

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

Course	: BSCIT	Date	: 21/07/2026
Subject Code	: BSCITRMA-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 different types of database models in detail.
2. What is Functional Dependency? Explain Full Functional Dependency, Partial Dependency and Transitive Dependency with examples.
3. Define an Entity-Relationship (ER) Model. Explain Entity, Attribute and Relationship with an appropriate ER diagram.
4. What is Normalization? Explain Normal Forms in Normalization process.
5. Explain SQL Data Manipulation Language (DML).

Section B

Answer the following (Attempt any four) (20)

1. Differentiate between Database and DBMS.
2. Explain Primary Key and Foreign Key with examples.
3. What are Aggregate Functions in SQL? Explain any four.
4. Write a short note on Integrity Constraints.
5. Explain INNER JOIN and LEFT JOIN with suitable examples.
6. What are the major phases involved in Database Development Process?

Section C

Part – A (Multiple Choice Questions) (10)

- Q.1 Which stage comes first in database design?
A) Database Implementation B) Data Modelling
C) SQL Programming D) Report Generation
- Q.2 Which data model organizes data in a tree-like structure?
A) Relational Model B) Hierarchical Model
C) Network Model D) Object Model
- Q.3 Which SQL command is used to change the structure of an existing table?
A) UPDATE B) MODIFY
C) ALTER D) CHANGE
- Q.4 Which SQL clause is used to arrange records in ascending or descending order?
A) WHERE B) ORDER BY
C) GROUP BY D) HAVING
- Q.5 Which normal form eliminates repeating groups?
A) First Normal Form B) Second Normal Form
C) Third Normal Form D) BCNF
- Q.6 Which SQL statement permanently removes a table from the database?
A) DELETE B) DROP
C) REMOVE D) TRUNCATE

Q.7 Which key establishes a relationship between two tables?

- A) Super Key
- B) Candidate Key
- C) Foreign Key
- D) Unique Key

Q.8 Which SQL function returns the total number of records?

- A) SUM()
- B) COUNT()
- C) AVG()
- D) TOTAL()

Q.9 Which of the following is mainly used to represent relationships among entities during database design?

- A) Data Dictionary
- B) ER Diagram
- C) Flowchart
- D) Decision Table

Q.10 Which SQL command is used to retrieve selected data from a table?

- A) FETCH
- B) DISPLAY
- C) SELECT
- D) SHOW

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

(10)

- 1 A relational database stores data in the form of tables.
- 2 A Candidate Key may contain duplicate values.
- 3 ALTER command can modify the structure of an existing table.
- 4 Foreign Key is used to maintain relationships between tables.
- 5 The WHERE clause can be used with the SELECT statement.
- 6 Second Normal Form removes partial dependency.
- 7 SQL aggregate functions operate on multiple rows and return a single value.
- 8 Every entity must have at least one attribute.
- 9 The DROP command deletes only the data and keeps the table structure.
- 10 Database design begins with gathering user requirements.
