



1. Donald is trying to explain to Joe that cache and RAM are not the same thing. Joe seems a little spaced out and as a result has earned the name Sleepy Joe. List 3 purposes of cache memory.

----- [3]

2. Donald is commended for his intelligence. People often mention that he knows what he is talking about. What do you think he would say is the reason a personal computer may need secondary storage?

----- [3]

3. A computer has 32 GB of RAM. What is the purpose of RAM?

----- [1]

4. Label the 3 types of storage correctly as either primary or secondary.

Storage	Volatile	Non-volatile	Read only	Writeable
RAM				
ROM				
SSD				

[6]

5. Sleepy Joe lists the following events that take place in a fetch-decode-execute cycle. Which 2 are not true?

Event	Not True (place a ✓)
An instruction is fetched from memory	
The instruction is then decoded	
The decoded instruction is then executed	
The process is repeated 3 times	
The program counter is incremented	
The instruction is transferred to the MDR	
The address of the instruction to be fetched is placed in the MAR	
The instruction is transferred to the program counter	

[2]

6. Stuart travels a lot for work and wants more storage for his laptop. When choosing a secondary storage device, what characteristics should be considered?

----- [4]

7. Sarah has a laptop computer and Zainab has a Desktop PC. The girls are debating which one is better for playing a life simulation game.

Sarah's laptop	Zainab's Desktop PC
2.2 Ghz Quadcore CPU	3.2 Ghz Dual Core CPU
16 GB RAM	32GB RAM
1 Terabyte Hard Drive	512 GB Hard Drive
Windows 10 OS	Windows 11 OS
Cockroach Security Firewall	Steel-wall Antivirus

Although not stated above, Sarah's laptop has a larger amount of cache. How could that effect performance for playing the simulation game?

----- [2]

8. A new Console designed by a leading manufacturer uses the Von Neumann architecture. Although this will not likely speed up the release of GTA 6, What are characteristics of the Von Neumann architecture?

----- [2]

