O.P.Code: 20CS0505	R20	H.T.No.									

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech II Year II Semester Regular & Supplementary Examinations August-2023

DATABASE MANAGEMENT SYSTEMS
(Common to CIC & CCC)

Time: 3 Hours **Max. Marks: 60**

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	a	Define Database. Discuss about applications of Database Systems.	CO1	L1	6M
	b	List out the purpose of Database Systems.	CO1	L1	6M
		OR			
2		Explain about ER model and Component of ER Diagram.	CO1	L4	12M
		UNIT-II			
3	a	Identify relational database query.	CO2	L2	6M
	b	Distinguish GROUP by and HAVING clauses with examples.	CO2	L5	6M
		OR			
4	a	Distinguish between two set theoretic operations of relational algebra with an example.	CO2	L2	6M
	b	Create a sub query to establish the WHERE, ANY, AS and ALL sub queries with example.	CO2	L6	6M
		UNIT-III			
5		Explain in detail about 1NF, 2NF, 3NF and BCNF with example.	CO3	L6	12M
		OR			
6	a	Consider the schema: R (A, B, C, G, H, I) and the set of FD's (A → B, A → C, CG → H, CG → I, B → H). Prove the members of F+: A → H, CG → HI, AG → I with axioms is true.	CO3	L3	6M
	b	Consider the relation scheme R = {E, F, G, H, I, J, K, L, M, M} and the set of functional dependencies {{E, F} -> {G}, {F} -> {I, J}, {E, H} -> {K, L}, K -> {M}, L -> {N} on R. What is the key for R?	CO3	L5	6M
		UNIT-IV			
7	a	Define a Transaction. List the properties of transaction.	CO4	L1	6M
	b	Write briefly about serializability with example.	CO4	L3	6M
		OR			
8		Explain ACID properties and illustrate them through examples.	CO4	L4	12M
		UNIT-V			
9	a	Discuss how do you recover from failure.	CO5	L6	6M
	b	Explain about the deadlock prevention schemes.	CO5	L2	6M
		OR			
10	a	What are the factors to be taken into account when choosing a RAID level?	CO5	L1	6M
	b	Distinguish between fixed length records and variable length records.	CO5	L2	6M

***** END *****