RAN-2411000902022001

RAN-2411000902022001 / 2411000902020021

First Year Bachelor of Computer Applications (NCF-NEP) (Sem. - II)

Examination October - 2025

Major-2-205 : Concepts of Relational Database Management Systems (TH)

Time: 1 Hour] **[Total Marks: 25**

સૂચના : / Instructions

(1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book.

Seat No.:

Student's Signature

Q. 1. Answer following : (Any Five) **(05)**

1. Which operation in relational algebra select stuples based on a condition?
   a) Project b) Select
   c) Union d) Rename
2. Which of the following is a characteristic of Codd's 11th rule?
   a) Information should be stored in tables
   b) Every operation must be reversible
   c) Data representation should be independent of storage
   d) No two relations should share an attribute
3. What is the effect of the "ROLLBACK" command in a transaction?
   a) It saves changes to the database
   b) It undoes all changes since the last COMMIT
   c) It begins a new transaction
   d) It temporarily suspends a transaction
4. Which of the following is a correct Data Control Language command?
   a) SELECT b) DELETE
   c) GRANT d) UPDATE
5. Which operation does "Rename" perform in relational algebra?
   a) It renames the attributes of a relation
   b) It joins two relations
   c) It filters data from a relation
   d) It changes the structure of a relation
6. Which SQL join will combine all rows from both tables, even if there is no match?
   a) Full Outer Join b) Cross Join
   c) Inner Join d) Left Join
7. Which of the following functions returns the current date and time?
   a) SYSDATE b) ADD_MONTHS
   c) NEXT_DAY d) ROUND
8. The "ROWID" pseudo column in SQL is used to:
   a) Identify unique rows in a table
   b) Return the row's position in the table
   c) Specify the data type of a column
   d) Retrieve specific rows by index

Q. 2. **A.** Discuss the concept of relational operations and explain how they are applied in database queries. Provide examples of select, project, and union operations. **(04)**

OR

A. Explain Codd's Rules and how they contribute to the definition of a relational database. Discuss any five rules in detail.

B. What is the purpose of Transaction Control Language (TCL)? Explain the commands COMMIT, SAVEPOINT and ROLLBACK with examples. **(04)**

OR

B. What is the significance of Data Control Language (DCL) in managing database security? Explain the GRANT and REVOKE commands with examples.

Q. 3. **A.** Explain the various data types in SQL. How does each data type differ in terms of storage and usage? Provide examples. **(04)**

OR

A. What is the use of the ROWID pseudo column and the DUAL table in SQLqueries? Explain with examples.

B. Explain the EXIT and CONTINUE commands used within loops in PL/SQL with examples. **(04)**

OR

B. Explain how conditional statements work in PL/SQL. Provide an example for an "IF...Else" structure.

Q. 4. **Answer Following (Any One)** **(04)**

A. What are Implicit and Explicit cursors in PL/SQL? Discuss their differences with examples.

B. Describe the use of "CASE" statements in PL/SQL. Provide an example of a nested CASE statement.

C. Discuss the different types of iterative statements available in PL/SQL. Provide an example for the "For Loop" and the "While Loop".

———————