SET A

NEW SUMMIT COLLEGE
Shantinagar, Kathmandu

PRE-BOARD EXAMINATION-2080

Full Marks: 40
Time: 3 hours

Bachelors in Business Management
COM 312- DBMS
Semester: VI
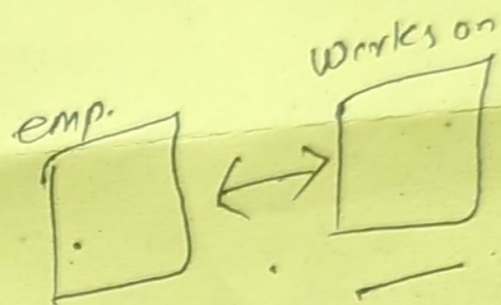
Group A

(1x5 = 5)

Very Short Answer Questions

1. What is data governance?
2. Define weak entity.
3. What is Primary key?
4. What is decomposition? Define lossy decomposition.
5. What is schedule. Can non-serial schedule is serializable? Justify.

Group B

Short Answer Questions

(5x3 = 15)

Attempt All questions.

6. Discuss the advantages of DBMS over file system.
7. What is a view in SQL and how it is defined? List advantages of view.
8. Consider a relation schema R (A , B , C , D) with the following functional dependencies(A → B,B → C,C → D,D → B).Determine whether the decomposition of R into R1 (A , B), R2 (B , C) and R3 (B , D) is lossless or lossy.
9. Discuss about ACID properties in transaction management.
10. Define trigger and Assertion with suitable syntax.

Group C

Long Answer Questions
Attempt all questions.

(2x10 = 20)

11. What is Normalization? Describe need of normalization. Explain 1NF,2NF and 3NF with suitable examples.
12. Consider the following supplier database, where primary keys are underlined.

    Supplier (supplier-id, supplier-name, city)

    Supplies (supplier-id, part-id, quantity)

    Parts (part-id, part-name, color, weight)

    Construct the following relational algebra and SQL queries for this relational database

    a. Find the name of all suppliers located in city "Kathmandu".
    b. Find the name of all parts supplied "ABC Company".
    c. Find the name of all parts that are supplied in quantity greater than 300.
    d. Find the number of parts supplied by "ABC Company".
    e. Find the name of all suppliers who supply more than 30 different parts.