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Term End Examination - June, 2018
Diploma in Computer Applications
DCA-05: Database Systems

Time - 3 hours   **Full Mark - 100**

*Answer **all** questions from Group -'A', any **four** questions from
Group -'B, any **four** questions from Group -'C' and any **two** question from Group-'D'*

<u>Group 'A'</u>   Marks: 1 × 10= 10

(Answer all the questions)

Q.No.1 (Choose the correct answer)

   i. A relational database consists of a collection of
      a) Tables   b) Fields   c) Records   d) Keys
   ii. Which one of the following is a procedural language?
      a) Domain relational calculus   b) Tuple relational calculus
      c) Relational algebra   d) Query language
   iii. Which forms simplifies and ensures that there is minimal data aggregates and repetitive groups:
      a) 1NF   b) 2NF   c) 3NF   d) All of the mentioned
   iv. In order to undo the work of transaction after last commit which one should be used?
      a) View   b) Commit   c) Rollback   d) Flashback
   v. Which of the following is not an integrity constraint?
      a) Not null   b) Positive   c) Unique   d) Check 'predicate'
   vi. Which of the following data type is used to store video and image files?
      a) Clob   b) Blob   c) Binary   d) Image
   vii. The function that an entity plays in a relationship is called that entity's _____.
      a) Participation   b) Position   c) Role   d) Instance
   viii. Which of the following can be a multivalued attribute?
      a) Phone_number   b) Name   c) Date_of_birth   d) All of the mentioned
   ix. Key to represent relationship between tables is called
      a) Primary key   b) Secondary Key   c) Foreign Key   d) None of the mentioned
   x. What field type is best to store serial numbers?
      a) Number   b) AutoNumber   c) Text   d) Memo

PTO.

<div align="center"><u>Group 'B'</u></div>

Marks: 5 × 4= 20

Q.No.2 (Answer any four questions each within 50 words)

    a) What is a database system and explain it?

    b) Discuss different types of attributes in relational databases.

    c) Write short notes on BCNF.

    d) Define data model and its records.

    e) What is the purpose of a Physical Data Model?

    f) Write the different types of Keys in relational databases?

<div align="center"><u>Group 'C'</u></div>

Mark: 10 × 4= 40

Q.No.3 (Answer any four questions each within 200 words)

    a) Write the characteristics of a database System.

    b) What do you mean by RDBMS? Give Examples of it.

    c) Explain detail about Fifth Normal Form with example.

    d) Find out the difference between 3NF and BCNF.

    e) Write the syntax of different DML commands with example.

    f) What is the Rules of Converting ER-Diagrams into tables?

<div align="center"><u>Group 'D'</u></div>

Mark: 15 × 2= 30

Q.No.4 (Answer any two questions each within 250 words)

    a) Discuss about different types of DBA and explain their roles in details.

    b) What is a data model? Name different types of record based data models.

    c) Explain the function of each of the clauses in the SELECT statement.

    d) What is an ER Diagram? Explain different symbols used in an ER diagram.

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