

# National University of Computer and Emerging Sciences, Lahore Campus



Course:	Advanced Database Concepts	Course Code:	CS451
Program:	BS(Computer Science)	Semester:	Spring 2017
Date:	13-Feb-2017	Total Marks:	
Section	A	Weight:	
Quiz:	2 (Concurrency Control Techniques)	Page(s):	1

Instruction/Notes:

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## Question:

Consider the following concurrency control protocols: 2PL, Strict 2PL, Strict Timestamp, Timestamp with the Thomas Write Rule (TS W/ TWR), and Optimistic. For the schedule  $S$ :

$R_1(X), R_2(Y), W_1(Z), C_1, R_3(Y), R_3(Z), W_2(Y), W_3(X), C_2, C_3$

State which of these protocols allows it, that is, allows the actions to occur in exactly the order shown. Give proper reason.

Also determine whether the schedule  $S$  is view-serializable? Provide proper reason. If so, provide the equivalent serial schedule(s).