Unit 7 - Week 5: Cache Memory Principles

Assignment 5

The due date for submitting this assignment must pass. Do not resubmit if you have not submitted this assignment.

1. A file contains an array of playing a video file by accessing the protected content of a private video file from the video service. If the file is protected, all requests are rejected on an event of initializing a 128-byte video with the value of an array element sequentially using a loop. Which of the following is TRUE?

(a) Write to cache. Cache shows temporary locality. Write shows temporary locality.
(b) Write to cache. Write shows temporary locality. Write shows temporary locality.
(c) Write to cache. Write shows temporary locality. Write shows temporal locality.
(d) Read from cache. Read shows temporary locality. Read shows spatial locality.
(e) Read from cache. Read shows spatial locality. Read shows spatial locality.

No. The answer is incorrect.

2. Which of the following statements is TRUE?

(a) Cache is a high-speed device that stores a large number of data with a high performance ratio.
(b) Cache is a high-speed device that stores a large number of cache with a high performance ratio.
(c) Cache is a high-speed device that stores a large number of cache with a high performance ratio.
(d) Cache is a high-speed device that stores a large number of cache with a high performance ratio.
(e) Cache is a high-speed device that stores a large number of cache with a high performance ratio.

No. The answer is incorrect.

3. Which of the following statements is TRUE?

(a) Least recently used (LRU) is a direct replacement strategy.
(b) Least recently used (LRU) is a direct replacement strategy.
(c) Least recently used (LRU) is a direct replacement strategy.
(d) Least recently used (LRU) is a direct replacement strategy.
(e) Least recently used (LRU) is a direct replacement strategy.

No. The answer is incorrect.

4. Which of the following statements is TRUE?

(a) Block size is stored in the main memory.
(b) Block size is stored in the main memory.
(c) Block size is stored in the main memory.
(d) Block size is stored in the main memory.
(e) Block size is stored in the main memory.

No. The answer is incorrect.

5. Which of the following statements is TRUE?

(a) A 128 KB write-in set associative cache has an address block size of 224 bytes. The cache has 4 sets. Then the size of the cache is ....
(b) A 128 KB write-in set associative cache has an address block size of 224 bytes. The cache has 4 sets. Then the size of the cache is ....
(c) A 128 KB write-in set associative cache has an address block size of 224 bytes. The cache has 4 sets. Then the size of the cache is ....
(d) A 128 KB write-in set associative cache has an address block size of 224 bytes. The cache has 4 sets. Then the size of the cache is ....
(e) A 128 KB write-in set associative cache has an address block size of 224 bytes. The cache has 4 sets. Then the size of the cache is ....

No. The answer is incorrect.

6. Which of the following statements is TRUE?

(a) If a program requires data from memory the cache is checked first. If not available, the block is read from memory. Then the cache is read from memory.
(b) If a program requires data from memory the cache is checked first. If not available, the block is read from memory. Then the cache is read from memory.
(c) If a program requires data from memory the cache is checked first. If not available, the block is read from memory. Then the cache is read from memory.
(d) If a program requires data from memory the cache is checked first. If not available, the block is read from memory. Then the cache is read from memory.
(e) If a program requires data from memory the cache is checked first. If not available, the block is read from memory. Then the cache is read from memory.

No. The answer is incorrect.

7. Which of the following statements is TRUE?

(a) Cache and main memory are separated by a cache controller.
(b) Cache and main memory are separated by a cache controller.
(c) Cache and main memory are separated by a cache controller.
(d) Cache and main memory are separated by a cache controller.
(e) Cache and main memory are separated by a cache controller.

No. The answer is incorrect.

8. Which of the following statements is TRUE?

(a) The address of a word in a byte addressable 1 MB physical memory is 000000H. This word gets brought in the cache is mapped to set 0, and the cache is mapped to set 0, and the cache is mapped to set 0.
(b) The address of a word in a byte addressable 1 MB physical memory is 000000H. This word gets brought in the cache is mapped to set 0, and the cache is mapped to set 0, and the cache is mapped to set 0.
(c) The address of a word in a byte addressable 1 MB physical memory is 000000H. This word gets brought in the cache is mapped to set 0, and the cache is mapped to set 0, and the cache is mapped to set 0.
(d) The address of a word in a byte addressable 1 MB physical memory is 000000H. This word gets brought in the cache is mapped to set 0, and the cache is mapped to set 0, and the cache is mapped to set 0.
(e) The address of a word in a byte addressable 1 MB physical memory is 000000H. This word gets brought in the cache is mapped to set 0, and the cache is mapped to set 0, and the cache is mapped to set 0.

No. The answer is incorrect.