

MALINI KISHORE SANGHVI COLLEGE OF COMMERCE & ECONOMICS

CLASS: S.Y.B.Sc I.T (SEM III)

Dt: - 21.3.23

SUBJECT: DATABASE MANAGEMENT SYSTEM

TIME: 2Hrs & 30 Min

Marks: 75



NOTE: ALL QUESTIONS ARE COMPUSORY

FIGURES TO THE RIGHT INDICATE FULL MARKS

EXPLAIN WITH ALGORITHM AND EXAMPLES WHEREVER NECESSARY

**Q.1 ANSWER THE FOLLOWING (ANY THREE):**

15

- A) Explain the features of Network model
- B) Describe the views of database
- C) Explain the Hierarchical database model
- D) Explain UML
- E) Describe Codd's rules (any five)
- F) Draw ER diagram for a movie theater company

**Q.2 ANSWER THE FOLLOWING (ANY THREE):**

15

- A) Describe integrity rules with regards to DBMS
- B) Explain 2<sup>nd</sup> NF
- C) Explain difference between calculus vs algebra
- D) Explain the set operations in relational algebra
- E) Explain the Join operations in relational algebra
- F) Explain 3 NF

**Q.3 ANSWER THE FOLLOWING (ANY THREE):**

15

- A) Explain data independence in DBMS
- B) Explain the importance and uses of Null values
- C) Explain the nested queries
- D) Explain the features of DDL
- E) Explain the COUNT ( ) function
- F) Explain the MAX ( ) function

**Q.4 ANSWER THE FOLLOWING (ANY THREE):**

15

- A) Concurrency control
- B) Deadlock detection
- C) ACID properties
- D) Two Phase Locking
- E) Deadlock recovery
- F) Time stamping method

**Q.5 ANSWER THE FOLLOWING (ANY THREE):**

15

- A) Expressions in PL/SQL
- B) Concatenation operator in PL/SQL
- C) Triggers
- D) Collections
- E) Transaction in PL/SQL
- F) Exception handling in PL/SQL