

1. What is a shadow copy scheme?

It is simple, but efficient, scheme called the shadow copy schemes. It is based on making copies of the database called shadow copies that one transaction is active at a time. The scheme also assumes that the database is simply a file on disk.

2. Give the reasons for allowing concurrency?

The reasons for allowing concurrency is if the transactions run serially, a short transaction may have to wait for a preceding long transaction to complete, which can lead to unpredictable delays in running a transaction. So concurrent execution reduces the unpredictable delays in running transactions.

3. What is average response time?

The average response time is that the average time for a transaction to be completed after it has been submitted.

4. What are the two types of serializability?

The two types of serializability is

- Conflict serializability
- View serializability

5. Define lock?

Lock is the most common used to implement the requirement is to allow a transaction to access a data item only if it is currently holding a lock on that item.

6. What are the different modes of lock?

The modes of lock are:

- Shared
- Exclusive

7. Define deadlock?

Neither of the transaction can ever proceed with its normal execution. This situation is called deadlock.

8. Define the phases of two phase locking protocol

Growing phase: a transaction may obtain locks but not release any lock.

Shrinking phase: a transaction may release locks but may not obtain any new locks.

9. Define upgrade and downgrade?

It provides a mechanism for conversion from shared lock to exclusive lock is known as upgrade. It provides a mechanism for conversion from exclusive lock to shared lock is known as downgrade.

10. What is a database graph?

The partial ordering implies that the set D may now be viewed as a directed acyclic graph, called a database graph.

11. What are the two methods for dealing deadlock problem?

The two methods for dealing deadlock problem is deadlock detection and deadlock recovery.

12. What is a recovery scheme?

An integral part of a database system is a recovery scheme that can restore the database to the consistent state that existed before the failure.

13. What are the two types of errors?

The two types of errors are:

- Logical error
- System error

14. What are the storage types?

The storage types are:

- Volatile storage
- Nonvolatile storage

15. Define blocks?

The database system resides permanently on nonvolatile storage, and is partitioned into fixedlength storage units called blocks.

16. What is meant by Physical blocks?

The input and output operations are done in block units. The blocks residing on the disk are referred to as physical blocks.

17. What is meant by buffer blocks?

The blocks residing temporarily in main memory are referred to as buffer blocks.

18. What is meant by disk buffer?

The area of memory where blocks reside temporarily is called the disk buffer.

19. What is meant by log-based recovery?

The most widely used structures for recording database modifications is the log. The log is a sequence of log records, recording all the update activities in the database. There are several types of log records.

20. What are uncommitted modifications?

The immediate-modification technique allows database modifications to be output to the database while the transaction is still in the active state. Data modifications written by active transactions are called uncommitted modifications.