

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

Course	: BCAR/DCAR	Date	: 13-Feb-26
Subject Code	: BCAR/DCAR-202	Time	: 03:00pm to 05:15pm
Subject Name	: Database Management System (DBMS)	Duration	: 02.15 Hours
		Max. Marks	: 70

Section A

Answer the following (Attempt any three) (30)

1. What is database? What is DBMS? List and explain advantages of DBMS.
2. What is Entity? How is it differing from object? Explain different types of attributes and their symbolic representation in the context of ER-Diagram.
3. What is Normalization? Discuss different normal forms up to BCNF.
4. Discuss DDL and DML commands in brief.
5. Discuss different types of Databases.

Section B

Answer the following (Attempt any four) (20)

1. Discuss about different types of DBMS Users.
2. Explain Primary key and Foreign key with an example.
3. Discuss cardinality of relationship with an example of each.
4. Explain super key and candidate key.
5. List and explain different tools for data mining.
6. Explain ACID properties of DBMS transactions.

Section C

Part – A (Multiple Choice Questions)

(10)

1. _____ property of the database that ensures that the data contained in the database is as accurate and consistent as possible.
A Data Abstraction B Data Independence
C Concurrent Access D Integrity
2. Objects which is distinguishable from other objects by specific set of attributes is called as _____.
A Entities B Classes
C Attributes D None of the above
3. Association among several entities is called as _____.
A Relationship B Extraction
C Combination D Join
4. In _____ normal form, we check partial dependency, and if it exists then we remove it.
A 1st NF B 2nd NF
C 3rd NF D BCNF

- 5 _____ is a key, which must be Primary Key into some other relation.
A Super Key
B Candidate Key
C Foreign Key
D Composite Key
- 6 Cardinality between Books and its Authors is of _____ type.
A One-to-One
B One-to-Many
C Many-to-One
D Many-to-Many
- 7 In the ER-Diagram multivalued attribute must be represented with _____.
A Single border oval
B Double border oval
C Rectangle
D Dashed border oval
- 8 To modify the structure of the table (schema), _____ query is used.
A Update
B Change
C Grant
D Alter
- 9 From the given below, which function is not an aggregate function?
A sum
B avg
C to_date
D count
- 10 “The intelligent technique to extract potentially useful patterns are working” – It is known as _____.
A Data Mining
B Data Transformation
C Data Cleaning
D Pattern Evaluation

Part – B

(State whether the following statements are TRUE or FALSE)

(10)

- 1 To view the data either in ascending or descending order, group by query is used.
- 2 For any relation $R(A, B, C, D)$ functional dependency $ABC \rightarrow AB$ is a trivial FD.
- 3 Relationship or cardinality between states and cities are One-to-One.
- 4 If the relationship is in the BCNF then it must also be in the 3NF.
- 5 In the ER-diagram, relationship has to be represented with diamond symbol.
- 6 Unnecessary duplication of the data is called data integrity.
- 7 Efficient version of super key is called a candidate key.
- 8 Foreign key does not allow null value.
- 9 In the acronym ACID, C stands for Computability.
- 10 As per transitivity law: if $X \rightarrow Y$ && $Y \rightarrow Z$ then $X \rightarrow Z$
