**Time allowed: 90 Minutes Max. Marks: 40**

**General Instructions:**

* **Follow the instructions given in each section.**
* **Make sure that you attempt the questions in order.**

**SECTION-A (10\*1 mark=10 marks)**

***(All questions are compulsory)***

1. Which type of procedure in DBMS returns a value?
   1. Stored Procedure
   2. Trigger
   3. **Function**
   4. Cursor
2. Which of the following statements is true about triggers in DBMS?
   1. **Triggers are automatically executed in response to certain database events**
   2. Triggers are used to query and retrieve data from the database
   3. Triggers are similar to stored procedures but cannot have input parameters
   4. Triggers are only used for database administration tasks
3. What is the purpose of a database trigger?
   1. To enforce referential integrity
   2. To perform calculations on database columns
   3. **To maintain audit logs of database changes**
   4. To optimize query performance
4. Which statement is true about package bodies in DBMS?
   1. Package bodies must be created before creating the package specification
   2. **Package bodies can exist without a corresponding package specification**
   3. Package bodies contain only public procedures and functions
   4. Package bodies are stored separately from the package specification
5. Which of the following is not an advantage of using packages in DBMS?
   1. Improved performance through the use of optimized code
   2. Encapsulation of related procedures and functions for better organization
   3. **Simplified data modeling and schema design**
   4. Reduced network traffic by reducing the number of round trips to the database server
6. The two-phase locking protocol in concurrency control ensures:
   1. Deadlock prevention
   2. Data consistency
   3. **Serializability**
   4. Atomicity
7. The technique used to detect and resolve conflicts among concurrent transactions is called:
   1. Two-phase locking
   2. Timestamp ordering
   3. **Deadlock detection**
   4. Deadlock prevention
8. Which of the following is a drawback of strict two-phase locking (S2PL)?
   1. Increased concurrency
   2. **Increased deadlock probability**
   3. Reduced consistency
   4. Reduced durability
9. Which of the following is a property of serializability in a DBMS?
   1. Atomicity
   2. Consistency
   3. **Isolation**
   4. Durability
10. Which of the following is used to enforce strict two-phase locking (S2PL)?
    1. Shared locks
    2. Exclusive locks
    3. **Intent locks**
    4. Latches

**SECTION-B (5\*2 mark=10 marks)**

***(All questions are compulsory)***

**SECTION-C(Coding Question) (4x5 marks=20 marks)**