

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

Course	: BSCCS	Date	: 16/07/2026
Subject Code	: BSCCS-301	Time	: 03:00pm to 05:15pm
Subject Name	: Relational Database	Duration	: 02.15 Hours
	Management System and Security	Max. Marks	: 70

Section A

Answer the following (Attempt any three) (30)

1. Discuss the advantages, disadvantages and functions of DBMS.
2. Explain the Three-Level DBMS Architecture in detail.
3. Explain Hierarchical Data Model, Network Data Model and Relational Data Model with their merits and demerits.
4. Explain the concept of Normalization in detail.
5. Discuss common Security Issues in RDBMS and Security Best Practices.

Section B

Answer the following (Attempt any four) (20)

1. Differentiate between Data, Information and Database.
2. Explain Logical Data Independence and Physical Data Independence.
3. Explain Entity, Attribute and Relationship in ER Model.
4. Explain Functional Dependency.
5. Explain Cursor in PL/SQL with its advantages.
6. Explain Exception Handling in PL/SQL with suitable example.

Section C

Part – A (Multiple Choice Questions) (10)

1. Which component acts as an intermediary between users and the database?
A) Compiler
B) Operating System
C) DBMS
D) Application Server
2. Which level of DBMS Architecture describes the user's view of the database?
A) Internal Level
B) Physical Level
C) External Level
D) Storage Level
3. Which data model represents data in the form of tables?
A) Hierarchical Model
B) Network Model
C) Relational Model
D) Object Model
4. Which key uniquely identifies each record in a table?
A) Foreign Key
B) Composite Key
C) Primary Key
D) Alternate Key
5. Which normal form removes Partial Dependency?
A) 1NF
B) 2NF
C) 3NF
D) BCNF
6. SQL stands for:
A) Structured Query Language
B) Standard Query Logic
C) System Query Language
D) Sequential Query Language

7. Which PL/SQL structure is used to process query results row by row?
A) Trigger B) Package
C) Cursor D) Sequence
8. Which database object executes automatically when a specified event occurs?
A) View B) Trigger
C) Synonym D) Index
9. Which command is used to grant privileges to a database user?
A) REVOKE B) DENY
C) GRANT D) ASSIGN
10. Which security principle provides access only to authorized users?
A) Redundancy B) Integrity
C) Confidentiality D) Replication

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

(10)

- 1 DBMS reduces data redundancy and inconsistency.
- 2 External Level is the highest level of abstraction in DBMS Architecture.
- 3 Hierarchical Model supports many-to-many relationships efficiently.
- 4 Relational Model stores data in tables.
- 5 Primary Key values cannot be NULL.
- 6 SQL is a procedural programming language.
- 7 A Cursor is used to process records one row at a time.
- 8 Triggers execute automatically when predefined events occur.
- 9 Exception Handling helps manage runtime errors in PL/SQL.
- 10 Strong authentication improves database security.
