

1. In normal English, what does the word cache mean?

- (a) money
- (b) a place where small things can be stored
- (c) a nearby place where a few things can be kept
- (d) a safe place to store something

Answer: (d)

2. What does the word "cache" mean in a CS context?

- (a) money
- (b) a place to store small things
- (c) a copy of the original, made for easy and fast access
- (d) a far away place to hide away data secretly

Answer: (c)

3. In a typical program, which of the following aspects result in temporal locality of instruction memory access? Select all that apply.

- (a) Sequential execution
- (b) Non-sequential execution
- (c) Loops
- (d) Function calls
- (e) Functions called in a loop

Answer: (a), (c)

4. In a typical program, which of the following aspects result in spatial locality of instruction memory access? Select all that apply.

- (a) Sequential execution
- (b) Loops
- (c) `nop` instructions
- (d) Function pointers

Answer: (a), (b), (c)

5. Which of the following represent temporal locality in data memory access in typical programs? Select all that apply.

- (a) Sequential array access
- (b) Any pointer
- (c) Same set of variables accessed in a loop
- (d) A function's local variable accessed many times in that function's code
- (e) Fields of a structure

Answer: (c), (d), (e)

6. Which of the following represent spatial locality in data memory access in typical programs? Select all that apply.

- (a) Array elements accessed sequentially
- (b) Fields of a structure
- (c) Tree traversal
- (d) Binary search on a large array

Answer: (a), (b)