313302

12425

03 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) Differentiate between hierarchical and network data model. (Any two points)

b) State any four symbols used in ER diagram.

c) Define the terms

i) view

ii) sequence

d) List any two characteristics of big data.

e) Draw PL/SQL block structure.

f) State any two applications of trigger.

g) Write a syntax of create table command for creating table with primary key constraint.

Marks

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

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

b) Draw ER diagram of library management system.

c) List and explain the types of database users.

d) Differentiate between function and procedure. (Write any four points)

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

a) List and explain any four rules of EF codd.

b) Draw and explain three level architecture of data abstraction.

c) Normalize the following database up to 3NF

Studinfo (roll no, name, mobile, subID, sub marks, deptno., dept name, dept head) Here (roll no, subID) is a primary key.

d) State and explain properties of the transaction.

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

a) Write a SQL command to

i) Create a new user 'user1' with password 'user@2024'.

ii) Assign create session and create table privileges to the above user.

iii) Assign insert and delete privileges on 'Emptable' to the above user.

iv) Remove delete privilege on 'Emptable' from the above user 'user1'.

b) State the difference between instance and schema. State and explain the types of data independence.

c) Compare strong entity set and weak entity set with example (Any four points).

d) List and explain types of joins.

e) Define Exception and explain two types of Exceptions.

Marks

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

a) Consider the table Employee (empid, empname, salary, designation) and write queries to

i) Update salary of all employees by 5%.

ii) Delete all employees whose designation is 'Analyst'.

iii) Display employee ID and name of those employees whose salary is in the range 20,000 to 40,000.

iv) Insert one record in the Employee table.

v) Add a column mobile no in the above table schema.

vi) Delete all rows from the table Employee.

b) Write a PL/SQL program to find if entered number is even or odd. Handle the Exceptions.

c) State the use of sequence. Write and explain the syntax of create sequence and alter sequence.

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

a) Write a function which takes customer ID as a parameter and returns age of the customer. Use following table schema

Customer (custid, custname, dob, city)

b) Write SQL commands for the following

i) Create two tables

Student (rn, name, city) where rn is primary key and stud result (rn, subid, smarks) where rn is foreign key referencing student table.

ii) Display roll number and total marks of the students.

iii) Display subject wise average marks.

c) Explain the super key, candidate key, primary key and foreign key with example.
