CS3402 Tutorial 7:

1. **Answer**:

Tb 🡨>Ta -> Tc

Tc -> Tb

It is not serializable as the schedule is cyclic.

1. **Answer**:
2. Non-recoverable
3. Recoverable
4. Cascadeless

Schedule (c) can be changed into the strict schedule:

r1(X); w1(X); w1(Y); c1; w2(X); r2(X); c2;

(Comment: the detailed explanation is omitted here but you need to explain the details when you answer questions in the final exam.)

3. Answers

(1)

|  |  |
| --- | --- |
| T1 | T2 |
| WriteLock(a) |  |
| Read(a) |  |
| Write(a) |  |
| Unlock(a) |  |
|  | WriteLock(a) |
|  | Read(a) |
|  | Write(a) |
|  | Unlock(a) |

(2)

|  |  |
| --- | --- |
| T1 | T2 |
| ReadLock(a) |  |
| Read(a) |  |
|  | ReadLock(a) |
|  | Read(a) |
| WriteLock(a) reject blocked |  |
|  | WriteLock(a) reject blocked |

(3)

C2PL since it does not have the deadlock problem and the transactions are short.