appraise how the advanced databases differ from the traditional databases

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