BCA-09/DCA-103

December - Examination 2018

BCA Pt. II/DCA Examination

Database Management System

Paper - BCA-09/DCA-103

Time : 3 Hours]   **[Max. Marks :- 100**

Note: The question paper is divided into three sections A, B and C. Write answers as per given instructions.

Section - A   **10 × 2 = 20**

(Very Short Answer Questions)

Note: Answer **all** questions. As per the nature of the question delimit your answer in one word, one sentence or maximum upto 30 words. Each question carries 2 marks.

1) (i) Give the three levels of data abstraction?

   (ii) What is File Manager?

   (iii) Define cardinality ratio in ER Model.

   (iv) Mention any four main objectives of a database management system.

   (v) Define the role of database administrator.

   (vi) State the different data types in SQL.

   (vii) What is Normalization?

(viii) What is Natural Join?

(ix) List any four applications of DBMS.

(x)   What is Entity Relationship diagram in DBMS?

Section - B $4 \times 10 = 40$
(Short Answer Questions)

Note: Answer **any four** questions. Each answer should not exceed 200 words. Each question carries 10 marks.

2)   Explain relational, network and hierarchical data model in brief with suitable example.

3)   Give the structure of DBMS and explain the role of various users in it.

4)   Discuss the main characteristics of the database approach and how it differs from traditional file system.

5)   Explain difference between Weak and Strong entity set.

6)   Explain the task performed by database administrator and database manager.

7)   Define Specilization and Generalization with the help of an example.

8)   What are the advantages and disadvantages of a database approach?

9)   What is serializability and how it works in concurrency?

Section - C $2 \times 20 = 40$

(Long Answer Questions)

Note: Answer **any two** questions. You have to delimit your each answer maximum upto 500 words. Each question carries 20 marks.

10) Define functional dependencies and explain inference rules of functional dependencies.

11) Differentiate between stored procedure and triggers. How stored procedure and triggers are created? Explain with examples.

12) Explain E-R model and Relational model. Also compare both.

13) Draw an ER diagram for Airlines Reservation System consisting of flights, aircrafts, airports, fares, reservation, tickets, pilots, crew and passengers. Clearly highlight the primary keys and mapping cardinalities.

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