

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

Course	: BCA	Date	: 14-02-2026
Subject Code	: BCAMI-203/BCAOL-203	Time	: 03:00pm to 05:15pm
Subject Name	: Database Management System (DBMS)	Duration	: 02.15 Hours
		Max. Marks	: 70

Section A

Answer the following (Attempt any three) (30)

1. List out and explain characteristics of a Database.
2. What are different Attributes used in Entity Relational Model? Explain with diagram.
3. Explain various rules of Functional Dependencies.
4. Discuss the concept of Normalization in detail.
5. Explain Database Life cycle in detail.

Section B

Answer the following (Attempt any four) (20)

1. Define Classification based Database System.
2. Define different types of Integrity in brief.
3. Define Database Schema.
4. What are different built-in function available in SQL Server?
5. Define Join in DBMS and describe its various types in brief.
6. What is Data Manipulation Language (DML)? Explain its commands with suitable examples.

Section C

Part – A (Multiple Choice Questions) (10)

Q-1 A database is best described as:

- | | |
|------------------------------------|--|
| A) A collection of unrelated files | B) A shared collection of related data |
| C) A software program only | D) A set of hardware devices |

Q-2 Which component of DBMS stores data about data?

- | | |
|-------------|-------------|
| A) Table | B) Record |
| C) Metadata | D) Instance |

Q-3 Which level of data abstraction represents the user's view of the database?

- | | |
|-------------------|---------------------|
| A) Internal level | B) Conceptual level |
| C) Physical level | D) External level |

Q-4 The relational data model was proposed by:

- | | |
|--------------------|---------------------|
| A) Charles Bachman | B) Edgar Frank Codd |
| C) Bill Gates | D) Alan Turing |

Q-5 Which diagram is used to represent entities and relationships in database design?

- A) Flowchart
- B) ER Diagram
- C) Data Flow Diagram
- D) Structure Chart

Q-6 A weak entity is identified by:

- A) Its own primary key
- B) A composite key including owner entity key
- C) A foreign key only
- D) A secondary key

Q-7 Functional dependency is mainly used in:

- A) SQL queries
- B) Normalization process
- C) File organization
- D) Transaction control

Q-8 Which of the following keys uniquely identifies each record in a relational table?

- A) Foreign Key
- B) Candidate Key
- C) Primary Key
- D) Composite Key

Q-9 Which SQL command is used to retrieve data from a database?

- A) INSERT
- B) UPDATE
- C) DELETE
- D) SELECT

Q-10 A schema in a database represents:

- A) Current data values
- B) Backup of database
- C) Overall logical structure of the database
- D) User privileges

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

(10)

- 1 Data consistency ensures that all users see the same data values at the same time in a multi-user database environment.
- 2 Data redundancy means storing the same data at multiple locations unnecessarily.
- 3 A multiuser DBMS allows only one user to access the database at a time.
- 4 Conceptual schema is independent of hardware and DBMS software.
- 5 In a relational table, the sequence of rows is significant.
- 6 A domain defines the set of valid values that an attribute can take.
- 7 A composite attribute can be divided into smaller sub-attributes.
- 8 A foreign key must always be unique in a table.
- 9 Many-to-many relationships are implemented directly in relational tables.
- 10 Logical data independence allows changes in conceptual schema without affecting user views.
