

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

Course	: BSCIT	Date	: 16/02/2026
Subject Code	: BSCIT-301	Time	: 03:00pm to 05:15pm
Subject Name	: Relational Database Management System	Duration	: 02.15 Hours
		Max. Marks	: 70

Section A

Answer the following (Attempt any three) (30)

1. Explain Hierarchical Data Model and Entity-Relationship Data Model
2. What is functional dependency? Discuss its types in detail with examples.
3. Discuss the concept of Normalization in detail.
4. Explain Stored Procedure and its components.
5. What is Cursor? List and explain types of Cursor in detail.

Section B

Answer the following (Attempt any four) (20)

1. What are Characteristics of a Relational Table?
2. List and explain Distributed Database types in brief.
3. What is Trigger? List and explain parts of a Trigger.
4. Define types of Privileges.
5. What are the major advantages of PL/SQL?
6. What is a user-defined exception? Describe its syntax and usage.

Section C

Part – A (Multiple Choice Questions) (10)

1. A database is defined as:
A) A collection of unrelated files B) A shared and integrated computer structure
C) Only metadata D) A programming language
2. Which of the following problems is common in traditional file systems?
A) Data independence B) Data redundancy
C) Data abstraction D) Data integrity enforcement
3. In three-tier architecture, the layer that interacts directly with users is:
A) Database layer B) Internal layer
C) Presentation layer D) Conceptual layer
4. Which component of DBMS defines rules and instructions to control operations?
A) Data B) Procedures
C) Hardware D) People
5. The hierarchical model primarily supports:
A) Many-to-many relationships B) One-to-many relationships
C) Many-to-one relationships D) No relationships
6. In an ER model, a derived attribute is one that:
A) Has multiple values B) Is calculated from another attribute
C) Is a primary key D) Represents relationship

7. A relational table must have:
A) At least two primary keys B) At least one attribute. uniquely identifies each row
C) Only numeric attributes D) Fixed row order
8. The logical design phase converts conceptual design into:
A) Hardware specifications B) Physical storage devices
C) Tables, indexes, and views D) Security policies only
9. Which anomaly occurs when deleting a record causes unintended data loss?
A) Update anomaly B) Insertion anomaly
C) Deletion anomaly D) Transaction anomaly
10. The relational model was proposed by:
A) Charles Babbage B) E. F. Codd
C) Edgar Frank D) James Gosling

(10)

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

1. Metadata describes the structure and relationships of data.
2. In two-tier architecture, users directly access the database without application layer.
3. Data modeling acts as a bridge between real-world objects and database structure.
4. In a relational table, the order of rows affects the logical meaning of the data.
5. A domain defines the permissible values for an attribute.
6. In a one-to-one relationship, one value in a table is related to only one value in another table.
7. The network model allows multiparent relationships.
8. Physical design describes how data is stored on storage devices.
9. Redundancy improves consistency in databases.
10. The conceptual level is also known as the logical view of the database.
