CS101 updated VU Midterm Past Paper MCQs Questions From 2020 to date
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Question 1: What is the role of a controller in computer systems?

A) It executes the main program of the computer.

B) It connects external devices to the computer.

C) It is responsible for executing instructions in the CPU.

D) It manages the computer's memory.

Answer: B) It connects external devices to the computer.

Question 2: How does a controller typically connect to peripheral devices within a computer?

A) Via wireless connections.

B) By using separate CPU chips.

C) Through a shared memory module.

D) Via cables and ports.

Answer: D) Via cables and ports.

Question 3: What is the function of a controller in translating messages and data between a computer and peripheral devices?

A) It converts messages into audio tones.

B) It performs arithmetic calculations.

C) It connects the computer to the internet.

D) It translates data formats between computer and device.

Answer: D) It translates data formats between computer and device.

Question 4: How has the development of standards like USB and FireWire impacted the role of controllers in personal computers?

A) They have made controllers obsolete.

B) They have simplified the role of controllers.

C) They have increased the need for multiple controllers.

D) They have enabled a single controller to handle various devices.

Answer: D) They have enabled a single controller to handle various devices.

Question 5: Where do controllers typically connect within a computer's architecture?

A) To a dedicated controller bus.

B) To the computer's power supply.

C) To the computer's central processing unit.

D) To the same bus connecting the CPU and main memory.

Answer: D) To the same bus connecting the CPU and main memory.

Question 6: How does a CPU send a bit pattern to a controller?

A) By executing a STORE instruction.

B) By executing a LOAD instruction.

C) By using a separate controller bus.

D) By sending an electrical signal directly.

Answer: A) By executing a STORE instruction.

Question 7: What is the significance of direct memory access (DMA) in computer systems?

A) It simplifies bus communication.

B) It allows the CPU to communicate directly with peripheral devices.

C) It enables controllers to access main memory during CPU idle time.

D) It eliminates the need for controllers.

Answer: C) It enables controllers to access main memory during CPU idle time.

Question 8: What is the main drawback of using direct memory access (DMA) in computer systems?

A) It simplifies communication.

B) It increases CPU utilization.

C) It adds complexity to bus communication.

D) It does not improve computer performance.

Answer: C) It adds complexity to bus communication.

Question 9: What is parallel communication in computing?

A) It transfers one signal at a time.

B) It requires a simple data path.

C) It involves several signals transferred simultaneously on separate lines.

D) It is a form of wireless communication.

Answer: C) It involves several signals transferred simultaneously on separate lines.

Question 10: What is serial communication in computing?

A) It transfers one signal at a time.

B) It involves complex data paths.

C) It is slower than parallel communication.

D) It requires multiple connections for each signal.

Answer: A) It transfers one signal at a time.

Question 11: What are USB and FireWire examples of in the context of communication?

A) Serial communication protocols.

B) Parallel communication protocols.

C) Wireless communication standards.

D) CPU instruction sets.

Answer: A) Serial communication protocols.

Question 12: What is the primary factor affecting the speed of data transfer in computing?

A) The type of communication protocol used.

B) The complexity of the data path.

C) The number of devices connected.

D) The rate at which bits are transferred.

Answer: D) The rate at which bits are transferred.

Question 13: What does the term "Kbps" stand for in the context of data transfer rates?

A) Kilobytes per second.

B) Megabits per second.

C) Gigabits per second.

D) Kilobits per second.

Answer: D) Kilobits per second.

Question 14: What is the primary goal of pipelining in computer systems?

A) To increase the execution speed of individual instructions.

B) To reduce the complexity of CPU design.

C) To eliminate the need for memory access.

D) To improve the machine's throughput.

Answer: D) To improve the machine's throughput.

Question 15: In pipelining, what happens when one instruction is being executed while the next instruction is fetched?

A) Both instructions are executed simultaneously.

B) The CPU waits for both instructions to complete.

C) The instructions in the pipe are discarded.

D) More than one instruction can be in the pipe at different stages of processing.

Answer: D) More than one instruction can be in the pipe at different stages of processing.

Question 16: What is batch processing in the context of early computer systems?

A) It involves executing multiple jobs simultaneously.

B) It requires constant interaction with the user.

C) It streamlines the transition between jobs.

D) It was the only form of processing used.

Answer: C) It streamlines the transition between jobs.

Question 17: What was one drawback of early batch processing systems?

A) They required constant interaction with the user.

B) Users had no interaction with their jobs once submitted.

C) They were limited to executing one job at a time.

D) They used wireless communication.

Answer: B) Users had no interaction with their jobs once submitted.

Question 18: What is interactive processing in the context of operating systems?

A) It involves executing jobs in batch mode.

B) It allows a program to carry on a dialogue with the user during execution.

C) It requires constant interaction with a computer operator.

D) It is the same as batch processing.

Answer: B) It allows a program to carry on a dialogue with the user during execution.

Question 19: In time sharing, how are multiple users serviced simultaneously?

A) By using separate computers.

B) By executing jobs in batch mode.

C) By allowing multiple users at remote terminals.

D) By executing one