22319

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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) Use of Non-programmable Electronic Pocket Calculator is permissible.

(7) 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 :–

i)   Data Abstraction

ii) Instance.

b) State any two advantages of DBMS.

c) Define Normalization. Enlist its types.

d) Write syntax for creating and Renaming a table.

e) Enlist arithmetic and logical SQL operators.

f) Write syntax for creating and dropping views.

g) state two advantages of PLISQL

Marks

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

 a) Explain three level architecture of Database system.

 b) Write SQL queries for following :–

  i) Create table student with following attributes using suitable data types. Roll no., as primary key, name, marks as not null and city.

  ii) Add column Date of Birth in above student table.

  iii) Increase the size of attribute name by 10 in above student table.

  iv) Change name of Student table to stud.

 c) Write and Explain the syntax for creating and dropping indexes with an example.

 d) Write a PLISQL code to print reverse of a number.

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

 a) Write down any four Dr. E.F Codd's rules.

 b) State the use of group by and order by clauses.

 c) Explain the steps of cursor implementation with syntax and example.

 d) Explain ACID properties of transaction.

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

 a) Describe any four responsibilities of Database Administrator.

 b) Explain Primary and Unique key constraint with syntax.

 c) Write and Explain the syntax for creating database trigger.

 d) Write a trigger which invokes on deletion of record on emp table.

 e) Explain Database Recovery techniques in detail.

Marks

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

  a) Draw the overall architecture of DBMS. Explain storage manager and query processor components.

  b) Write the SQL queries for following EMP table. Emp (empno, deptno, ename, salary, designation, city.)

     i) Display average salary of all employee.

     ii) Display names of employees who stay in Mumbai or Pune.

     iii) Set the salary of employee 'Ramesh' to 50000.

     iv) Display names of employees whose salaries are less than 50000.

     v) Remove the Record of employees whose deptno is 10.

     vi) Remove the column deptno from EMP table.

  c) Write and Explain the syntax for creating, Altering and dropping the sequence.

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

  a) Write SQL queries for following. Consider table stud (roll no, name, sub1, sub2, sub3)

     i) Display names of student who got minimum mark in sub1.

     ii) Display names of students who got above 40 marks in sub2.

     iii) Display count of Students failed in sub2.

     iv) Display average marks of sub1 of all students.

     v) Display names of students whose name start with 'A' by arranging them in ascending order of sub1 marks.

     vi) Display student name whose name ends with 'h' and subject 2 marks are between 60 to 75.

  b) Write a PLISQL code to check whether specified employee is present in Emp table or not. Accept empno from user. If employee does not exist display message using exception handling.

Marks

c) Write SQL queries for following.

    i)   Create user named 'user1' having Password '1234'

    ii)   Assign 'insert' and 'update' Privilege to 'user1'.

    iii) Remove update Privilege assigned to the user1.

    iv) Assign the resource Permission to user1.

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