

		Register Number		2	1	0	8	R	0	1	4
VELALAR COLLEGE OF ENGINEERING AND TECHNOLOGY											
(An Autonomous Institution, Affiliated to Anna University, Chennai)											
Continuous Assessment Test - II						QP Set		2		Regulations-2018	
Programme:		B.E/B.Tech		Semester:		4		Max. Marks:		60	
Duration		2 Hrs									
Course Code & Title:		21CST41 & DATABASE MANAGEMENT SYSTEMS									
Class:21CS4A &4B 21IT4A&B		Date:12.05.2023				Time: 10.30 AM – 12.30 PM					
Knowledge Levels (KL)		K1 - Remembering			K3 – Applying			K5 – Evaluating			
		K2 - Understanding			K4 – Analysing			K6 – Creating			
Part A – 12x2 = 24 Marks											

No		CO	KL
1.	Updates through view are not possible. Why?	CO3	K1
2.	Define Trigger. Mention the need for trigger in DBMS.	CO3	K1
3.	List two reasons why null values might be introduced into the database.	CO3	K1
4.	Define functional dependency.	CO4	K2
5.	What is need for normalization?	CO4	K2
6.	State the conditions to be satisfied for a relation to be in BCNF.	CO4	K1
7.	What do you mean by “Query Optimization”?	CO4	K2
8.	Differentiate strict two phase locking protocol and rigorous two phase locking	CO5	K1
9.	Enumerate the properties of a transaction	CO5	K1
10.	Give the reasons for allowing concurrency?	CO5	K2
11.	If deadlock is avoided by deadlock avoidance schemes, is starvation still possible? Justify your answer.	CO5	K1
12.	When is a transaction rolled back?	CO5	K1

Part B – 3x12 = 36 Marks

No	Question	Marks	CO	KL
13 (a)	Explain 1NF, 2NF and 3NF and BCNF with an example.	12	CO4	K2
OR				
13 (b) i)	Consider the relation schema R = {E, F, G, H, I, J, K, L, M, N} and the set of functional dependencies: {E, F} → {G}, {F} → {I, J}, {E, H} → {K, L}, K → {M}, L → {N} on R. What are the super and candidate keys for R?	6	CO4	K3
ii)	Write the procedure to find attribute closure and canonical cover with examples.	6	CO4	K2
14 (a)	Explain in detail about RAID technology to achieve reliability in database	12	CO4	K3
OR				
14 (b)	Describe about Query Processing and query optimization in SQL	12	CO4	K3
15 (a) i)	Explain Two Phase- Locking protocol .What benefit does strict two-phase locking protocol provides? Discuss its disadvantages.	6	CO5	K2
ii)	Discuss about two phase commit protocol.	6	CO5	K2
OR				
15 (b)	Explain in detail about deadlock prevention and detection techniques	12	CO5	K2