

Dr. Babasaheb Ambedkar Open University
Term End Examination July – 2026

Course	: BSCIT	Date	: 21/07/2026
Subject Code	: BSCIT-201	Time	: 11:30am to 01:45pm
Subject Name	: Database Management System	Duration	: 02.15 Hours
		Max. Marks	: 70

Section A

Answer the following (Attempt any three)

(30)

1. Explain the architecture of a Database Management System.
2. Explain the Relational Data Model in detail.
3. Explain different types of database keys.
4. Explain Structured Query Language (SQL).
5. Discuss the **ACID properties** and their importance in maintaining data consistency and reliability.

Section B

Answer the following (Attempt any four)

(20)

1. Explain the objectives and advantages of Data Abstraction.
2. Differentiate between Weak Entity and Strong Entity.
3. Write a short note on Entity Integrity Constraint.
4. Explain the concept of Cardinality Mapping in an ER Model.
5. Differentiate between DELETE and TRUNCATE commands.
6. Write a short note on Database Administrator (DBA).

Section C

Part – A (Multiple Choice Questions)

(10)

Q.1 Which level of database architecture is closest to the physical storage of data?

- | | |
|-------------------|---------------------|
| A) External Level | B) Conceptual Level |
| C) Internal Level | D) View Level |

Q.2 Which key is formed by combining two or more attributes to uniquely identify a record?

- | | |
|------------------|------------------|
| A) Foreign Key | B) Composite Key |
| C) Alternate Key | D) Secondary Key |

Q.3 Which SQL command is used to modify the structure of an existing table?

- | | |
|-----------|-----------|
| A) UPDATE | B) ALTER |
| C) MODIFY | D) CHANGE |

Q.4 Which SQL statement is used to create a new database table?

- | | |
|-----------------|---------------|
| A) BUILD TABLE | B) NEW TABLE |
| C) CREATE TABLE | D) MAKE TABLE |

Q.5 Which ACID property ensures that a transaction is completed entirely or not executed at all?

- | | |
|----------------|---------------|
| A) Consistency | B) Isolation |
| C) Atomicity | D) Durability |

Q.6 Which type of relationship allows one record in one table to be associated with many records in another table?

- | | |
|----------------|-----------------|
| A) One-to-One | B) Many-to-Many |
| C) One-to-Many | D) Recursive |

- Q.7 Which SQL clause is primarily used to group rows that have the same values?
A) ORDER BY B) GROUP BY
C) DISTINCT D) UNION
- Q.8 Which database object stores the description of tables, columns, and constraints?
A) Transaction Log B) Data Dictionary
C) Query Optimizer D) Buffer Manager
- Q.9 Which command permanently removes an entire table along with its structure?
A) DELETE B) REMOVE
C) DROP D) ERASE
- Q.10 Which database user is primarily responsible for database security, backup, and recovery?
A) Programmer B) End User
C) Database Administrator D) Data Entry Operator

Part – B (State whether the following statements are true or false)

(10)

- 1 The conceptual schema provides a community view of the entire database.
- 2 Domains specify the permissible values that an attribute can contain.
- 3 A weak entity depends on another entity for its identification.
- 4 A composite key contains more than one attribute.
- 5 DDL commands modify the database structure rather than the stored data.
- 6 Cardinality mapping defines the number of entity occurrences participating in a relationship.
- 7 Database transactions help preserve consistency during concurrent operations.
- 8 Backup and recovery mechanisms help restore database information after failures.
- 9 Database security includes controlling unauthorized access to data.
- 10 Proper database documentation supports maintenance and future enhancements.
