

2019

Time : 3 hours

Full Marks : 80

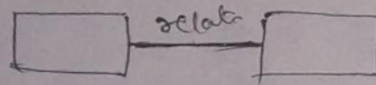
Candidates are required to give their answers in their own words as far as practicable.

The questions are of equal value.

*Answer **five** questions in which*

Q. No. 1 is compulsory.

1. Choose the correct alternative of the following :
 - (a) Which of the following is an advantage of a database ?
 - (i) Reduction in redundancy
 - (ii) Avoidance of inconsistency
 - (iii) Security enforcement
 - ~~(iv) All of these~~
 - (b) Which of the following is a database elements ?
 - (i) Data



- (ii) Relationship
(iii) Constraints and Schema
(iv) All of these
- (c) In a relational model, relations are termed as :
- (i) Tuples (ii) Attributes
(iii) Tables (iv) Rows
- (d) The database schema is written by :
- (i) HLL (ii) DML
(iii) DDL (iv) DCL
- (e) In an ER-diagram attributes are represented by :
- (i) Rectangle (ii) Square
(iii) Ellipse (iv) Triangle
- (f) Which of the the following is not a deadlock handling strategy ?
- (i) Deadlock Prevention
(ii) Time out
(iii) Deadlock detection and recovery
(iv) Deadlock annihilation

- (g) What is the name of the system database that contains description of the data in the database ?
- (i) Metadata
(ii) Data dictionary
(iii) Table
(iv) None of these
- (h) Who developed the ER-model ?
- (i) Codd (ii) Date
(iii) Chen (iv) Bachman
2. What do you mean by Database Management System ? Why do we need a DBMS ? Illustrate the advantages of the database.
3. What is Data Administration ? What are the responsibilities of a DBA ? Explain.
4. What are the Data Manipulation Language (DML) and Data Definition Lanaguage (DDL) Commands ? Explain with examples.

5. What are the different database models ?
Explain with advantages and disadvantages.
6. What is Normalization ? What are its objectives ?
Explain 2nd , 3rd, and 4th normal forms.
7. What do you mean by relational algebra and what are its uses ? Which are the relational algebra operations developed specially for relational database ?
8. Describe database recovery. What are the recovery facilities provided by the DBMS ?
Explain with different recovery techniques.
9. Write short notes on any four the following :
 - (a) Decision Support System(DSS)
 - (b) File Organisation
 - (c) Data Structure
 - (d) Concurrency Control
 - (e) Database Design
 - (f) SQL

