PANJAB UNIVERSITY

DATABASE MANAGEMENT SYSTEM

(BCA 4TH SEMESTER)

Maximum Marks: 65

Note: - Attempt <u>five</u> questions in all, including Question No. 9 (Section E) which is compulsory and selecting one question each from Section A-D.

2021: -

SECTION – A

1. Explain three level architecture of Database Management System.   **13**

2. a) What is Data Independence? Explain logical and physical data independence.   **5**
   b) Differentiate between File system and DBMS.   **8**

SECTION – B

3. Explain network and hierarchical models.   **13**

4. a) Explain Codd's rules for an RDBMS.   **8**
   b) Explain selection and projection operations used in relational algebra.   **5**

SECTION – C

5. a) Explain COMMIT and ROLLBACK in SQL with examples.   **5**
   b) Explain the difference between DELETE, DROP AND TRUNCATE command with example.   **8**

6. a) Explain the working of Group by Clause with suitable example.   **7**
   b) Explain any three data functions.   **6**

SECTION – D

7. a) Explain block structure of PL/SQL.   **7**
   b) Explain Equi-Join and Outer-Join with Example.   **6**

8. What is a database trigger? What are its types? What functions are performed by triggers? Explain with suitable PL/SQL code.   **2+5+3+3**

SECTION – E

(Compulsory questions)

9. Write short note on the following:
   a) Foreign Key   **2**
   b) Functional Dependency   **2**
   c) Cursor   **2**
   d) Advantages of Pl/SQL   **2**
   e) Aggregate functions   **3**
   f) ER Diagram   **2**