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**SARDAR PATEL UNIVERSITY**  
**M.Sc.(Information Technology) : FIRST SEMESTER**  
**PS01CINT23 (RDBMS & Client Server Computing)**  
**16<sup>th</sup> April 2018, Monday**

Time: 2 PM To 5 PM

Marks: 70

**Q1. Give Answers of following Multiple Choice Questions. [08]**

- 1 The \_\_\_\_\_ data model organizes data in a tree structure.  
(A) Hierarchical (B) Network  
(C) Relational (D) Organization
- 2 There is generally a \_\_\_\_\_ that listens for events.  
(A) Main loop (B) Call back function (C) Event handler (D) None of Given
- 3 A \_\_\_\_\_ is a database object that holds user data.  
(A) FORM (B) TABLE (C) QUERY (D) None of given
- 4 \_\_\_\_\_ Command is used to modify the structure of a table.  
(A) Update (B) Modify (C) Alter (D) None of given
- 5 The \_\_\_\_\_ section deals with handling of errors that arise during execution of the data manipulation statements, which makes up the PL/SQL code block.  
(A) Exception (B) Declaration (C) Error (D) None of given
- 6 A \_\_\_\_\_ command can undo the work changes made in the table during the transaction.  
(A) COMMIT (B) Rollback (C) Savepoint (D) None of given
- 7 The \_\_\_\_\_ statement provides various types of access to database objects.  
(A) Grant (B) Commit  
(C) Revoke (D) None of given
- 8 In a \_\_\_\_\_ system, all databases are of same type.  
(A) Client/server distributed database (B) Homogeneous distributed database  
(C) Heterogeneous distributed database (D) None of given

**Q2. Answer the following questions: [Any SEVEN] [14]**

- 1 What is E-R diagram? What is its purpose?
- 2 Write differences between Logical data independence and Physical data independence.
- 3 Write the purpose of writing ROLLBACK and COMMIT statement.
- 4 What is joining? Give name of any four join.
- 5 Differentiate clearly RDBMS and DBMS.
- 6 Write about cursor attributes.
- 7 Differentiate clearly trigger and Stored procedures.
- 8 Explain update statement with its syntax and example.
- 9 Define: Reverse Engineering. Give categories of its applications

- Q3. A. Explain briefly the Normalization process. [6]  
B. Explain the with appropriate example(s): [6]  
i. FOR loop ii. SUBSTR() iii. ROUND ()  
OR

- B. Explain Relational Data Model with its advantages and disadvantages. [6]  
Q4. A. What do you mean by data constraint ? Explain any two data constraint with example. [6]  
B. Explain with diagram 2-Tier and 3-Tier Architecture. [6]

OR

- B. What is PL/SQL? Explain the basic structure of PL/SQL block. [6]  
Q5. A. Write SQL commands for the following. (Any THREE) [6]

- i. To create a table EMP having fields (ENO number(2,0), DNO number(1,0), ENAME varchar2(15)), where ENO is primary key and DNO is foreign key referencing DEPTNO of table DEPT.  
ii. To display the records of a table STUD whose SNAME has second character as A.  
iii. To give all permission on table STUD to user XYZ.  
iv. To display the records in descending order of SNAME of a table STUD.

- B. Assume that table named TRANS has fields INO Number(5), PRICE number(5,2), NUNITS number(2) and BAMT number (11,2). [6]

Write a PL/SQL code block to read INO from user and to calculate and update the BAMT for that customer using the following criteria:

$$\text{BAMT} = \text{NUNITS} * \text{PRICE}$$

OR

- B. Do as directed. [6]  
i. Define the term Trigger and write atleast two applications of it. [6]  
ii. Write short note on Error handling in PL/SQL.  
Q6. A. What do you mean by Cursor? Write the steps to manage explicit cursor. [6]  
B. Answer the questions: [6]  
i. Write short note on Concurrency control.  
ii. Write clearly the differences between stored procedures and functions.

OR

- B. Write a procedure named PSUB, which returns subtraction of two numbers. [6]  
Write a PL/SQL block code, which reads two numbers and using procedure PSUB, calculates subtraction of that two numbers and print the result.

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