8. With a neat diagram describe the overall system structure of DBMS.

9. What is Entity set ? Also define Relationship Set. List and explain the symbols used to draw ER Diagrams.

BCA–09/DCA–103

December – Examination 2021

BCA (Part II)/DCA Examination

Database Management System
Paper : BCA-09/DCA-103

Time : 1½ Hours]   [*Maximum Marks : 70*

Note :– The question paper is divided into two Sections A and B. Write answers as per the given instructions.

Section–A   **4×3½=14**

(Very Short Answer Type Questions)

Note :– Answer any *four* questions. As per the nature of the question delimit your answer in one word, one sentence or maximum up to **30** words. Each question carries 3½ marks.

1. (i) Give the definition of DBMS.

   (ii) Write the generalized syntax of the SELECT query.

   (iii) What do you mean by normalization ? Give an example.

   (iv) What is the atomicity of a transaction ? Give an example.

   (v) Why foreign keys used ? Explain with an example.

   (vi) List any *four* data types supported by SQL.

   (vii) What is a Relation Schema and a Relation ? Give an example.

   (viii) Give an example of equi join.

Section–B   4×14=56

(Short Answer Type Questions)

Note :– Answer any *four* questions. Each answer should not exceed **200** words. Each question carries 14 marks.

2. Explain timestamp ordering to ensure concurrency control with example.

3. Explain the difference between DBMS and file processing system in detail.

4. Given a relation R with 5 attributes ABCDE and the following FDs : $A \rightarrow B$, $BC \rightarrow E$, and $ED \rightarrow A$. Is R in 3NF ? Justify.

5. List and explain various issues while transactions are running concurrently in DBMS.

6. Does two phase locking protocol ensure conflict serializability ? Justify your answer with appropriate examples.

7. Explain the concept of DDL and DML commands in DBMS.