1. \*\*Which of the following is NOT a type of micro-operation?\*\*

- a) Arithmetic

- b) Logic

- c) Control

- d) Shift

\*\*Answer\*\*: c) Control

2. \*\*Which type of instruction cycle involves the CPU processing data and performing operations?\*\*

- a) Fetch

- b) Execute

\*\*Answer\*\*: b) Execute

3. \*\*Which type of computer architecture has a large number of simple instructions?\*\*

- a) Reduced Instruction Set Computer (RISC)

- b) Complex Instruction Set Computer (CISC)

- c) Both RISC and CISC

- d) None of the above

\*\*Answer\*\*: a) Reduced Instruction Set Computer (RISC)

4. \*\*Which type of computer architecture has a large number of complex instructions?\*\*

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- c) Both RISC and CISC

- d) None of the above

\*\*Answer\*\*: b) Complex Instruction Set Computer (CISC)

5. \*\*Which of the following registers stores the memory address of the next instruction to be fetched?\*\*

- a) Instruction Register

- b) Program Counter

- c) Memory Address Register

- d) Memory Buffer Register

\*\*Answer\*\*: b) Program Counter

6. \*\*The time taken to complete one instruction cycle is called:\*\*

- a) Processing time

- b) Execution time

- c) Instruction time

- d) Clock cycle time

\*\*Answer\*\*: c) Instruction time

7. \*\*In computer arithmetic, Booth's algorithm is used for:\*\*

- a) Addition

- b) Subtraction

- c) Multiplication

- d) Division

\*\*Answer\*\*: c) Multiplication

8. \*\*Which programming language is closest to machine language?\*\*

- a) Assembly Language

- b) High-level Language

- c) Object-oriented Language

- d) Scripting Language

\*\*Answer\*\*: a) Assembly Language

9. \*\*Which construct is used to repeat a set of instructions in high-level programming?\*\*

- a) Looping Construct

- b) If-Else Construct

- c) Switch-Case Construct

- d) Function/Procedure Construct

\*\*Answer\*\*: a) Looping Construct

10. \*\*Which type of instruction is used in assembly language programming to perform arithmetic and logic operations?\*\*

- a) ALU Instruction

- b) Control Instruction

- c) Memory-Reference Instruction

- d) Input-Output Instruction

\*\*Answer\*\*: a) ALU Instruction

11. \*\*Which of the following is responsible for generating micro-instructions in a microprogrammed control unit?\*\*

- a) Control Memory

- b) Address sequencing

- c) Micro program example

- d) Design of Control Unit

\*\*Answer\*\*: a) Control Memory

12. \*\*The register transfer language is used for:\*\*

- a) Defining micro-operations

- b) Defining assembly language

- c) Defining high-level language

- d) Defining computer architecture

\*\*Answer\*\*: a) Defining micro-operations

13. \*\*In a microprogrammed control unit, the design of the control unit involves:\*\*

- a) Designing the datapath

- b) Designing the instruction set

- c) Designing the finite state machine

- d) Designing the memory

\*\*Answer\*\*: c) Designing the finite state machine

14. \*\*Which of the following is responsible for performing arithmetic and logical operations in the CPU?\*\*

- a) Control Unit

- b) Arithmetic and Logic Unit (ALU)

- c) Memory Unit

- d) Input-Output Unit

\*\*Answer\*\*: b) Arithmetic and Logic Unit (ALU)

15. \*\*Which addressing mode allows the use of an address register and an index register to calculate the effective address of an operand?\*\*

- a) Direct Addressing Mode

- b) Indexed Addressing Mode

- c) Immediate Addressing Mode

- d) Register Addressing Mode

\*\*Answer\*\*: b) Indexed Addressing Mode

16. \*\*DMA stands for:\*\*

- a) Direct Memory Access

- b) Data Memory Allocation

- c) Direct Memory Allocation

- d) Data Memory Access

\*\*Answer\*\*: a) Direct Memory Access

17. \*\*Which type of instruction accesses memory for both operands?\*\*

- a) Register-Reference Instruction

- b) Memory-Reference Instruction

- c) Input-Output Instruction

- d) None of the above

\*\*Answer\*\*: b) Memory-Reference Instruction

18. \*\*Which memory organization scheme allows for parallel access to memory locations?\*\*

- a) Hierarchical Memory

- b) Associative Memory

- c) Cache Memory

- d) Segmented Memory

\*\*Answer\*\*: b) Associative Memory

19. \*\*Which memory technology provides the fastest access time?\*\*

- a) Cache Memory

- b) Auxiliary Memory

- c) Hard Disk

- d) None of the above

\*\*Answer\*\*: a) Cache Memory

20. \*\*Which of the following is a non-volatile memory?\*\*

- a) Cache Memory

- b) RAM

- c) Hard Disk

- d) Register

\*\*Answer\*\*: c) Hard Disk

21. \*\*Which of the following is used to transfer data between two registers in a computer?\*\*

- a) Bus

- b) Memory

- c) Control unit

- d) Accumulator

\*\*Answer\*\*: a) Bus

22. \*\*What is the purpose of a shift micro-operation in a computer?\*\*

- a) To transfer data from one register to another

- b) To perform arithmetic operations on binary numbers

- c) To manipulate the bit positions of binary numbers

- d) To perform logical operations on binary numbers

\*\*Answer\*\*: c) To manipulate the bit positions of binary numbers

Here's the comparison of the two sets of questions, where I have removed repeated ones and organized the rest properly:

**1. Which of the following is NOT a type of micro-operation?**

* a) Arithmetic
* b) Logic
* c) Control
* d) Shift

**Answer**: c) Control

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* c) Switch-Case Construct
* d) Function

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- a) Control Memory

- b) Address sequencing

- c) Microprogram Example

- d) Design of Control Unit

\*\*Answer\*\*: a) Control Memory

**11. What is the purpose of address sequencing in a microprogrammed control unit?**

- a) To generate micro-instructions

- b) To store control signals

- c) To fetch instructions from memory

- d) To perform arithmetic and logical operations

\*\*Answer\*\*: a) To generate micro-instructions

**12. In a microprogrammed control unit, the design of the control unit involves:**

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- c) Designing the finite state machine

- d) Designing the memory

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- d) Input-Output Unit

\*\*Answer\*\*: b) Arithmetic and Logic Unit (ALU)

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- c) Immediate Addressing Mode

- d) Register Addressing Mode

\*\*Answer\*\*: b) Indexed Addressing Mode

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- d) None of the above

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**19. Which of the following is a non-volatile memory?**

- a) Hard Disk

- b) RAM

- c) Cache Memory

- d) Register

\*\*Answer\*\*: a) Hard Disk