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DEEMED TO BE
UNIVERSITY
NAVI MUMBAI

Semester-III   **B. Tech. Computer Science and Engineering (Cyber Security)**   38422301

CCC301   **Subject Name: Database Management Systems**

Date: 14-05-2024   **Time:02.00 pm To 04.00 pm**   **Max Marks: 60**

Q.1	**Solve any Four**	**20 Marks**	**CO**	**BT**
a)	Explain specialization and generalization with example	5	CO1	BT2
b)	Difference between file processing system and database system	5	CO2	BT4
c)	Explain view in SQL with example	5	CO4	BT2
d)	Explain ACID properties in details	5	CO6	BT2
e)	Explain any five relational algebra operations	5	CO2	BT2
f)	Explain serializability concept with example?	5	CO6	BT2
Q.2	**Solve any Four**	**20 Marks**	**CO**	**BT**
a)	Explain types of join with example	5	CO4	BT2

b)	Explain the following terms with example
	   i) Week Entity set
	   ii) Extended ER features
	   iii) Total and Partial participation
		5	CO2	

c)	Explain Log based protocol in details?	5	CO6	BT2
d)	Explain Integrity constraints with examples?	5	CO4	BT2
e)	Explain different types of attributes with example	5	CO1	BT2
f)	Explain Trigger with syntax and example	5	CO5	BT2
Q.3	**Solve any Two**	**20 Marks**	**CO**	**BT**
a)	For the following given database, write SQL Queries. Employee_info (Emp_id, Emp_ name, department, projects, address, DOB, gender Employee_ position (Empid, Emp_position, Dateof joing, salary)	10	CO4	BT3

    i)   Write a query to fetch the number of employees working in the department 'HR'.

    ii)   Write a SQL query to retrieve employee details from

Employee_Info table who have a date of joining in the Employee _Position table.

iii) Write q query to find all the employees whose salary is between 50000 to 100000.

iv) Write a query to retrieve Emp_Position along with total salaries paid for each of them

b) Draw ER diagram of hospital management system and convert it in to relational model   10   **CO2**   **BT6**

c) What is normalization? Explain 1 NF, 2 NF, 3NF, BCNF with example   10   **CO3**   **BT2**