ASSIGNMENT-I DBMS

1. What is DBMS? Explain its application.
2. Write down advantage and disadvantage of DBMS.
3. What is data independence? Describe three level architecture of DBMS.
4. What is database language? Describe its types with example.
5. Describe Entity and Entity set with example.
6. What is Data model? Explain its types.
7. Construct ER diagram of Hospital/College/Bus ticketing management system.
8. Differentiate between database schema and instance.
9. What do you understand by the keys in database? Explain its type.
10. Explain different types of relational algebra operation with proper mathematical notation.
11. What is normalization? Explain objectives of normalization.
12. Explain different types of normalization with example.
13. What is functional dependency? Write down its types with example.
14. What is attribute? Explain types of attribute with example.
15. Write a SQL command for creating database and table.
16. Write a SQL command for inserting and deleting records in a table.
17. Write SQL command for deleting database and table.
18. Write shorts notes:
    - i. Weak and Strong entity set.
    - ii. Relationship and Relationship set.
    - iii. Attribute.
    - iv. Generalization and Specialization.
    - v. Aggregation.
    - vi. SQL.
    - vii. Relational algebra.
    - viii. Outer join.
    - ix. Inner join.

x. constraints.

19. Consider the following relational schema of hospital where primary key are underlined.

Doctor(name,age,address)

Works(name,deptno)

Department(deptno,floor,room)

Write down the relational algebra and SQL expression for the following:

i. List the room of the doctors named 'KAROL'

ii. Count the numbers of doctors working in top floor.

iii. Delete all the department of ground floor.

iv. increase the age of doctor named 'Saphal' by 1.

v. Find the name of doctors having address 'Kathmandu' and working on ground floor.

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