



# 17332

15116

3 Hours / 100 Marks

Seat No.

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- Instructions :**
- (1) All questions are **compulsory**.
  - (2) Answer **each** next main question on a **new** page.
  - (3) Illustrate your answers with neat sketches **wherever** necessary.
  - (4) Figures to the **right** indicate **full** marks.
  - (5) Mobile Phone, Pager and any other Electronic Communication devices are **not** permissible in Examination Hall.

- |  | Marks |
|--|-------|
| 1. a) Attempt <b>any six</b> of the following :  | 12    |
| a) List any four advantages of DBMS.   |       |
| b) What is domain and entity ?   |       |
| c) What is meant by database normalization ?   |       |
| d) What statement is used in PL/SQL to display the output ?  |       |
| e) What is data redundancy ?   |       |
| f) Explain the use of truncate statement. Give example.  |       |
| g) What is cursor ?  |       |
| h) What do you mean by database security ?   |       |
| b) Attempt <b>any two</b> of the following :   | 8     |
| a) Explain three tier architecture with suitable diagram.  |       |
| b) Consider the structure of student (Name, Mark, Age, Place, Phone, Birthdate). Write SQL queries for the following : |       |
| i) To list name of student who do not have phone number  |       |
| ii) To list students from Mumbai and Pune.   |       |
| iii) To change mark of 'Ajay' to 88 instead of 80.   |       |
| iv) To list the students whose age is more than 12.  |       |
| c) Describe exception handling in brief.   |       |
| 2. Attempt <b>any four</b> of the following :  | 16    |
| a) Explain any four integrity constraints.   |       |
| b) Describe enhanced E-K model with the help of example.   |       |
| c) Describe how to delete the data from table with an example.   |       |
| d) Explain sequences with example.   |       |
| e) Explain implicit and explicit locking strategy.   |       |
| f) Compare DBMS and RDBMS (any four points).   |       |

P.T.O.

**Marks**

- 3. Attempt any four of the following :** **16**
- a) Write PL/SQL program to print even or odd numbers from given range. (Accept number from user.)
  - b) Explain conditional control structure in PL/SQL.
  - c) Describe functional dependencies with example.
  - d) Explain views with example.
  - e) What is lock based protocol ? Explain share and exclusive mode protocols in lock based protocol.
  - f) What are data independence ? What are its types ?
- 4. Attempt any four of the following :** **16**
- a) Define the term :
    - i) Candidate key
    - ii) Primary key.
  - b) What are adv. of PL/SQL ?
  - c) Explain the select clause in SQL with suitable example.
  - d) Write PL/SQL program to display factorial of any number.
  - e) Explain snapshot with example.
  - f) Explain the overall structure of DBMS with suitable diagram.
- 5. Attempt any four of the following :** **16**
- a) Explain different applications of DBMS.
  - b) Explain the concept of indexing with neat diagram.
  - c) Explain implicit and explicit cursors.
  - d) Explain parameterized cursor with example.
  - e) Explain tuple relational calculus with example.
  - f) Explain the set operator with help of example.
- 6. Attempt any four of the following :** **16**
- a) What is DBMS ? Explain its functions.
  - b) Explain on delete cascade clause with suitable example.
  - c) Explain any four date function with example.
  - d) Explain not null constraints by suitable example.
  - e) Give block structure of PL/SQL and explain main components.
  - f) Explain ACID properties of transaction.
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