National University of Computer and Emerging Sciences, Lahore Campus

	Course:	**Advance Database Concepts**	**Course Code:**	**CS4064**
	Program:	**BS (Computer Science)**	**Semester:**	**Spring 2025**
	Date:	**Tue 3-Feb-2025**	**Total Marks:**	**10**
	Section:	**BCS-6A**		
	Roll No:			
	Quiz:	**1 (Transactions)**		

SOLUTION

Q. *(8+2= 10 points)* Consider the following schedule:

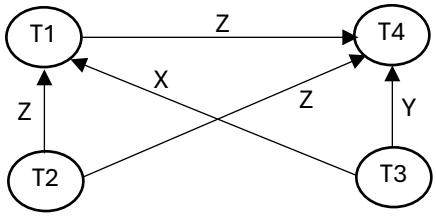
S: r1(X), r2(Z), w1(Z), r3(X), r3(Y), w1(X), w3(Y), r4(Y), w4(Z), w4(Y), c2, c3, c1, c4.

a. Draw the serializability (precedence) graph for this schedule. State whether this schedule is conflict-serializable or not. If the schedule is conflict-serializable, write down the equivalent serial schedule(s) otherwise explain why it is not.

b. Determine whether this schedule is strict, cascadeless, recoverable, or non-recoverable. Provide proper reason.

Ans:

a. It is conflict-serializable and equivalent serial schedules are T2→T3→T1→T4 and T3→T2→T1→T4.



b. Recoverable schedule. Due to dirty read r4(Y) of w3(Y).