

313302

25226

3 Hours / 70 Marks

Seat No.

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- 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) Define Normalization.
 - c) Define candidate key. Give example.
 - d) Define view. State its uses.
 - e) Enlist any four DDL commands.
 - f) Draw PL/SQL block structure.
 - g) List any four causes of database failures.

P.T.O.

2. Attempt any THREE of the following : 12

- a) Explain any four rules of EF codd.
- b) Consider the following schemas :
 - i) Dept (Dept – no, Dname, Loc)
 - ii) Emp (Emp - no, Ename, Job, Salary, Dept–no)Draw and explain parent child relationship for above schemas and apply referential integrity constraint.
- c) Describe any four string functions with example.
- d) Write a PL/SQL program to print even numbers between 1 to 20.

3. Attempt any THREE of the following : 12

- a) List and explain any four advantages of DBMS over traditional file processing system.
- b) Define the following terms :
 - i) Relation
 - ii) Tuple
 - iii) Domain
 - iv) Attribute
- c) Explain different types of exception.
- d) Explain ACID properties of transaction.

4. Attempt any THREE of the following : 12

- a) Describe data abstraction with neat diagram.
- b) Explain two-tier and three-tier client server architecture.
- c) Describe group by and having clause with suitable example.
- d) Consider following schema :
Employee (Emp-id, Emp-name, Job, Salary, Dept-no)
Write SQL commands for following :
 - i) Create view Emp - Vu20 that contains details of employee in Dept - No 20.
 - ii) Display employee details from view Emp - Vu20 whose salary is greater than 50,000/-
- e) Describe steps to use Explicit cursor with syntax and example.

5. Attempt any TWO of the following : 12

- a) Draw ER diagram of Library management system in which library maintains the data of books, borrowers, issue return details, fine collection, supplier of books. Assume suitable data display the relationship among entities.
- b) Consider the table student (rollno, Fname, Lname, dob, marks) and write queries :
 - i) Update marks of all students by 5.
 - ii) Delete all students whose rollno is less than 15.
 - iii) Insert one record in student table.
 - iv) Display rollno, fname and Lname of those students whose marks are in the range of 75 to 90.
 - v) Add a column mobile_no in the student table.
 - vi) Delete all rows from student table.
- c) Write a PL-SQL program which accepts the customer ID from user, if user enters an invalid ID then the exception invalid_id is raised using exception handling.

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 sequence seq-1 to insert the values into table student [ID number (10), Name char (20)]
 - iii) Change the seq-1 max value from 20 to 50.
 - b)
 - i) Write a function to find area of a circle and call the function.
 - ii) Create a stored procedure to accept name and greet user with name.
 - c) Write SQL commands for the following :
 - i) Create user 'ABC' with password as 'Student4K'.
 - ii) Grant privilege of select, update, delete on table student to user ABC.
 - iii) Take back privilege of delete from user 'ABC' on relation student.
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