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# SARDAR PATEL UNIVERSITY

M. Sc. (GEOINFORMATICS)

SEMESTER – I

PS01CGIN05 (RDBMS & CLIENT SERVER COMPUTING)

26<sup>TH</sup> OCTOBER, 2016

Time : 10:00 a.m. to 1:00 p.m.

Marks : 70

Note : Answers of all the questions (including multiple choice questions) should be written in the provided answer book only.

Q-1 Pick up the most appropriate answer from the given alternatives and write in your answer book. (8)

- (1) Which of the following are supported by transaction control statements?  
(A) Commit, Rollback, Savepoint (B) Alter, Execute, Drop  
(C) Insert, Remove, Delete (D) All of the above
- (2) Find odd one out from the followings:  
(A) Oracle (B) PostgreSQL (C) MySQL (D) MS-OFFICE
- (3) The \_\_\_\_\_ provides command for defining relation schema, deleting relations and modifying relation schema.  
(A) DML (B) DDL (C) DCL (D) DQL
- (4) PL/SQL is a \_\_\_\_\_ language.  
(A) natural (B) procedural (C) natural (D) none of these
- (5) Which is correct syntax to matches any string beginning with "net" ?  
(A) %net (B) net% (C) %net% (D) \_net%
- (6) The GROUP BY clause is used with \_\_\_\_\_ command.  
(A) SELECT (B) DELETE (C) DROP TABLE (D) none of these
- (7) Primary key constraint can be assigned using \_\_\_\_\_.  
(A) PRIMARY (B) PRIMARY KEY (C) PRIMERY KEY (D) none of these
- (8) DCL stands for \_\_\_\_\_.  
(A) Data Command Language (B) Domain Control Language  
(C) Data Control Library (D) Data Control Language

Q-2 Attempt the following: (ANY SEVEN) (14)

- 1) What is RDBMS? List out benefits of RDBMS.
- 2) What is Range Searching and Pattern matching?
- 3) List out any Six Codd's rules.
- 4) What is 'Constraint'? Write the benefits of using data constraint.
- 5) What is Join? List different types of joins.
- 6) What is View? Give an example of CREATE VIEW command.
- 7) What is query? Give an example of SELECT statement, which makes the use of IN and AND keywords.
- 8) Write a note on Entity Relationship diagram.
- 9) What is Trigger? Why is it used?

- Q-3 (a) What is Normalization? Explain 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> normal forms with example. [6]  
(b) A company has several departments. Each department has a supervisor and at least one employee. Employees must be assigned to at least one, but possibly more departments. At least one employee is assigned to a project, but an employee may be on vacation and not assigned to any projects. The important data fields are the names of the departments, projects, supervisors and employees, as well as the supervisor and employee number and a unique project number. [6]

*Answer the following questions :*

- i. Find out various entities involved.
- ii. Find out relationships between identified entities.
- iii. Draw an ERD.

OR

- Q-4 (b) Draw a Context Level diagram, 1<sup>st</sup> Level DFD and 2<sup>nd</sup> Level DFD for Banking Environment. [6]  
(a) List down String related functions. Explain any four of them with syntax and example. [6]  
(b) Explain Stored Procedure with its syntax and example. [6]

OR

- (b) What is Exception? Why is it required? Explain the use of pre-defined exception with suitable example. [6]  
Q-5 (a) What is PL/SQL? Explain the basic structure of a PL/SQL block? Explain in brief with suitable example the exceptional handling mechanism used in PL/SQL block. [6]  
(b) What is Cursor? Explain the use of explicit and implicit cursor by taking suitable example. [6]

OR

- (b) Write a note in Conditional and Looping Statements in PL/SQL block taking suitable example. [6]  
Q-6 (a) Explain 2-tier and 3-tier Client-Server architecture. [6]  
(b) Explain GRANT, REVOKE and SAVEPOINT commands with an example. [6]

OR

- (b) Write a note on Web Application Server and File Server.

*Wish You All The Best*