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Third Semester B.Sc./B.C.A. Degree Examination, March 2022

Career Related First Degree Programme under CBCSS

Group 2(b) – COMPUTER SCIENCE/COMPUTER APPLICATIONS

Core Course

CS 1345/CP 1343 – DATABASE MANAGEMENT SYSTEMS

(2019 & 2020 Admission)

Time : 3 Hours *Max. Marks : 80*

SECTION – A [Very Short Answer Type]

(One word to maximum of one sentence. Answer **all** questions)

1. What is schema?
2. Expand SQL.
3. What is universe of discourse?
4. Define database.
5. What is a key?
6. Which DDL command is used to delete a table?
7. What is cardinality?

P.T.O.

8. What is DML?

9. What is a record?

10. What is ORACLE?

(10 × 1 = 10 Marks)

SECTION – B [Short Answer]

(Not to exceed one paragraph. Answer **any eight** questions)

11. How do application programmers interact with database?

12. Differentiate between single user system and multi-user system.

13. What are database anomalies?

14. Write short note on RDBMS.

15. How is a relation is mathematically defined?

16. List any four advantages of DBMS.

17. Write a note on SQL.

18. What is the use of SELECT statement?

19. Write SQL query for creating a table with the name STUDENT having attributes ROLLNO, NAME and DEPARTMENT where ROLLNO should be used to identify each student uniquely.

20. Write the difference between UNIQUE and DISTINCT constraints.

21. What is the advantage of interactive SQL?

22. What is subquery? Write an example for a subquery in SQL.

23. What do you mean by logical data independence?

24. What is equi join?

25. What is trivial dependency?

26. Write a note on loseless decomposition.

(8 × 2 = 16 Marks)

SECTION – C [Short Essay]

(Not to exceed **120** words. Answer **any six** questions)

27. Write a note on three level architecture.

28. Discuss on cardinality of relations in DBMS.

29. Explain the set operations union, intersection and difference on relations.

30. What do you mean by data independence? Write a note on types of data independence.

31. What is specialization in E-R model? How does it differ from generalization?

32. Explain different types of attributes with proper examples.

33. What is the use of ALTER statement? What are the changes we can apply to a table using ALTER statement?

ADD
DROP
MODIFY

34. Explain aggregate functions in detail.

AVG, SUM, COUNT, MIN, MAX

35. What do you mean by database integrity?

36. What do you know about lossy decomposition?

37. Draw E-R diagram for a student database.

38. Why is database security considered important?

(6 × 4 = 24 Marks)

SECTION – D [Essays]

Answer **any two** questions.

39. Discuss on the evolution of database system.

40. Describe the relational operators (selection, projection, equi join) with proper examples.

41. Who is a DataBase Administrator? Explain the roles of DBA in detail.

42. What is E-R model? Explain in detail.

43. Explain different types of normalization done in databases.

44. What is the use of DDL statements? Write examples for CREATE, ALTER, DROP statements for a table and explain them.

(2 × 15 = 30 Marks)