

Code No: **R20A0509****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

(Autonomous Institution – UGC, Govt. of India)

II B.Tech II Semester Supplementary Examinations, June 2024**Database Management Systems**

(CSE, IT, CSE-CS, CSE-AIML, CSE-DS, CSE-IOT & B.Tech-AIDS)

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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing **ONE** Question from each SECTION and each Question carries 14 marks.

			<u>SECTION-I</u>	BCLL	CO(s)	Marks
1	A	What is DBMS? List out the important applications of DBMS in the modern era.		L3	CO-I	[7M]
	B	Differentiate Entity sets and Relationship sets in detail.		L1	CO-I	[7M]
			OR			
2	A	Who are the different database users? Explain their interfaces to the database management system.		L5	CO-I	[7M]
	B	Explain the relational model structure in detail.		L2	CO-I	[7M]
			<u>SECTION-II</u>			
3	A	What is Tuple Relational Calculus in DBMS, explain.		L5	CO-II	[6M]
	B	Explain the following in SQL a) EXCEPT b) EXIST		L2	CO-II	[8M]
			OR			
4	A	What is the role of the selection operation in Relational algebra, explain the syntax with a suitable example.		L1	CO-II	[7M]
	B	Write is the role of triggers in SQL. Explain with simple examples.		L3	CO-II	[7M]
			<u>SECTION-III</u>			
5	A	What is the second normal form explain with a suitable example.		L2	CO-III	[7M]
	B	What is Normalization and how to do it in DBMS, explain.		L4	CO-III	[7M]
			OR			
6	A	What is partial dependency, explain with an example.		L2	CO-III	[7M]
	B	What is join dependency, explain the statement of the fifth normal form.		L4	CO-III	[7M]
			<u>SECTION-IV</u>			
7	A	Explain ACID properties in detail.		L2	CO-IV	[7M]
	B	Explain the concept of multiple granularity with a suitable example.		L1	CO-IV	[7M]
			OR			
8	A	Write short notes on lock-based protocols.		L3	CO-IV	[7M]
	B	Why timestamps are used? How many ways timestamps are		L4	CO-IV	[7M]

generated? Discuss the Thomas Write Rule.

SECTION-V

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| 9 | A | Explain the concept of log-based recovery. | L4 | CO-V | [7M] |
| | B | What is non-volatile storage, explain the concept of failure with loss of non-volatile storage | L1 | CO-V | [7M] |
| | | OR | | | |
| 10 | A | Explain the checkpoint log-based recovery scheme for recovering the database. | L3 | CO-V | [7M] |
| | B | Write a short note on buffer management in databases. | L1 | CO-V | [7M] |
