ex3)

S1 : r1(x) r2(y) r3(z) w1(x) w2(x) w2(y) w3(z) r3(y) w3(y) s1 is equivalent with s2

S2 : r1(x) r2(y) r3(z) w1(x) w3(z) w2(x) w2(y) r3(y) w3(y) s2 is equivalent with s3

S3 : r1(x) w1(x) r2(y) w2(x) w2(y) r3(z) w3(z) r3(y) w3(y) s1 is equivalent with s3

all 3 of them are serializable

ex4)

w1(x) r2(x) w2(y) w3(y) w2(x) c2 w1(x) c1 r3(x) c3

1. w1(x) - no locks, puts write lock on x

2. r2(x) - is blocked (write lock)

3. w2(y) - is blocked (waits)

4. w3(y) - no locks, puts write lock on y

5. w2(x) - is blocked (waits)

6. c2 - skipped

7. w1(x) - x already has a lock of the same transaction (not blocked)

8. c1 - commited

9. r2(x) - no locks, puts read lock on x

10. w2(y) - is blocked (write lock)

11. w2(x) - is blocked (waits)

12. r3(x) - only read lock (not blocked), puts read lock

13. c3 - commited

14. w2(y) - no locks, puts write lock

15. w2(x) - x has a read lock from the same transaction (not blocked) puts write lock

16. c2 - commited