

18U414

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Name:

Reg. No.....

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2020

(CUCBCSS-UG)

(Regular/Supplementary/Improvement)

CC17U BCS4 B05 - DATA BASE MANAGEMENT SYSTEM AND RDBMS

(Core Course)

(2017 Admission onwards)

Time: Three Hours

Maximum: 80 Marks

Section A

Answer *all* questions. Each question carries 1 mark.

1. How to represent Weak Entity and Derived attribute in ER- Diagram?
2. What is a database state?
3. What is meant by a Recursive Relationship?
4. Define lock.
5. Consider the following Schema Employee = (Emp_Id, Emp_Name, Emp_Salary).
Write a SQL query to find the second highest salary from the relation Employee.
6. Distinguish between Degree and Cardinality.
7. What is functional dependency?
8. What is Dirty Read Problem?
9. What is the significance '%' and '_' wild cards with SQL like operator?
10. What is the difference between Function and Stored procedure?

(10 x 1 = 10 Marks)

Section B

Answer *all* questions. Each question carries 3 marks.

11. What do you mean by data independence?
12. What are the five main functions of a database administrator?
13. What is a transaction? Distinguish commit and rollback statements.
14. Write a short note on Set-Difference operation.
15. Describe about BCNF.

(5 x 3 = 15 Marks)

Section C

Answer any *five* questions. Each question carries 5 marks.

16. What are different types of statements supported by SQL?
17. What is sub-query? Explain different types of sub-queries.

18. Explain 1NF,2NF,3NF with examples?
19. Describe about primary key, super key, candidate key with an example.
20. Explain integrity constraints check, not null, unique and referential integrity.
21. List the different types of joins in SQL.
22. What is cardinality of relations? Give examples.
23. Describe ACID properties of a transaction.

(5 x 5 = 25 Marks)

Section D

Answer any *three* questions. Each question carries 10 marks.

24. Explain Three level schema of a DBMS with a neat diagram.
25. Explain different concurrency control problems in DBMS.
26. (a) Describe in detail about Trigger and give an example.
(b) Explain the concept of stored procedure with an example.
27. (a) Explain aggregate functions in SQL with examples.

(b) Consider the following schema

Suppliers(*sid*: integer, *sname*: string, *address*: string)

Parts(*pid*: integer, *pname*: string, *color*: string)

Catalog(*sid*: integer, *pid*: integer, *cost*: real)

The Catalogue relation lists the prices charged for parts by Suppliers. Write the following

queries in SQL:

1. Find the *pnames* of parts for which there is some supplier.
 2. Find the *snames* of suppliers who supply every red part
 3. Find the *sids* of suppliers who supply a red part or a green part.
 4. For every supplier that supplies a green part and a red part, print the name and price of the most expensive part that she supplies
28. (a) Describe in detail about views in DBMS.
(b) Explain set operations in SQL.

(3 x 10 = 30 Marks)
