

22416

21819

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) Enlist any four relational algebra operators.
 - b) State the use of 'Between' clause (any two user)
 - c) Compare 'GROUP BY' and 'HAVING' clause. (any two difference)
 - d) State any two advantages of PL/SQL.
 - e) List any four statements of PL/SQL.
 - f) Define the term 'cursor'
 - g) Enlist the types of database users.

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- 2. Attempt any THREE of the following:** **12**
- a) Describe simple and composite attribute with suitable example.
 - b) Define the index with its characteristics.
 - c) Differentiate between PL/SQL function and procedure. (any four differences)
 - d) Describe database security with its requirements.
- 3. Attempt any THREE of the following:** **12**
- a) Give any four string functions with example.
 - b) Create synonyms for 'class' tables. Write steps to create synonyms.
 - c) Write a PL/SQL program to display 10 reverse numbers. Use 'for' loop.
 - d) Describe GRANT and Revoke with its syntax and example.
- 4. Attempt any THREE of the following:** **12**
- a) Consider following schema:
Depositor (cust_name, acc_no)
Borrower (cust_name, loan_no)
Solve following queries:
 - (i) Find customer name having saving account as well as loan account.
 - (ii) Find customer names having loan account but not the savings account.
 - b) Create sequence for department table and also altered the created sequence.
 - c) List the types of trigger. Write the steps to create trigger with example.
 - d) Describe ACID properties of Transaction.
 - e) Define database backup. Describe how database backup helps to avoid failures.

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

- a)
 - (i) Create the table as named 'student' with field as roll no, name, address, DOB and percent.
 - (ii) Add a column 'city' to student table.
 - (iii) Change the name of 'student' table to; 'student_info'.
 - (iv) Remove/ delete the data or records from student info table.
- b) Describe Commit, Rollback and save point with example.
- c) Give syntax for creating a view. Consider following schema-ACCOUNT (Account_No, Name, Account_Type, PAN_Number, Balance). Create a view on ACCOUNT having attributes (Account_No, Name, PAN_Number) where balance is less than 10,000.

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

- a) Consider the following data base scheme student (roll_no, name, city, marks, result). Write queries for the following:
 - (i) Display all students having result as first class.
 - (ii) Update roll-no of each student by adding 18 to it.
 - (iii) Delete percent column from table.
 - (iv) Display student whose city is 'Mumbai'
 - b) Describe different types of Indexes with examples.
 - c) With suitable example write steps to create triggers and drop a trigger..
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