22319

22223

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 <u>FIVE</u> of the following:**   **10**

a) Define the following terms:

i) Database

ii) DBMS

b) List any four codd's rules.

c) Explain subquery concept with example.

d) Define

i) Primary Key

ii) Candidate key

e) List any two DDL commands with syntax.

f) Draw the block structure of PL-SQL.

g) State syntax of while loop command.

Marks

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

   a) Explain not null and check constraint with example.

   b) Explain any four string functions with example.

   c) Describe Grant and Revoke commands with example.

   d) Explain trigger with suitable example.

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

   a) Explain views with example.

   b) Explain properties of transaction.

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

   d) Explain savepoint and rollback command with example.

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

   a) Explain any four types of attributes with example.

   b) Explain any four aggregate function with example.

   c) Explain any four DML commands with syntax and example.

   d) Write a PL-SQL program to print odd numbers from 1 to 10.

   e) Explain the most common types of database failures.

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

   a) Explain strong and weak entity set with example. Draw ER diagram indicating strong and weak entity set.

   b) Explain for loop syntax in PL-SQL with example of printing 10 to 1 reverse numbers.

   c) Explain function in PL-SQL with suitable example.

Marks

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

   a) Draw an ER diagram of library management system considering publisher, books, member. Also show primary key, weak entity and strong entity.

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

   c) Explain any two types of join with example.

————