

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

|                     |                                           |                   |                             |
|---------------------|-------------------------------------------|-------------------|-----------------------------|
| <b>Course</b>       | <b>: BSCIT</b>                            | <b>Date</b>       | <b>: 16/07/2026</b>         |
| <b>Subject Code</b> | <b>: BSCITRMA-301</b>                     | <b>Time</b>       | <b>: 03:00pm to 05:15pm</b> |
| <b>Subject Name</b> | <b>: RDBMS Database Management System</b> | <b>Duration</b>   | <b>: 02.15 Hours</b>        |
|                     |                                           | <b>Max. Marks</b> | <b>: 70</b>                 |

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**Section A**

**Answer the following (Attempt any three) (30)**

1. Explain Database Management System (DBMS). Discuss its functions, advantages and limitations over traditional file systems.
2. Explain various Data Models. Compare Hierarchical, Network and Relational Data Models with suitable examples.
3. Explain the process of Database Design. Discuss tables, rows, columns, domains and database anomalies.
4. Explain Normalization. Discuss 1NF, 2NF and 3NF with suitable examples.
5. Explain PL/SQL. Discuss the structure of a PL/SQL block and its advantages in Oracle Database.

**Section B**

**Answer the following (Attempt any four) (20)**

1. Differentiate between Data, Information, Database and Database System.
2. Explain Three-Level Architecture of DBMS.
3. Discuss Functional Dependency and its importance in database normalization.
4. Explain Oracle Database Objects and their uses.
5. Explain Cursor in PL/SQL with suitable examples.
6. Differentiate between Distributed Database and Centralized Database.

**Section C**

**Part – A (Multiple Choice Questions) (10)**

1. A database is:  
A) Collection of related data  
B) Collection of programs  
C) Collection of hardware devices  
D) Collection of networks
2. Which component manages database structure and controls access to data?  
A) Operating System  
B) DBMS  
C) Compiler  
D) Assembler
3. Which level of DBMS architecture is also known as Logical View?  
A) External Level  
B) Internal Level  
C) Conceptual Level  
D) Physical Level
4. Which data model organizes data in the form of tables?  
A) Hierarchical Model  
B) Network Model  
C) Relational Model  
D) Object Model
5. Which normal form removes partial dependency?  
A) 1NF  
B) 2NF  
C) 3NF  
D) BCNF
6. SQL stands for:  
A) Structured Query Language  
B) System Query Language  
C) Sequential Query Language  
D) Standard Query Logic

7. Which Oracle object is used to store a SQL query virtually?  
A) Table  
B) Trigger  
C) View  
D) Index
8. Which PL/SQL structure is used for row-by-row processing?  
A) Trigger  
B) Package  
C) Cursor  
D) View
9. Which mechanism ensures simultaneous transactions do not corrupt data?  
A) Normalization  
B) Locking  
C) Triggering  
D) Indexing
10. Which block handles runtime errors in PL/SQL?  
A) Declare Block  
B) Begin Block  
C) Cursor Block  
D) Exception Block

**Part – B (State whether the following statements are true or false) (10)**

- 1 Data are raw facts and figures.
- 2 DBMS reduces data redundancy.
- 3 External Level is the lowest level of abstraction in DBMS architecture.
- 4 Relational Model stores data in tables.
- 5 Functional Dependency is used in normalization.
- 6 A distributed database stores data at multiple locations.
- 7 A View does not physically store data.
- 8 Cursor is used to process query results row by row.
- 9 Locking helps maintain database consistency.
- 10 Exception Handling is used to manage runtime errors in PL/SQL.

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