11819

3 Hours / 70 Marks   Seat No.

Instructions :   (1) ***All*** questions are ***compulsory***.
   (2) *Illustrate your answers with **neat** sketches **wherever** necessary.*
   (3) *Figures to the **right** indicate **full** marks.*
   (4) *Assume suitable data, if **necessary**.*

Marks

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

   a) List disadvantages of typical file processing system.

   b) Define i) data abstraction, ii) data redundancy.

   c) Define the term :
      i) Candidate key
      ii) Primary key

   d) List four DDL commands with syntax.

   e) Define normalization, list its types.

   f) Enlist four aggregate functions.

   g) Define cursor. List the two types of cursor.

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

   a) Distinguish between network model and hierarchical model (any 4 points).

   b) Explain set operators with example.

   c) Explain any four string functions with example.

   d) Describe exception handling in brief.

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

   a) Describe commit and rollback with syntax and example.

   b) Explain joins in SQL with examples.

   c) Explain function in PL/SQL with example.

   d) Explain database security with it's requirements in detail.

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

   a) Explain the four roles of database administrator.

   b) State and explain 1NF and 2NF with example.

   c) Draw the block structure of PL/SQL . List advantages of PL/SQL.

   d) Write step by step syntax to create, open and close cursor in PL/SQL.

   e) Explain transaction ACID properties.

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

   a) Draw an E-R diagram of library management system considering issue and return, fine calculation facility, also show primary key, weak entity and strong entity.

   b) Consider the following database Employee(emp_id, emp_name, emp_city, emp_addr, emp_dept, join_date)

     i) Display the emp_id, of employee who live in city 'Pune' or 'Nagpur'.

     ii) Change employee name, 'Aayush' to 'Aayan'.

     iii) Display the total number of employee whose dept is 50.

   c) Consider the following schema Depositor (ACC_no, Name, PAN, Balance) Create a view on Depositor having attributes (ACC_no, PAN) where balance is greater than 100000.

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

   a) Create a sequence

     i) Sequence name is Seq_1, Start with 1, increment by 1, minimum value 1, maximum value 20.

     ii) Use a seq_1 to insert the values into table Student (ID Number (10), Name char (20));

     iii) Change the seq_1 max value 20 to 50.

     iv) Drop the sequence.

   b) Write a PL/SQL program which accept the customer ID from the user if user enters an invalid ID then the exception invalid_id is raised using exception handling.

   c) i) Create user 'Rahul'.

     ii) Grant create, select, insert, update, delete, drop privilege to 'Rahul'.

     iii) Removes the select privilege from user 'Rahul'.