22416

23242

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 answers 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) List any four commands of DDL.

b) Define terms :

 i)   Relation

 ii)   Cardinality

c) Enlist ACID properties.

d) List types of failures.

e) List string functions.

f) Define sequence.

g) List types of exceptions in PL/SQL.

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

a) Describe NOT NULL constraint with syntax and suitable example.

b) List types of operators in SQL and explain logical operators.

c) Describe PL/SQL block structure.

d) Describe simple and composite index with suitable example.

P.T.O.

Marks

3. Attempt any THREE of the following: 12

   a) Explain transaction state diagram with neat diagram.

   b) Consider following schema :

      emp(empno, ename, job, deptno)

      Write SQL queries for the following :

      i)   Create synonym el for emp table.

      ii)   Drop synonym el.

   c) Explain set operators with suitable examples.

   d) Differentiate between Truncate and Delete.

4. Attempt any THREE of the following: 12

   a) Consider following schema :

      student(rollno, sname, dob, loc)

      Write SQL queries for the following :

      i)   Display students who stay at Mumbai.

      ii)   Change the location of Anita to Pune.

      iii) Display students whose name starts with B.

      iv) Display sname and dob for all students.

   b) Describe various causes of database failures.

   c) Write steps to create, execute and delete a PL/SQL function.

   d) Define view. Explain advantages of using a view.

   e) Write SQL statement to perform following operation :

      i)   Create synonym as "Stud_Synon" on table name "Student".

      ii)   Create unique index on "Student" table, use S_id as index attribute.

Marks

5. Attempt any TWO of the following: **12**

  a) Consider following schema

     employee(empno, ename, job, deptno, sal, hiredate, loc)

     Write SQL queries for the following :

     i) Create table employee with above mentioned attributes.

     ii) Display employees whose salary is in the range 10000 to 20000.

     iii) Display employees who stay at Nashik.

  b) Write SQL commands for the following schema

     Student(rollno, sname, loc, dob)

     i) Create a view called St taking columns rollno, sname.

     ii) Create a view called Sl for students staying at Pune.

     iii) Drop view named S1.

  c) Write PL/SQL program to create a function name area_circle to calculate area of circle and also have another PL/SQL code to call this function.

6. Attempt any TWO of the following: **12**

  a) Explain Grant and Revoke commands with syntax and suitable example.

  b) Consider following schema :

     emp(empno, empname, job, salary, deptno, loc)

     Write SQL commands for the following statements.

     i) Display all employee names in lower case.

     ii) Display total number of employees.

     iii) Display average salary of each department.

     iv) Display details of employee in descending order of salary.

     v) Display employee names staying at Mumbai having salary 10000.

     vi) Display names of employee who are staying either at Mumbai or Pune.

  c) Write PL/SQL code for the following :

     i) Print odd numbers from 1 to 20.

     ii) Print factorial of number 5.

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