

17332

13141

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 any **SIX** of the following: **12**
- i) List any four application of DBMS.
 - ii) Describe primary key & candidate key.
 - iii) Define normalization & explain it's two goals.
 - iv) Explain datatypes in SQL.
 - v) List DCL commands any four.
 - vi) What is view ? Write the syntax of create view.
 - vii) Define cursor ? List the two types of cursor.
 - viii) Explain integrity constraints ? List it's types.
- b) Attempt any **TWO** of the following: **08**
- i) Explain database languages with it's two types.
 - ii) Explain group by having & order by clause in SQL.
 - iii) Describe shared lock and exclusive locking strategy in brief.

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2. Attempt any FOUR of the following:**16**

- a) Describe basic concepts of relational model.
- b) List relational algebra operation & explain set difference operation with example.
- c) Give the syntax of create & RENAME command with example.
- d) Consider following schema.

EMPLOYEE-DETAILS (empname, empId, DOB, salary, job)

Create a view on EMPLOYEE-DETAILS having attribute (empname, empId, DOB, salary, job) where salary is greater than 20,000.

- e) What is database trigger ? Compare database trigger and procedures and explain use of database trigger.
- f) List and explain any four functions of database administrator.

3. Attempt any FOUR of the following:**16**

- a) Consider the following schema.

STUDENT (Name, Mark, Age, Place, Phone, Birthdate)

Write SQL queries for following:

- i) To list name of student who do not have phone number.
 - ii) To list student from Nashik & Pune.
 - iii) To change mark of Monika to 88 instead of 80.
 - iv) To list the student from Amit's age group.
- b) Give the block structure of PL/SQL & explain main components.
 - c) Explain functional dependencies with it's example.

- d) Explain index & their types in detail.
- e) Explain following with syntax.
 - i) function
 - ii) procedure.
- f) Draw the overall structure of DBMS.

4. Attempt any FOUR of the following: 16

- a) Draw an E-R diagram for customer branch & account relationship.
- b) Write PL/SQL program to display the largest of three number.
- c) Explain DROP & DELETE commands with syntax. State the difference between them.
- d) Explain the set operators of SQL.
- e) What is snapshots ? Create a snapshots for “EMPLOYEE” table.
- f) Explain the disadvantages of file processing system.

5. Attempt any FOUR of the following: 16

- a) Compare DBMS & RDBMS.
- b) What are sequences ? Why it is used ? Create sequence for “Client” table.
- c) Explain conditional control structure of PL/SQL.
- d) Explain the exception handling with its two types.
- e) Define integrity constraints ? Explain the three types of integrity constraints.
- f) List the SQL operators & explain range searching operator - “BETWEEN” & pattern matching operator - “LIKE”.

6. Attempt any FOUR of the following:**16**

- a) Define the following terms:
 - i) Data
 - ii) Database
 - iii) DBMS
 - iv) RDBMS.
 - b) Explain the database security with its requirements.
 - c) Explain any four aggregate functions with example.
 - d) What is data model ? Explain network model and hierarchical model.
 - e) Explain any four string functions.
 - f) Explain for loop in PL/SQL with example.
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