

Term-End Examination : January-2026

Course Name : MCA

Date : 17-02-2026

Subject Name : Relational Database Management System

Time : 11:30AM TO 01:45PM

Subject Code : MCA/MCAOL-102

Max Marks : 70

Section A

Q.-1. Respond to any three of the following questions in brief. (30)

- (1) Explain the three-level DBMS architecture with a neat diagram. Discuss how data abstraction is achieved in this architecture.
- (2) Explain hot backup and cold backup. Compare them and justify where each type is appropriate.
- (3) Describe the Oracle recovery process in detail. Explain the role of control files, redo logs and data dictionary views during recovery.
- (4) Explain different types of cursors. Distinguish between implicit and explicit cursors with suitable examples.
- (5) Explain parameterized cursors and cursor FOR loops. Illustrate their usage with suitable PL/SQL programs.

Section B

Q.-2. Write short notes on any four of the following topics. (20)

- (1) Explain the advantages of DBMS over the files system
- (2) Explain weak relationships and strong relationships with examples.
- (3) Explain the different types of objects contained in a user's schema.
- (4) Explain the advantages of packages.
- (5) Write a short note on Parameterized Cursor
- (6) Write short note on Predefined (Named) Exceptions

Section C

Q.-3. Choose the correct option (A, B, C, or D). (10)

- (1) The relational data model was proposed by _____.
A) E. F. Codd
B) Charles Bachman
C) Edgar Frank
D) Ted Codd**
- (2) An attribute that uniquely identifies an entity is called _____.
A) Composite key
B) Primary key
C) Foreign key
D) Candidate key**
- (3) The cardinality ratio 1:N means _____.
A) One entity related to one
B) One entity related to many
C) Many related to many
D) Many related to one**
- (4) Entity integrity rule states that _____.
A) Foreign key must be NULL
B) Primary key cannot be NULL
C) Attribute must be numeric
D) No duplicate tables**
- (5) The protocol used to maintain consistency in distributed transactions is _____.
A) Locking protocol
B) Two-phase commit protocol
C) Deadlock protocol
D) Fragmentation protocol**
- (6) A backup taken when the database is closed is called _____.
A) Hot backup
B) Cold backup
C) Logical backup
D) Physical backup**

(7) In ARCHIVELOG mode, redo logs are ____.

- A) Overwritten
- B) Copied and saved
- C) Ignored
- D) Deleted

(8) Which SQL command is used to remove a table permanently?

- A) DELETE
- B) TRUNCATE
- C) DROP
- D) REMOVE

(9) Which keyword is used to display output in PL/SQL?

- A) PRINT
- B) OUTPUT
- C) DBMS_OUTPUT.PUT_LINE
- D) DISPLAY

(10) PRAGMA EXCEPTION_INIT is used to ____.

- A) Declare exception
- B) Rename exception
- C) Map error code to exception
- D) Raise exception

Section D

Q.-4. State whether the following statements are true or false.

(10)

- (1) End users interact directly with physical data storage in a DBMS.
- (2) Data independence means changing data without affecting application programs.
- (3) Generalization is a bottom-up approach in ER modeling.
- (4) Second Normal Form removes transitive dependency.
- (5) The SELECT statement is used to insert records into a table.
- (6) A VIEW stores data physically in the database.
- (7) SQL supports nested queries inside SELECT statements.
- (8) User profiles are used to control resource usage and password policies.
- (9) The FETCH statement retrieves one row at a time from a cursor.
- (10) SQLCODE returns the error message of the last exception.
