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SARDAR PATEL UNIVERSITY  
M. Sc. (IT) Integrated  
External Examination  
Semester-IV  
Relational Database Management System-II (PS04CIIT04)

Date: 9/4/2016 (Saturday)  
Time: 10:30 AM to 01:30 PM

Total Marks: 70

Choose the most appropriate answer from the given options.

- (1) Normalization is a process of restructuring a relation to \_\_\_\_\_.
  - (a) minimize duplication of data in a database
  - (b) maximize duplication of data to ensure reliability
  - (c) make it of uniform size
  - (d) allow addition of data
- (2) Which of the following is not true?
  - (a) Normalization reduces duplication.
  - (b) Normalization reduces anomalies.
  - (c) Normalization is the process of designing the application programs.
  - (d) All of above.
- (3) The \_\_\_\_\_ attribute is used to declare a variable based on definition of column in a table.
  - (a) %ROWTYPE
  - (b) %TYPE
  - (c) %ROW
  - (d) %COLUMNTYPE
- (4) The \_\_\_\_\_ section deals with handling of errors in PL/SQL code block.
  - (a) Exception
  - (b) Declaration
  - (c) End
  - (d) Error
- (5) The \_\_\_\_\_ section is compulsory in PL/SQL block.
  - (a) Exception
  - (b) Begin
  - (c) Declare
  - (d) None of these
- (6) Fetch statement retrieves \_\_\_\_\_ row(s) at a time.
  - (a) one
  - (b) two
  - (c) three
  - (d) more than three
- (7) Which of the following is not a cursor attribute?
  - (a) %ROWTYPE
  - (b) %FOUND
  - (c) %ROWCOUNT
  - (d) %ISOPEN
- (8) A parameter can be passed to procedure in \_\_\_\_\_ ways.
  - (a) One
  - (b) Two
  - (c) Three
  - (d) Four
- (9) A \_\_\_\_\_ is Executed automatically when an associated DML statement is executed.
  - (a) Procedure
  - (b) Function
  - (c) Trigger
  - (d) Package
- (10) A \_\_\_\_\_ is an oracle object, which holds other objects in it.
  - (a) Procedure
  - (b) Function
  - (c) Trigger
  - (d) Package

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Answer the following questions in brief (**Any Ten**)

- (1) What is normalization?
- (2) What are the advantages of Normalization?
- (3) Differentiate 3NF and BCNF.
- (4) Draw the PL/SQL block structure.
- (5) Define: Variable and Constant.
- (6) Explain Case statement in brief.
- (7) Explain cursor FOR LOOP.
- (8) Differentiate between implicit cursor and explicit cursors.
- (9) Explain SELECT ... INTO Statement.
- (10) Differentiate between stored Procedure and stored Function.
- (11) Differentiate row level and statement level trigger.
- (12) What is Package? List part of package.

Explain First Normal Form, Functional Dependency, Second Normal Form and BCNF with example.

OR

Consider the following table EMP\_PROJ with primary key (Employee\_ID, Project\_ID). It is used to record information related to (i) Employee Information (ii) Project Information and (iii) Information related to association between employee and project. Note that an employee can work in multiple projects, and multiple employees can work on a same project. Also note that salary of two employees is same if their designations are same. List Functional Dependencies and give table(s)/database design for this system in (i) 1 NF (ii) 2 NF and (iii) BCNF.

EMP\_PROJ(Employee\_ID, Project\_ID, Joining\_Date, Leaving\_Date, Employee\_Name, Project\_Title, Employee\_Phone, Project\_Duration\_in\_Days, Dependents\_of\_Employee, Designation, Salary)

- (A) Explain Conditional Control with syntax and example.
- (B) Explain basic data types in detail.

OR

- (A) Explain Iterative Control with syntax and example.
- (B) Write advantages of PL/SQL

Explain declaration, open, fetch and close statements for an explicit cursor with proper syntax, description and example.

OR

- (A) List and explain explicit cursor attributes with suitable example.
- (B) What is exception? Explain exception handling process with example.

- (A) Explain Procedure with syntax and example.
- (B) Explain Trigger with syntax and example.

OR

- (A) Explain Function with syntax and example.
- (B) Explain PL/SQL package with syntax and example.