SIVS 189 A-15
B.Sc. IVth Semester Degree Examination
Computer Science
(Database Management System)
Paper - CS-401

Time : 3 Hours   Maximum Marks : 80

Section - A

I   Answer **All** questions.   (Marks : 15×1=15)

1. Define database

2. What is Foreign key?

3. Define entity

4. What is weak entity?

5. What is the use of commit command?

6. Write any two aggregate functions of SQL

7. Write the general syntax of UPDATE command in SQL

8. Define Tuple

9. What is relational Algebra?

10. Why are keys necessary?

11. Define BCNF.

12. Give any two examples for derived attribute types.

13. What is Trivial functional dependency?

14. What is meant by transaction rollback?

15. What is time stamp?

Section -B

II Answer any **Five** of the following questions. **(Marks : 5×5=25)**

16. What is data independence? Explain physical and logical data independence.

17. Explain the various key constraints of relational model.

18. How does PROJECT operation differs from SELECT operation. Explain with an example.

19. What is Join? Explain the various types of Joins in SQL with an example.

20. Give the general syntax of CREATE TABLE. Write an SQL Query to create a table.

21. What is functional dependency? Explain full and partial functional dependency.

22. Write a short note on Database recovery techniques.

Section - C

III Answer any **Four** of the following. **(Marks : 4×10=40)**

23. Discuss the three layer architecture of a DBMS.

24. Explain ER-diagram Notations with their meaning.

25. Explain the following

    a) DDL

    b) DML

26. Explain relational algebra operations.

27. Define normalization. Explain 2NF and 3NF with an example

28. Explain Database security and Authorization.

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