G.R. No.		PAPER CODE	U223-233(ESE)

MAY 2023 (ENDSEM) EXAM
S.Y. B. TECH (COMPUTER ENGINEERING)
(AY 2022-23 SEMESTER - II)
COURSE NAME: DATABASE MANAGEMENT SYSTEM
COURSE CODE: CSUA22208
(PATTERN 2020)

Time: [1Hr]   [Max. Marks: 30]

Instructions to candidates:
1) Use of scientific calculator is allowed
2) Use suitable data wherever required
3) All questions are compulsory

Question No.	Question Description	Max. Marks	CO mapped	BT Level
Q.1	a) Discuss ACID properties in database transactions.	[4]	[4]	[Understand]
	b) Compare and contrast different concurrency control mechanisms in a database.	[6]	[4]	[Analyze]
	OR			
	c) Consider the transactions (T3) and (T4) working on data items A and B. Following schedule explains the execution of T3 & T4 transactions. Illustrate whether the following schedule is conflict serializable or not.	[6]	[4]	[Analyze]

T3	T4
Read(A)	
Write(A)	
	Read(A)
	Write(A)
Read(B)	
Write(B)	
	Read(B)
	Write(B)

Q.2	a) Explain the terms speed up and scale up with respect to parallel database architecture?	[4]	[5]	[Understa...
	b) Implement parallel database architectures with suitable example.	[6]	[5]	[Apply]
	OR			
	c) Interpret Immediate database modification technique for database recovery with example.	[6]	[5]	[Apply]
Q.3	a) Illustrate different V's of Big Data. (any 4)	[4]	[6]	[Apply]
	b) Differentiate between structured, unstructured and semi-structured data.	[6]	[6]	[Apply]
	OR			
	c) Solve any 3 queries for given mongo schema- Inventory (type, quantity, price): i) Create Collection ii) Insert Data and Update Document. iii) Find documents where the field qty has a value greater than 50 or the value of the price field is less than 5. iv) Delete one document where the type of field equals food.	[6]	[6]	[Apply]