Started on	Tuesday, 28 October 2025, 12:01 PM
State	Finished
Completed on	Tuesday, 28 October 2025, 12:04 PM
Time taken	2 mins 21 secs
Marks	7.00/10.00
Grade	**70.00** out of 100.00

Question 1

Complete

Mark 0.00 out of 1.00

Flag question

In a write-through cache, when does the data get written to main memory?

a. Only when cache is full.
b. After a fixed delay.
c. When background flush starts.
d. Immediately after it is written to cache.

Question 2

Complete

Mark 1.00 out of 1.00

Flag question

In Linux, what does the command sudo hdparm -W 1 /dev/sda do?

a. Flushes dirty cache pages to disk.
b. Displays the cache size.
c. Enables the write cache of the disk.
d. Disables the write cache of the disk.

Question 3

Complete

Mark 1.00 out of 1.00

Flag question

The background flush threshold (vm.dirty_background_ratio) defines:

a. When the system blocks writes.
b. The maximum percentage of memory that can be dirty.
c. The percentage of dirty pages that triggers background flushing.
d. The speed of the writeback daemon.

Question 4

Complete

Mark 1.00 out of 1.00

Flag question

?

The write-back cache improves performance mainly by:

- a. Writing data immediately to disk.
- b. Storing writes only in the CPU cache.
- c. Delaying writes to memory until necessary.
- d. Disabling caching temporarily.

Question 5

Complete

Mark 1.00 out of 1.00

Flag question

What happens if vm.dirty_ratio is reached in Linux?

- a. All processes are terminated.
- b. The kernel starts background flush silently.
- c. Swap space is expanded.
- d. Processes performing writes are blocked until enough dirty pages are written.

Question 6

Complete

Mark 1.00 out of 1.00

Flag question

What is the primary advantage of object storage over block storage?

- a. Scalability and metadata-rich organization.
- b. Better transaction management.
- c. Hardware-based caching.
- d. Faster write performance.

Question 7

Complete

Mark 1.00 out of 1.00

Flag question

Which of the following correctly represents the data flow in Linux caching layers?

- a. Disk → RAM → CPU Cache
- b. CPU → Disk Cache → RAM → Disk Media
- c. RAM → CPU → Disk Cache
- d. CPU → RAM → Disk Cache → Disk Media

Question 8

Complete

Mark 0.00 out of 1.00

Flag question

Which of the following statements best describes block storage?

a. Data is accessed only through RESTful APIs.
b. It is used mainly for cloud object storage.
c. Data is stored as complete files with metadata and unique IDs.
d. Data is stored in fixed-size chunks managed by the OS.

Question 9

Complete

Mark 1.00 out of 1.00

Flag question

Which process in Linux is responsible for periodically writing dirty pages from RAM to disk?

a. pdflush / flush-x:y daemons
b. swapd
c. cron
d. fsck

Question 10

Complete

Mark 0.00 out of 1.00

Flag question

Which statement best differentiates disk cache from memory cache?

a. Disk cache is managed by the CPU; memory cache by the disk firmware.
b. Disk cache is hardware-level; memory cache (page cache) is OS-level.
c. Disk cache is non-volatile.
d. Both are controlled by the file system.

Finish review