

Question # 2 of 30 (Start time: 03:16:32 PM, 27 December 2020)

To implement an N-bit barrel shifter in form of a combinational circuit, we require N _____.

Select the correct option



multiplexers



demultiplexers



selectors



tri-state buffers

Question # 3 of 30 (Start time: 03:17:30 PM, 27 December 2020)

_____ controls the sequence of the flow of microinstructions.

Select the correct option



Multiplexer



Micro program controller



DMA Controller



Virtual Memory

Question # 4 of 30 (Start time: 03:18:30 PM, 27 December 2020)

In Structural RTL, the first three time steps (i.e. T0, T1 and T2) are of the instruction _____ phase.

Select the correct option



fetch



execute



create



destroy

Question # 5 of 30 (Start time: 03:19:11 PM, 27 December 2020)

"If $P = 1$, then load the contents of register R1 into register R2". This statement can be written in RTL as:

Select the correct option



$R1 \leftarrow R2$



$P: R1 \leftarrow R2$



$P: R2 \leftarrow R1$



$P: R2 \leftarrow R1, P: R1 \leftarrow R2$

Question # 5 of 30 (Start time: 03:19:11 PM, 27 December 2020)

"If $P = 1$, then load the contents of register R1 into register R2". This statement can be written in RTL as:

Select the correct option



$R1 \leftarrow R2$



$P: R1 \leftarrow R2$



$P: R2 \leftarrow R1$



$P: R2 \leftarrow R1, P: R1 \leftarrow R2$

Question # 6 of 30 (Start time: 03:20:27 PM, 27 December 2020)

SPEC stands for _____.

Select the correct option



Scientific Performance Execution Cooperative



System Performance Execution Cooperative



Scientific Performance Evaluation Cooperative



System Performance Evaluation Cooperative

Question # 7 of 30 (Start time: 03:21:36 PM, 27 December 2020)

jump [ra+c2] is an _____ instruction

Select the correct option



Conditional jump



Unconditional jump



Shift



Arithmetic and logic

Question # 8 of 30 (Start time: 03:22:10 PM, 27 December 2020)

_____ form the branch control field in the micro instruction.

Select the correct option



C Bits



M Bits



B Bits



A Bits

Question # 9 of 30 (Start time: 03:23:02 PM, 27 December 2020)

Which type of instructions load data from memory into registers, or store data from registers into memory and transfer data between different kinds of special-purpose registers?

Select the correct option

☒	Arithmetic
☐	Control
☐	Data transfer
☐	Transfer

Question # 9 of 30 (Start time: 03:23:02 PM, 27 December 2020)

Which type of instructions load data from memory into registers, or store data from registers into memory and transfer data between different kinds of special-purpose registers?

Select the correct option

☒	Arithmetic
☐	Control
☐	Data transfer
☐	Transfer

Question # 10 of 30 (Start time: 03:24:06 PM, 27 December 2020)

In MC68000, only the last _____ bits of 32-bit program counter (PC) register are used to store memory addresses.

Select the correct option



8



16



24



32

Question # 11 of 30 (Start time: 03:25:45 PM, 27 December 2020)

Program counter (PC) holds the memory address of _____?

Select the correct option



Previous instruction



Current instruction



Next instruction

Question # 12 of 30 (Start time: 03:26:21 PM, 27 December 2020)

Type checking allows the _____ to determine memory requirements for variables.

Select the correct option

☒

Compiler

☐

Debugger

☐

Linker

Question # 13 of 30 (Start time: 03:26:54 PM, 27 December 2020)

The instruction "PUSH A" is an example of _____.

Select the correct option



0-address instruction



1-address instruction



2-address instruction

Question # 14 of 30 (Start time: 03:28:12 PM, 27 December 2020)

Which one of the following control signals allows the value of register rc to be read?

Select the correct option

☒

RCE

☐

RBE

☐

LCON

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Question # 15 of 30 (Start time: 03:29:32 PM, 27 December 2020)

Which of the following registers is used as an implicit operand in MUL/DIV instruction of Falcon-A?

Select the correct option

☒	R0
☐	PC
☐	IR
☐	...

Question # 16 of 30 (Start time: 03:30:50 PM, 27 December 2020)

Which one of the followings is the correct RTL description for sign extension of an 8-bit constant?

