CS101 updated VU Midterm Past Paper MCQs Questions From 2020 to date
Created by APEX Team

Question 1: How is a machine instruction fetched from main memory to the CPU?

A) By directly executing the instruction

B) By decoding the instruction

C) By obeying the instruction

D) By transferring it using a bus

Answer: D) By transferring it using a bus

Question 2: What determines the order of execution for instructions in memory?

A) The CPU's program counter

B) The CPU's instruction register

C) The CPU's control unit

D) The CPU's arithmetic/logic unit

Answer: A) The CPU's program counter

Question 3: What is the role of the Instruction Register?

A) To execute instructions

B) To decode instructions

C) To hold the currently executed instruction

D) To fetch instructions from memory

Answer: C) To hold the currently executed instruction

Question 4: In the context of machine cycles, what happens during the execution step?

A) Instructions are fetched from memory

B) Instructions are decoded

C) Instructions are executed

D) Instructions are stored in the program counter

Answer: C) Instructions are executed

Question 5: In Figure 45, what type of program is being executed?

A) Data manipulation program

B) Memory reading program

C) Addition program

D) Memory storing program

Answer: C) Addition program

Question 6: What does the CPU do after analyzing the instruction in its instruction register during the execution step?

A) It fetches the next instruction

B) It decodes the instruction

C) It stores the instruction in memory

D) It increments the program counter

Answer: A) It fetches the next instruction

Question 7: What is the content of the Program Counter after executing the instruction at address A4?

A) A4

B) 166D

C) A6

D) 5056

Answer: C) A6

Question 8: Which register holds the result of the two's complement addition in the CPU?

A) Program Counter

B) Instruction Register

C) Arithmetic/Logic Unit

D) Register 0

Answer: D) Register 0

Question 9: What is the final instruction in the program?

A) A4

B) A6

C) C000

D) 306E

Answer: C) C000

Question 10: In data manipulation, what is one major use of the AND operation?

A) Combining two strings of bits

B) Duplicating a bit pattern

C) Inverting all the bits

D) Moving bits within a register

Answer: B) Duplicating a bit pattern

Question 11: When using the AND operation for masking, what does the mask determine?

A) The position of the result

B) The type of operation to perform

C) Which part of the other operand affects the result

D) The color of the result

Answer: C) Which part of the other operand affects the result

Question 12: What does the OR operation do when used with a mask?

A) Duplicates a part of a string

B) Inverts all the bits in a string

C) Rotates the bits in a string

D) Discards the bits in a string

Answer: A) Duplicates a part of a string

Question 13: How is the XOR operation often used?

A) To perform multiplication

B) To perform division

C) To form the complement of a bit string

D) To perform circular shifts

Answer: C) To form the complement of a bit string

Question 14: What are the operations in the class of rotation and shift operations used for?

A) Solving alignment problems

B) Multiplying two's complement representations

C) Adding two bit patterns

D) Inverting all the bits in a register

Answer: A) Solving alignment problems

Question 15: What distinguishes a circular shift from a logical shift?

A) The direction of motion

B) The circular shift always fills the hole with 1

C) The logical shift always fills the hole with 0

D) The circular shift never discards bits

Answer: B) The circular shift always fills the hole with 1

Question 16: How can subtraction be simulated using addition in 2's complement notation?

A) By adding the binary of the first number to the binary of the second number

B) By adding the binary of the first number to the negation of the second number

C) By adding the binary of the second number to the binary of the first number

D) By multiplying the binary of the first number with the binary of the second number

Answer: B) By adding the binary of the first number to the negation of the second number

Question 17: What is multiplication in the context of arithmetic operators?

A) Repetitive subtraction

B) Repetitive addition

C) Division by addition

D) Division by subtraction

Answer: B) Repetitive addition

Question 18: How can division be achieved using some small CPUs?

A) By adding

B) By subtracting

C) By multiplication

D) By division

Answer: B) By subtracting

Question 19: What is the straightforward method of handling numbers stored in 2's complement notation?

A) Multiplication

B) Division

C) Addition

D) Subtraction

Answer: C) Addition

Question 20: In the context of handling numbers stored in floating-point notation, what needs to be considered?

A) The number of bits in the register

B) The position of the sign bit

C) The color representation of the numbers

D) The type of operation to perform

Answer: B) The position of the sign bit