

(3 Hours)

[Total Marks: 100]

- N.B: (1) All questions are compulsory.
 (2) Figures to the right indicate marks.
 (3) Draw diagrams wherever necessary.
 (4) Mixing of sub-questions is not allowed.

Q1. Attempt the following (any FOUR): (20)

- (A) ARIES Algorithm
- (B) PL/SQL Data Types
- (C) For Loop
- (D) Agile development
- (E) Black box testing
- (F) Function points

Q2. Attempt the following (any FOUR): (20)

- (A) Explain the working of locking scheduler.
- (B) Distinguish between serial and serializable schedule with example.
- (C) List and explain ACID properties with example.
- (D) How concurrency control is achieved with the help of timestamps?
- (E) Explain in brief: Conflict and View Serializability.
- (F) What is functional dependency? Discuss its types.

Q3. Attempt the following (any FOUR): (20)

- (A) Explain CASE statement. Give its types. Justify your answer with suitable example.
- (B) State and explain Set operators.
- (C) What is the use of explicit cursors? How it is implemented?
- (D) Define COMMIT, ROLLBACK and SAVEPOINT. How it is used in transaction management?
- (E) Create table Employees (Emp_ID, Emp_Name, Emp_City, Emp_Salary). Write a PL/SQL block to insert 5 records into the table. Commit your changes and display the table values using user defined variables.
- (F) Explain the concept of GOTO statement with example.

Q4. Attempt the following (any FOUR): (20)

- (A) Explain the duties of project manager.
- (B) Write a note on software metrics.
- (C) What is COCOMO?
- (D) Explain the significance of project scheduling and staffing.
- (E) List and explain different stages of CMM.
- (F) Explain the concept of effort estimation. Justify your answer with appropriate formula.

Q5. Attempt the following (any FOUR): (20)

- (A) How quality assurance is achieved using six sigma?
- (B) Write a note on equivalence partitioning and boundary-value analysis.
- (C) What is the significance of white box testing? Also give its disadvantages.
- (D) Explain branch/decision coverage with suitable example.
- (E) What is integration testing?
- (F) Explain the significance of cyclomatic complexity.