End-Term Examination- ONLINE MODE
(CBCS/Non-CBCS)(SUBJECTIVE TYPE)
<Programme Name __B.Tech. IT_____> <____3_ SEM>
(DEC, 2021)
(SET A)

Subject Code:< BIT 201 >	Subject: < DBMS >

Time : 1 Hour 15 minutes

Note: Q. 1 is compulsory. Attempt any one question from the rest.   Maximum Marks : 30

Q1	For the relation R(A,B,C,D,E) with FD set {B → A, A→ C, BC → D, AC → BE}	(5*3=15)
	(a) Show that AC and BC are NOT candidate keys of R. What are candidate keys of R	
	(b) Which of the following is a good decomposition i. R1(A, C, D) and R2(B, A, E) ii. R1(A, C, D, E) and R2(C, D, E)	
	(c) Should R be decomposed or should it be accepted as such?	
Q2	Given the following log file: (start, T4); (write, T4, A, 2, 3); (start, T1); (write, T1, B, 5, 7); (start, T2); (write, T2, C, 1, 9); (commit, T2); (start, T3); (write, T3, B, 7, 2); (commit T3)	(7.5+7.5= 15)
	(a) What will be the final value of A, B and C if i. UNDO/REDO algorithm is applied ii. NO-UNDO/REDO is applied	
	(b)(i) A proposal is received to use deferred update for the UNDO/REDO. Would you agree with this proposal? Justify your answer (ii) A proposal is received to use update in place for the UNDO/REDO. Would you agree with this proposal? Justify your answer.	
Q3	The HR and Accounts departments of an organization wish to update the designation and salary of an employee from Asst. Engineer to Exec. Engineer and Rs. 20,000 to Rs. 25,000 respectively. Data about employees is available in a relation, Employee(Eno, Ename, Designation, Salary).	(7.5+7.5= 15)
	(a) Can there be lost updates? If yes then build a schedule to show this. Can there be dirty reads? If not, then why not? If yes, then build a schedule to show this	
	(b) Can there be unrepeatable reads? If not then why not? If yes, then build a schedule to show this. For the schedule of lost updates of (a) above, use the time stamping technique of optimistic serializability and show if it results in rollback or not.	