DEPARTMENT OF COMPUTER ENGINEERING
UNIT TEST - I

Class: SE	**Div: A/B/C**	**Semester: IV**
Date:21/02/2024	**Time: 10:00 am- 11:30 am**	**Max marks: 40**

Subject: DATABASE MANAGEMENT SYSTEM

Note the following instructions
1. Attempt all questions.
2. Draw neat diagrams wherever necessary.
3. Write everything in ink (no pencil) only.
4. Assume suitable data, if missing, with justification.

Q1	Attempt any Two	Mark	CO	Level
A)	Explain Data Abstraction	[5]	CO1	L2
B)	What is DBA? Explain Role of DBA?	[5]	CO1	L2
C)	Explain Data Independence in DBMS?	[5]	CO1	L2
D)	Define DBMS and Explain its Characteristics?	[5]	CO1	L2
Q2	**Attempt the following**	**Mark**	**CO**	**Level**
A)	Demonstrate the concepts of cardinality mapping constraint and participation constraint with Example in ER model. **OR**	[10]	CO2	L3
A)	Demonstrate the concepts of Generalization, Specialization, Union and Aggregation in EER with examples?	[10]	CO2	L3
B)	Design an ER/EER diagram for a company which has several employees working on different types of projects. Several employees are working for one department. Every Department has a manager. Several Employees are supervised by one Employee. And map it into a relational model. (<u>Assume suitable data for attributes</u>) **OR**	[10]	CO2	L3
B)	Construct an ER/EER diagram for the College Management system. State and assume suitable data. And map it into a relational model.	[10]	C02	L3
Q3	**Attempt any one(Solve the following relational algebra queries for the given Database)**	**Mark**	**CO**	**Level**
A)		[10]	CO3	L3

employee(person_name, street, city)	**works(person_name,company_name, salary)**
company(company_name,city)	**manages(person_name,manager_name)**

i) Find the names of all employee in this database who work in " First Bank Corporation"
ii) Find the names of employee whose salary is greater than 75000
iii) Find the names of the employees and their company name.
iv) Find the employees who live in Mumbai.

B)	For the **Employee(e_id, name,job,join_date,dept_no, sal)** table.	[10]	CO3	L3

a)Find the name of the EMPLOYEE whose department is 4
b)Find the EMPLOYEE tuples whose salary is greater than $30,000
c)Delete the employee whose e_id is 121.
d)Update the salary of employees with the name "John"