Chapter 6 Quiz

Due Oct 17 at 11:59pm **Points** 100 **Questions** 25 **Time Limit** None
Allowed Attempts 2

Take the Quiz Again

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	29 minutes	100 out of 100

ⓘ Correct answers will be available on Nov 2 at 12am.

Score for this attempt: **100** out of 100
Submitted Oct 17 at 7:46pm
This attempt took 29 minutes.

Question 1

4 / 4 pts

A document that sequentially writes all the database operations is known as a/an _____.

- (●) recovery log
- ( ) task log
- ( ) application log
- ( ) system log

Question 2

4 / 4 pts

In the recovery log below, line 6 is a/an _____.

```
1. start T1
2. start T2
3. update T1, AID, Aoriginal, Anew
4. commit T1
5. update T2, BID, Boriginal, Bnew
6. undo T2, BID, Boriginal
7. rollback T2
```

- transaction record
- compensation record
- update record
- checkpoint record

Question 3

4 / 4 pts

In an online bank application that transfers funds from a checking account to a savings account, the _____ property ensures that the changes made to each account will not be lost due to a computer failure.

- consistency
- isolation
- atomicity
- durability

Question 4

4 / 4 pts

Refer to the table and schedule below. The UPDATE statement in transaction T1 holds an exclusive lock on the Class table. With strict two-phase locking, when does the SELECT statement in transaction T2

execute?

T1	T2
UPDATE Class SET TeacherID = 32412 WHERE ClassID = 80; ROLLBACK;	SELECT CourseTitle FROM Class WHERE ClassID = 80;

- Immediately after the UPDATE statement in T1 executes
- The SELECT statement in T2 will never execute
- At the same time as the UPDATE statement in T1 executes
- After the ROLLBACK statement in T1 executes

Question 5

4 / 4 pts

_____ allows all executed database instructions to be rolled back and to be restored in a prior transaction state.

- SET TRANSACTION
- COMMIT
- SAVEPOINT
- RELEASE SAVEPOINT

Question 6

4 / 4 pts

In an online bank application that transfers funds from a checking account to a savings account, if a debit is made successfully from the checking account, the _____ property ensures that the corresponding credit is made to the savings account.

- consistency
- durability
- isolation
- atomicity

Question 7

4 / 4 pts

In which isolation level can dirty reads occur?

- Serializable
- Repeatable read
- Read committed
- Read uncommitted

Question 8

4 / 4 pts

A recovery system should manage which three failure scenarios?

- Transaction failure, Memory failure, and Storage media failure
- Transaction failure, Program failure, and Storage media failure
- Transaction failure, System failure, and Application failure
- (selected) Transaction failure, System failure, and Storage media failure

Question 9

4 / 4 pts

A transaction _____ indicates the starting and ending statement of a database transaction.

- coverage
- (selected) boundary
- limit
- scope

Question 10

4 / 4 pts

The username and password for the database in the configuration file of a web application is incorrect, so the web application cannot connect to the database. Which failure scenario best describes this example?

- (selected) Transaction failure
- Storage media failure
- Task failure
- System failure

Question 11

4 / 4 pts

In an online bank application that transfers funds from a checking account to a savings account, the _____ property ensures that another transaction sees the transferred funds in one account or the other, but not in both, nor in neither.

- durability
- consistency
- atomicity
- isolation

Question 12

4 / 4 pts

A ____ is a sequential order of database instructions for multiple transactions.

- Schedule
- Path
- Transaction
- Query

Question 13

4 / 4 pts

In MySQL, which of the following SQL operations always commits immediately?

- DELETE
- CREATE
- SELECT
- INSERT

Question 14

4 / 4 pts

A database _____ is a unit of work that is treated as a whole. It is either completed as a unit or failed as a unit.

- commit
- rollback
- transaction
- operation

Question 15

4 / 4 pts

Choose the recovery log that is generated by the schedule below.

T1	T2
read B	
	read C
A = B + 1	
write A	
commit	
	B = C - 2
	write B
	rollback

(●)
```
1. start T1
2. start T2
3. update T1, AID, Aoriginal, Anew
4. commit T1
5. update T2, BID, Boriginal, Bnew
6. undo T2, BID, Boriginal
7. rollback T2
```

( )
```
1. start T1
2. update T1, AID, Aoriginal, Anew
3. start T2
4. commit T1
5. update T2, BID, Boriginal, Bnew
6. undo T2, BID, Boriginal
7. rollback T2
```

```
1. start T1
2. update T1, AID, Aoriginal, Anew
3. start T2
4. update T2, BID, Boriginal, Bnew
5. undo T2, BID, Boriginal
6. commit T1
7. rollback T2
```

```
1. start T1
2. start T2
3. update T1, AID, Aoriginal, Anew
4. update T2, BID, Boriginal, Bnew
5. undo T2, BID, Boriginal
6. commit T1
7. rollback T2
```

Question 16

4 / 4 pts

A _____ is a part of the concurrency system that monitors, grants, and releases locks.

