DIT-05

Diploma Management System

Diploma in Information Technology (DIT-17)

2nd Semester Examination 2019

Time : 3 Hours   **Max. Marks 80**

Note : This paper is of Eighty (80) marks divided into three(03) sections A,B & C. Attempt the questions contained in these sections according to the detailed instruction given therein

Section –A

(Long Answer Type question)

Note : Section 'A' contains four (04) long-answer-type question of nineteen (19) marks each.learners are required to answer any two(02) question only.   (2x19=38)

1. a. What do you mean by Database Administrator? Discuss the various functions of DBA.
   b. Discuss in detail SELECT, PROJECT and UNION with suitable example.

2. Define the following terms .
   a. Data Abstraction
   b. Database Schema
   c. Data independency
   d. Data Redundancy
   e. DDL & DML

3. What is Deadlock ? When does it occur ? How is it detected in database system ?How it can be avoided ? Discuss in detail.

4. a. Explain Concurrency ? And also explain about concurrency control techniques.

   b. How many types of failure ? Explain about the verious recovery techniques.

Section – B
(Short-Answer-Type Question)

Note : Section 'B' contains eight(08) short answer type questions of Eight (08) marks each.Learners are required to Answer any four (04) Questions only.

(4x8=32)

1. Difine the terms generalization , Specalization and Aggregation with suitable Example.
2. a. Explain the three levels Architecture of DBMS in detail.

   (04)

   b. Explain codds rules. (04)
3. Draw the E-R diagram of the registration process of the student in a Particular course; convert the E-R diagram into table also.
4. Explain the following
       (i)Integrity Constraints
       (ii)Foreign key
       (iii)Primary key
       (iv)Candidate key
       (v)super key
5. Distringuish between:
   I. Primary and secondary indexing.
   II. Ordered indexing and hashing.
6. Explain briefly about 3NF,4NF & BCNF with suitable example.
7. What is functional Dependency? Explain type and properties of FD's.
8. What is join ? Discuss different types of joins.

Section –C
(Objective-Type Question)

Note : Section 'C' contains ten(10) objective- type questions of one (01) mark each. All the questions of this section are Compulsory.   (10 x 1 = 10)

1. Cardinality is :
    - (a)   Number of tuples
    - (b)   Number of attributes
    - (c)   Number of tables
    - (d)   Number of constraints.

2. In an E-R diagram attributes are represented by
    - (a) rectangle
    - (b) square
    - (c) ellipse
    - (d) triangle

3. SET concept is used in :
    - (a) Network Model
    - (b) Hierarchical Model
    - (c) Relational Modal
    - (d) None of these

4. In RDBMS a row is called as
    - (a) tuple
    - (b) relation
    - (c) attribute
    - (d) degree

5. DDL is
    - (a) Dynamic Data Language
    - (b) Data Difinition Language
    - (c) Datailed Data Language
    - (d) Data Derivation Language

6. Which database level is closest to the usres ?

   (a) External

   (b) Internal

   (c) Physical

   (d) Conceptual

7. Relational calculus is a

   (a) Procedurel language

   (b) Non-Procedurel

   (c) Data definition language

   (d) High level language

8. In relational algebra, Cartesian product is

   (a) Unary operator

   (b) Binary operator

   (c) Ternary operator

   (d) None of them

9. Architecture of the database can be viewed as

   (a) Two levels

   (b) Four levels

   (c) Three levels

   (d) One levels

10. Which of the following is a comparison operator in SQL ?

   (a) =

   (b) LIKE

   (c) BETWEEN

   (d) All of them

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