24225

3 Hours / 70 Marks   Seat No.

Instructions – (1) All Questions are *Compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answer with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. **Attempt any FIVE of the following:** **10**

a) Define terms –

   i)   Data abstraction

   ii)   DBMS

b) Enlist any four symbols used in ER diagram.

c) Write any two DDL commands with syntax.

d) Enlist any four string functions in SQL.

e) List the type of exception in PL/SQL.

f) State any two advantages of PL/SQL.

g) List characteristics of big data.

Marks

2. **Attempt any THREE of the following:** **12**

   a) Explain any four rules of EF codd.

   b) Define Normalization and explain 2 NF with example.

   c) Write PL/SQL program to find largest of three number.

   d) Consider table student (name, marks, dept, age, place, phone) write SQL query for following:

      i) Display students name, dept. and place who are staying in 'Pune' or 'Jalgaon'.

      ii) Change marks of Rahul from 96 to 88.

      iii) List student name and marks of 'IT' department.

      iv) List student name having same department as that of 'Jyoti'.

3. **Attempt any THREE of the following:** **12**

   a) Distinguish between Network and Hierarchical model. (Any four points)

   b) Explain any four aggregate function with example.

   c) Define cursor. Write step by step syntax to declare open, fetch and close cursor in PL/SQL.

   d) Differentiate between physical backup and logical backup.

4. **Attempt any THREE of the following:** **12**

   a) Explain two tier and three tier client server architecture.

   b) List and explain any four advantages of DBMS over file processing system.

   c) Explain set operators with suitable examples.

   d) Explain trigger with suitable example.

   e) Write a PL/SQL program to print odd numbers in 1 to 10.

Marks

5.   **Attempt any <u>TWO</u> of the following:**   **12**

a)   With neat ER diagram explain strong and weak entity set.

b)   Write SQL command for following schema student (rollno, fname, Lname, Loc, dob):

 i)   Create view named VI that includes the columns, rollno, fname)

 ii)   Remove the view named VI

 iii)   Create composite index using attribute rollno and Lname.

 iv)   Create a sequence for student table.

c)   Write a PL/SQL program to find sum all numbers from 1 to 10.

6.   **Attempt any <u>TWO</u> of the following:**   **12**

a)   Create table employee (empid, ename, phone, dob, city, salary, deptno.) with following constraints.

 i)   Set empid as primary key

 ii)   Ensure phno values are unique

 iii)   deptno can not be left empty

 iv)   Salary is above 1000

 v)   deptno is foreign key

 vi)   assign a default value to city as Pune.

b)   Draw an E-R diagram for college management system with atleast three entities and two relationship including composite attribute, multivalued attribute and derived attribute.

c)   Write SQL queries for following –

 i)   Create user named user1 having password 'Pass@123'.

 ii)   Assign insert and update privilege to user1.

 iii)   Remove update privilege assigned to user1.

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