- (•) Lock Manager
- ( ) Lock Administrator
- ( ) Lock System
- ( ) Lock Optimizer

Question 17

4 / 4 pts

Which deadlock management technique automatically rolls back a transaction when a lock is not released in a fixed period of time?

- ( ) Cycle detection
- ( ) Data ordering

- Timeout
- Aggressive locking

Question 18

4 / 4 pts

Refer to the schedule below. The initial value of B is 7 and C is 3. What is the value of A after the schedule executes?

T1	T2
read B A = B + 1 write A commit	
	read C B = C - 2 write B commit

- 8
- 7
- 2
- 4

Question 19

4 / 4 pts

Refer to the initial Class table, SQL transaction, and final Class table, below. Which SAVEPOINT identifier is used to produce the final Class table?

```
START TRANSACTION;
SELECT CourseTitle FROM Class;
SAVEPOINT S1;
```

```
UPDATE Class SET CourseTitle = "Programming in C" WHERE ClassID = 56;
SAVEPOINT S2;


UPDATE Class SET TeacherID = 32412 WHERE ClassID = 56;
SAVEPOINT S3;


DELETE FROM Class WHERE ClassID = 80;
SAVEPOINT S4;


ROLLBACK TO _____;


UPDATE Class SET TeacherID = 32412 WHERE ClassID = 80;
COMMIT;
```

FINAL CLASS TABLE

ClassId	CourseCode	CourseTitle	TeacherId
12	HTML1	Web Development	32412
30	DB1	Databases	11234
56	PROG1	Programming in C	11234
80	MATH26	Algebra	32412

- S4
- S1
- S2
- S3

Question 20

4 / 4 pts

Refer to the sequence below. What is the isolation level of transaction E?

```
session begins
SET GLOBAL TRANSACTION
ISOLATION LEVEL SERIALIZABLE;
session ends


session begins
SET SESSION TRANSACTION
ISOLATION LEVEL REPEATABLE READ;
```

```
transaction A
transaction B


SET TRANSACTION
ISOLATION LEVEL READ UNCOMMITTED;


transaction C


SET TRANSACTION
ISOLATION LEVEL READ COMMITTED;


transaction D
transaction E
session ends
```

- Read uncommitted
- Read committed
- Serializable
- Repeatable read

Question 21

4 / 4 pts

A database administrator is updating one of the tables in the database. Which of the following techniques can prevent other database administrators from doing concurrent transactions to the same table?

- Locking
- Logging
- Scoping
- Mirroring

Question 22

4 / 4 pts

_____ is a recovery technique that creates a nearly synchronized backup of the primary database on another database server.

- Data backup
- Storage backup
- Cold backup
- Hot backup

Question 23

4 / 4 pts

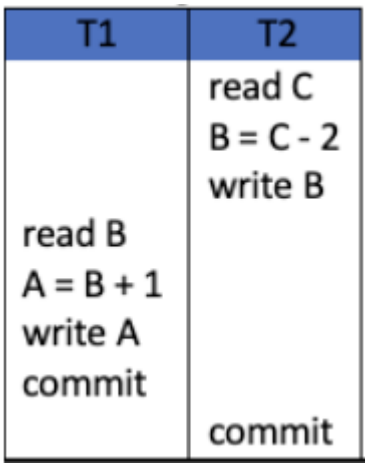
Which isolation level prevents dirty, non-repeatable, and phantom reads?

- Repeatable read
- Read uncommitted
- Read committed
- Serializable

Question 24

4 / 4 pts

Refer to the schedule below. The initial value of B is 7 and C is 3. What is the value of A after conflicting schedule executes?



- (•) 2
- ( ) 4
- ( ) 7
- ( ) 8

Question 25

4 / 4 pts

In a _____, all transactions come to a halt and remain at a standstill until one of the transactions is aborted.

- ( ) locking
- (•) deadlock
- ( ) timeout
- ( ) two-phase locking

Quiz Score: **100** out of 100