Instructions for the submission of assignment CA-2

1. Please follow all the instructions.
2. Each question carries 10 marks
3. Even roll numbers will perform set-A and odd roll number will perform set-B.
4. Every student will perform the questions of the set which has been allocated to them.
5. Write step by step explanation for the answer to the question. Do not write the direct answer.
6. Submission is allowed only through UMS. No other mode of submission will be accepted
7. If a student fails to submit the assignment in a given time period, he or she will be marked zero
8. Do not copy the assignment. If the assignments are found to be copied, the person will be marked zero (both who copied the assignment, and from whom assignment is copied)
9. Last date for the submission is 16th November 2021.

Assignment-1 CA-2

SET-A (Even Roll Numbers)

INT306 Database Management System

Max Marks-30

1. Consider the following relation with set of functional dependencies
   R(ABCDEF)
   ABC->D, ABD->E, CD->F, CDF->B, BF->D
   a) Identify the candidate key(s) in the relation (with proper steps followed).
   b) Identify which normal form this relation is in and reason for the answer.
2. Consider the following schedule of transactions

   W1(A) W2(A) W1(A) W2(A) W1(A)
   Which of the following properties are true for the above schedule and justify the reason for your answer with explanation?
   a) Conflict Serializable
   b) View Serializable
   c) Recoverable
3. Consider a schedule with 4 transactions with 1, 2, 3, and 4 operations respectively. Calculate the possible number of
   a) Serial schedules
   b) Non serial schedules

Assignment-1 CA-2

SET-B (Odd Roll Numbers)

INT306 Database Management System

Max Marks-30

1. Consider the following relation with set of functional dependencies
   R(ABCDEF)
   AB->CD, CD->EF, BC->DEF, D->B, CE->F
   a) Identify the candidate keys in the above relation (with proper steps followed).
   b) Identify which normal form this relation is in and reason for the answer.
2. Consider the following schedule of transactions

   R1(A) W1(A) R2(A) W2(B) W1(B) Commit1 Commit2
   Which of the following properties are true for the above schedule and justify the reason for your answer with explanation?
   a) Conflict Serializable
   b) View Serializable
   c) Recoverable
3. Consider a schedule with 3 transactions with 2, 3, and 4 operations respectively. Calculate the possible number of
   c) Serial schedules
   d) Non serial schedules