Select the correct option



$(8aIR<7> \oplus IR<7..0>)$



$(8aIR<8> \oplus IR<8..1>)$



$(8aIR<7> \oplus IR<8..0>)$

Question # 17 of 30 (Start time: 03:31:26 PM, 27 December 2020)

In which of the following instructions, the data moves between a register in the processor and a memory location?

Select the correct option

☐

Arithmetic

☒

Load/Store

☐

Branch

Question # 18 of 30 (Start time: 03:32:17 PM, 27 December 2020)

The instruction "Load R1, [R3 + 20]" is an example of which of the following addressing modes?

Select the correct option



Direct



Immediate



Register

Question # 19 of 30 (Start time: 03:34:01 PM, 27 December 2020)

A machine cycle is defined to be the time it takes to fetch _____ operands from registers, perform an Arithmetic logic Unit (ALU) operation and store the result in a register.

Select the correct option

☐	Three
☒	Two
☐	One
☐	Four

Question # 20 of 30 (Start time: 03:34:48 PM, 27 December 2020)

Total number of data registers in Motorola 68000 processor are _____.

Select the correct option



8



12



24



32

Question # 20 of 30 (Start time: 03:34:48 PM, 27 December 2020)

Total number of data registers in Motorola 68000 processor are _____.

Select the correct option



8



12



24



32

Question # 21 of 30 (Start time: 03:36:33 PM, 27 December 2020)

The _____ instruction is completed once memory access has been made and the memory location has been written to.

Select the correct option

☐

Link

☐

Branch

☒

Store

Question # 22 of 30 (Start time: 03:37:17 PM, 27 December 2020)

Which one of the followings is the correct RTL description for sign extension of a 5-bit constant?

Select the correct option

☒

5aIR<4> @IR<4.. 0>

☐

5aIR<5> @IR<5.. 1>

☐

11aIR<4> @IR<4.. 0>

Question # 23 of 30 (Start time: 03:38:13 PM, 27 December 2020)

Which of the following RTL descriptions is used for specifying the operation of an SRC instruction?

Select the correct option

☐

IR<31..27>

☒

IR<22..26>

☐

IR<21..17>

Question # 24 of 30 (Start time: 03:39:06 PM, 27 December 2020)

A _____ processor is based on a very long instruction word.

Select the correct option

☒

VLIW

☐

SRC

☐

FALCON-A

Question # 24 of 30 (Start time: 03:39:06 PM, 27 December 2020)

A _____ processor is based on a very long instruction word.

Select the correct option

☒

VLIW

☐

SRC

☐

FALCON-A

Question # 24 of 30 (Start time: 03:39:06 PM, 27 December 2020)

A _____ processor is based on a very long instruction word.

Select the correct option

☒

VLIW

☐

SRC

☐

FALCON-A

Question # 25 of 30 (Start time: 03:40:13 PM, 27 December 2020)

Which one of the following is a bi-stable device, capable of storing one bit of Information?

Select the correct option

☐

Decoder

☒

Flip-flop

☐

Multiplexer

Question # 26 of 30 (Start time: 03:40:50 PM, 27 December 2020)

What is the purpose of following Falcon-A instruction?

call R2, R1

Select the correct option



Save the current contents of PC into R1 and assign value of R2 to PC.



Save the current contents of PC into R2 and assign value of R1 to PC.



Add the values of R1 and R2 and then assign new value to PC.

Question # 27 of 30 (Start time: 03:41:52 PM, 27 December 2020)

VLIW stands for _____.

Select the correct option



Variable Length Instruction Word



Very Long Instruction Word



Very Long Instruction Width

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Question # 28 of 30 (Start time: 03:42:16 PM, 27 December 2020)

In _____, only one field is required which specifies the type of operation.

Select the correct option

☐

3-Address Instruction

☐

2-Address Instruction

☐

1-Address Instruction

Question # 29 of 30 (Start time: 03:42:58 PM, 27 December 2020)

_____ instruction is used to load a register with an immediate data value.

Select the correct option



la



lar



ld

Question # 30 of 30 (Start time: 03:43:50 PM, 27 December 2020)

In a register-based machine having 64 registers, a _____ field is required in instruction to identify a register.

Select the correct option



4-bit



6-bit



8-bit

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Question # 30 of 30 (Start time: 03:43:50 PM, 27 December 2020)

In a register-based machine having 64 registers, a _____ field is required in instruction to identify a register.

Select the correct option



4-bit



6-bit



8-bit



16-bit