

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

Course	: BSCCS	Date	: 20/07/2026
Subject Code	: BSCCS-201	Time	: 11:30am to 01:45pm
Subject Name	: Database Management System and Security	Duration	: 02:15 Hours
		Max. Marks	: 70

Section A

Answer the following (Attempt any three) (30)

1. What is a Database? Explain characteristics and Benefits of a Database.
2. Write detailed note on Entity, Entity Set and Entity Type.
3. What is constraint? Explain types of integrity.
4. What is normalization? Explain 2NF and 3NF.
5. Explain key areas of cybersecurity relevant to DBMS.

Section B

Answer the following (Attempt any four) (20)

1. Explain role of databases in business.
2. Write short note on Data Abstraction Layer.
3. Define: Relation, Table, Column, Domain, Records.
4. Explain Many to many (M: N) relationships.
5. Explain database anomaly in brief.
6. Write short note on DML commands.

Section C

Part – A (Multiple Choice Questions) (10)

- 1 Which property ensures that a database represents real-world information accurately?
A Data redundancy B Logical consistency
C File dependency D Data duplication
- 2 Metadata in a database primarily describes:
A Relationships and structure of data B User passwords
C Backup files D SQL commands
- 3 In an ER model, a weak entity depends on:
A Composite attribute B Primary key
C Strong entity D Derived attribute
- 4 Which normal form removes partial dependency?
A BCNF B 3NF
C 1NF D 2NF
- 5 Which SQL statement permanently removes a table along with its structure?
A DELETE B REMOVE
C DROP D TRUNCATE
- 6 Which SQL clause groups rows having similar values?
A ORDER BY B GROUP BY
C HAVING D DISTINCT

- 7 Which JOIN returns only matching records from both tables?
A LEFT JOIN B RIGHT JOIN
C FULL JOIN D INNER JOIN
- 8 SQL is primarily classified as:
A Operating System B Query Language
C Programming Language D Compiler
- 9 Which database security principle ensures that data cannot be modified without authorization?
A Confidentiality B Availability
C Scalability D Integrity
- 10 Which database development phase identifies user requirements?
A Implementation B Testing
C Requirement Analysis D Maintenance

Part – B (Do as Directed)

(10)

State whether the following statements are true or false

- 1 A database can contain multiple related tables.
- 2 Data independence is a major disadvantage of DBMS.
- 3 A distributed database stores all data at one central location.
- 4 A primary key may contain duplicate values.
- 5 BCNF is stricter than Third Normal Form.
- 6 LEFT JOIN always returns only matching records.
- 7 Encryption protects database information from unauthorized reading.
- 8 Backup and recovery mechanisms improve database availability.
- 9 SQL Injection exploits improperly validated user input.
- 10 Cybersecurity practices are important for protecting database systems.
