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MCA-07

December - Examination 2015

MCA Ist Year Examination

Fundamentals of Database Management System

Paper - MCA-07

Time : 3 Hours] **[Max. Marks :- 80**

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

Section - A

$8 \times 2 = 16$

(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) What is SQL?

(ii) Define RDBMS.

(iii) What do you mean by Data Dictionary?

(iv) Write the function of Query processor.

(v) Which is the first commercial RDBMS that support SQL.

(vi) Name the wildcard character used with LIKE operator in SQL.

(vii) What is aliasing?

(viii) Write the syntax of SELECT query.

Section - B

$4 \times 8 = 32$

(Short Answer Questions)

Note: Answer any four questions. Each answer should not exceed 200 words. Each question carries 8 marks.

2) Give the difference between Fields and Records.

3) What is Hashing? Write advantages and disadvantages of hash file.

4) Define the concept of aggregation. Give an example where this concept is useful.

5) What are the standard operations on sets are also available in relational algebra? Explain with example.

6) Explain the following terms briefly: attribute, domain, entity, relation-ship, entity set, relationship set, one-to-many relationship, many-to-many relationship, participation constraint, overlap constraint, covering constraint, weak entity set.

7) Explain the difference between CHAR and VARCHAR2 Data Type.

8) How you can handle NULL values in RDBMS? Explain.

9) What is join operation? Compare Inner Join with Outer Join operation.

Section - C

2 x 16 = 32

(Long Answer Questions)

Note: Answer any two questions. You have to delimit your each answer maximum upto 500 words. Each question carries 16 marks.

10) Describe 3-tier DBMS Architecture with neat diagram and example.

11) Describe the implementation of stack using Arrays and Linked list with suitable example.

12) Describe the goal of Normalization Process. What are the anomalies associated with Normalized Database? Explain with example.

13) Write short notes on the following:

(i) Primary key

(ii) Foreign key

(iii) Super key

(iv) Candidate key