

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

Course	: BCA	Date	: 08/07/2026
Subject Code	: BCAMI/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. Discuss characteristics and advantages of Database Management System (DBMS).
2. Explain the Entity-Relationship (ER) Model.
3. Explain Functional Dependency in detail.
4. Explain Database Normalization in detail.
5. Discuss DDL, DML, DCL and TCL commands with suitable examples.

Section B

Answer the following (Attempt any four) (20)

1. Define Database. State any five characteristics of a database.
2. Differentiate between File Processing System and Database Management System.
3. Explain Primary Key and Foreign Key with suitable examples.
4. Write a short note on Data Independence.
5. Explain the purpose of the **SELECT** statement with a suitable example.
6. Write a short note on **INNER JOIN**.

Section C

Part – A (Multiple Choice Questions) (10)

Q.1 A university wants to store student records in such a way that data duplication is minimized and information can be shared among departments. Which approach is most appropriate?

- A) Spreadsheet System B) Database Management System
C) Word Processing System D) Text File System

Q.2 Which database model primarily represents data using rows and columns?

- A) Hierarchical Model B) Network Model
C) Relational Model D) Object Model

Q.3 Which key uniquely identifies each record in a relation?

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

Q.4 Which normal form removes partial dependency from a relation?

- A) First Normal Form B) Second Normal Form
C) Third Normal Form D) Boyce-Codd Normal Form

Q.5 Which SQL command is used to retrieve selected records from a table?

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

Q.6 Which SQL command permanently removes a table along with its structure?

A) DELETE

B) REMOVE

C) DROP

D) ERASE

Q.7 Which JOIN returns only matching records from both related tables?

A) LEFT JOIN

B) RIGHT JOIN

C) INNER JOIN

D) CROSS JOIN

Q.8 Which SQL clause is mainly used to arrange query results in ascending or descending order?

A) GROUP BY

B) HAVING

C) ORDER BY

D) WHERE

Q.9 Which database object stores data in rows and columns?

A) Index

B) View

C) Table

D) Trigger

Q.10 Which SQL function returns the total number of records matching a condition?

A) SUM()

B) COUNT()

C) AVG()

D) MAX()

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

(10)

- 1 A Database Management System reduces unnecessary data redundancy.
- 2 Every table must contain more than one Primary Key.
- 3 A Foreign Key establishes a relationship between two tables.
- 4 Functional Dependency is an important concept used during database normalization.
- 5 A relation in the relational model is commonly represented as a table.
- 6 The DELETE command removes selected rows without deleting the table structure.
- 7 The WHERE clause is used to filter records in an SQL query.
- 8 A table can contain only one Candidate Key.
- 9 Third Normal Form eliminates transitive dependency.
- 10 An INNER JOIN returns only the rows that satisfy the join condition in both tables.
