

Week 15 Exercises:

Logging and recovery

Solutions

Question 15.1:

A force policy requires all updates made by a transaction to be written back to the volatile RAM before the transaction can commit.

- A) True
- B) False

Answer: B

Question 15.2:

In which ARIES phase is the Dirty Page Table (DPT) built?

- A) Checkpoint
- B) Undo
- C) Redo
- D) Analysis

Answer: D

Question 15.3:

Which of the following fields appears in every Compensation Log Record (CLR) but not in a normal UPDATE log record?

- A) Transaction-ID
- B) after value
- C) before value
- D) undoNextLSN Pointer

Answer: D

Question 15.4:

A page in the buffer pool has pageLSN = 500, while flushedLSN = 450.

Before this page can be written to disk, the DBMS must:

- A) Do nothing; it is already safe to flush.
- B) Flush the WAL so that flushedLSN $\geq$ 500.
- C) Flush all dirty pages whose pageLSN $\leq$ 500 first.
- D) Abort any transaction that touched the page

Answer: B