BCS41 — DATA BASE MANAGEMENT SYSTEM
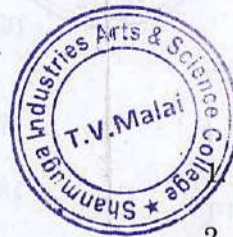
Time : Three hours   Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define entity.

2. What is the use of ER diagrams?

3. What is Tuple?

4. List some operators used in Relational Calculus.

5. What is an integrity constraint?

6. Why do we need normalization?

7. SQL is procedural language (True/False).Explain.

8. Give examples for nested queries.

9. State the purpose of PL/SQL.

10. Define stored procedure.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) What are the advantages of DBMS?

Or

(b) What is the difference between a flat file and a relational database?

12. (a) Explain the importance of Null values in Relational Model.

Or

(b) Write some extended relational algebra operations.

13. (a) Write short note on Boyee Codd Normal form.

Or

(b) Find the highest normal form of a relation $R(A, B, C, D, E)$ with functional dependency set $\{A-> D, B-> A, BC-> D, AC-> BE\}$.

14. (a) Explain querying from multiple tables.

Or

(b) What are the DCL commands in SQL? Explain.

15. (a) Explain about PL/SQL function.

Or

(b) Write the types of cursors used in PL/SQL.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Draw the compare relational and hierarchical approaches of data models.

17. Explain the relational models in detail.

18. Explain 3NF and BCNF with examples.

19. Give the various numeric functions used in SQL.

20. Describe PL/SQL block structure with examples.

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