

CS304 Database System Concepts

Assignment 8

Due: April 13, 2012

(Please submit hard copies to class or to Zheng on due date.)

Name:

Matric No:

Q1. (2 points) Proof of the following lemma:

Every view serializable schedule that is not conflict serializable has blind writes.

Q2. (2 points) Exercise 15.11 on page 633 of Text book.

Q3. (2 points) What is a recoverable schedule? Why is recoverability of schedules desirable? Are there any circumstances under which it would be desirable to allow nonrecoverable schedules? Explain your answers.

Q4. (2 points) Consider the following two transactions:

```
T1: Read(A);  
    Read(B);  
    If A=0 then B := B+1;  
    Write(B)
```

```
T2: Read(B);  
    Read(A);  
    If B=0 then A:= A+1;  
    Write(A)
```

Add lock and unlock instructions to transactions T1 and T2, so that they observe the two-phase locking protocol. Can the execution of these transactions result in a deadlock?

Q5. (2 points) Show that there are schedules that are possible under the two-phase locking protocol, but are not possible under the timestamp protocol, and vice versa.