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**G H Raisoni College of Engineering and Management, Pune**

(An Autonomous Institution affiliated to SPPU)

T.Y. B. Tech (Computer Engineering) (Term-V)

CAE-I Winter-2022 (2020 Pattern)

**Database Management Systems (UCOL301)**

[Time: 1 Hour]

[Max. Marks-15]

**COURSE OUTCOMES:**

1. Analyse an information storage problem and derived an information model expression in the form of Entity relation diagram and design appropriate data model for it.
2. Demonstrate SQL queries to perform CRUD (Create, Retrieve, Update, Delete) operations on database and perform inferential analysis of data model
3. Identify features of database management systems and Relational database and Understand functional dependencies and various normalization forms
4. Perform basic transaction processing and management and ensure database security, integrity and concurrency control
5. Analyze the management of structured and unstructured data management with recent tools and technologies

**Instructions to the candidates:**

1. All questions compulsory.
2. Neat diagrams must be drawn wherever necessary.
3. Figures to the right indicate full marks.
4. Assume suitable data, if necessary.
5. Other Instructions, if any.

Q. No.	Sub Quest ion		CO	L	M
1	a)	Enlist and explain advantages and applications of DBMS in real life.	3	L2	[5]
	b)	Compare and contrast file system with database systems.	3	L2	[5]
2	a)	Design Entity Relationship diagram for library management system, find appropriate entity sets and apply all features of ER diagram.	1	L2	[5]
OR					
	b)	Consider following table named EMPDATA	2	L3	[5]

ENAME	DNAME	JOB	EMPNO	LOC	SALARY
ADAMS	RESEARCH	CLERK	7876	DALLAS	1000
ALLEN	SALES	SALESMAN	7499	CHICAGO	1500
BLAKE	SALES	MANAGER	7698	CHICAGO	2500
CLARK	ACCOUNTING	MANAGER	7782	NEW YORK	2000
FORD	RESEARCH	ANALYST	7902	DALLAS	3000



JAMES	SALES	CLERK	7900	CHICAGO	1000
JONES	RESEARCH	MANAGER	7566	DALLAS	2500
KING	ACCOUNTING	PRESIDENT	7839	NEW YORK	5000
MARTIN	SALES	SALESMAN	7654	CHICAGO	1500
MILLER	ACCOUNTING	CLERK	7934	NEW YORK	1000
SCOTT	RESEARCH	ANALYST	7788	DALLAS	2500
SMITH	RESEARCH	CLERK	7369	DALLAS	1000
TURNER	SALES	SALESMAN	7844	CHICAGO	1500
WARD	SALES	SALESMAN	7521	CHICAGO	1500

- 1) Write SQL query for inserting data in the table for employee David working in accounting department as manager in New York with salary 2500.
- 2) Write SQL query for updating the job of Martin as clerk.
- 3) Write SQL query for displaying names employees working in ACCOUNTING dept.
- 4) Write SQL query for displaying names and empno of employees who are manager in sales dept
- 5) Write SQL query for displaying all information of employees who are not clerks

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