**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 of the following statements is true about procedures in DBMS?
   1. **Procedures are used to perform complex calculations**
   2. Procedures are used to store data permanently
   3. Procedures are used to define database schema
   4. Procedures are used to create user accounts
2. Which of the following is not a type of procedure in DBMS?
   1. Stored Procedure
   2. Function
   3. Trigger
   4. **Index**
3. Which of the following best describes a database trigger?
   1. A program that executes a sequence of SQL statements
   2. A constraint that ensures data integrity
   3. **A mechanism to automatically perform actions in response to specific database events**
   4. A function that retrieves data from the database
4. Triggers in DBMS are associated with which of the following?
   1. **Tables**
   2. Views
   3. Indexes
   4. Constraints
5. What is a package in DBMS?
   1. A collection of related tables
   2. **A collection of related procedures and functions**
   3. A collection of related views
   4. A collection of related triggers
6. In a DBMS, a transaction is:
   1. A single SQL statement
   2. A sequence of SQL statements
   3. An individual user operation
   4. **A unit of work that is either executed completely or not at all**
7. ACID properties of a transaction include:
   1. **Atomicity, Consistency, Isolation, Durability**
   2. Attainability, Concurrency, Integration, Durability
   3. Association, Concurrency, Isolation, Durability
   4. Atomicity, Consistency, Isolation, Dependency
8. Which of the following is a purpose of locking in a DBMS?
   1. **Ensuring isolation**
   2. Ensuring durability
   3. Ensuring atomicity
   4. Ensuring consistency
9. In a DBMS, which type of lock allows exclusive access to a data item?
   1. Shared lock
   2. **Exclusive lock**
   3. Intent lock
   4. Deadlock
10. In a DBMS, a transaction is said to be serializable if:
    1. It can be divided into multiple sub-transactions
    2. It can execute in parallel with other transactions
    3. **Its execution is equivalent to some serial execution of the transactions**
    4. It guarantees the durability of data

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

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

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