Review questions

After hearing the play, describe the function of each of the following:

Control

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ROM

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RAM

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Address register

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Program counter

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Instruction register

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Accumulator register

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Data register

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ALU

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Bus

___

Clock

___

Machine cycle

___

Microprogram

___

Cache

___

Interpreter

___

DIGITAL TECHNOLOGIES HUB

Solutions

Control

performs the decoding of the assembly language into microprograms which are the language of the computer's particular CPU

ROM

Read Only Memory – contains the basic instructions of the computer's system software

RAM

Random (direct) Access Memory. Volatile. Stores the program for execution after reading from it from secondary storage.

Registers

- **address register:** stores addresses of the program lines and stored data
- **program counter:** stores address of current program instruction
- **instruction register:** stores current program instruction
- **accumulator register:** stores result from ALU
- **data register:** stores current data from the main memory (RAM)

ALU

Arithmetic Logic Unit – performs arithmetic and logical operations

Bus

wires that connect the parts of the CPU

Clock

produces electronic pulses at millions per second to time these activities

Machine cycle

the *fetch–execute cycle*, also called the *machine cycle*

Microprograms

the unique set of instructions in a particular CPU

Cache

stores often repeated instructions