



Grand Quiz Spring 2021

Subject Code CS501 lecture 1 to 22

Solved by Riz Mughal

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RIZ MUGHAL (SQA ENGINEER)



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Question # 1 of 30 (Start time: 09:00:35 AM, 23 June 2021)

Total Marks: 1

In which of the following addressing modes, the address of the memory from where the value is to be accessed is given in the instruction?

Select the correct option

- | | |
|----------------------------------|----------------------------|
| <input type="radio"/> | Register Direct Addressing |
| <input type="radio"/> | Immediate Addressing |
| <input checked="" type="radio"/> | Direct Addressing |
| <input type="radio"/> | Indirect Addressing |

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Question # 2 of 30 (Start time: 09:00:59 AM, 23 June 2021)

_____ controls the sequence of the flow of microinstructions.

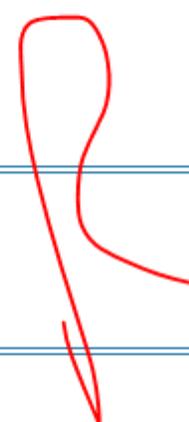
Select the correct option

- | | |
|----------------------------------|--------------------------|
| <input type="radio"/> | Multiplexer |
| <input type="radio"/> | DMA Controller |
| <input checked="" type="radio"/> | Micro program controller |
| <input type="radio"/> | Virtual Memory |
- 

Question # 3 of 30 (Start time: 09:01:13 AM, 23 June 2021)

All of the below given processors employ Little-Endian storage format except _____.

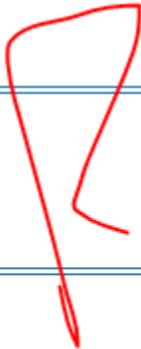
Select the correct option

- | | |
|----------------------------------|----------------|
| <input type="radio"/> | Falcon-E |
| <input checked="" type="radio"/> | Falcon-A |
| <input type="radio"/> | EAGLE |
| <input type="radio"/> | Modified EAGLE |
- 

Question # 4 of 30 (Start time: 09:01:27 AM, 23 June 2021)

The RTL description " $IO[32] \leftarrow R[5]$ " represents which of the following instructions of EAGLE?

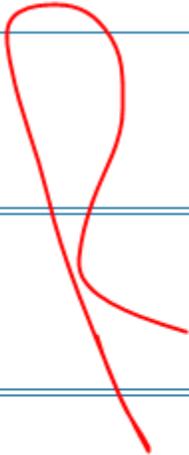
Select the correct option

- | | |
|----------------------------------|------------|
| <input type="radio"/> | in 32, r5 |
| <input type="radio"/> | ori 32, r5 |
| <input type="radio"/> | mov 32, r5 |
| <input checked="" type="radio"/> | out 32, r5 |
- 

Question # 5 of 30 (Start time: 09:01:43 AM, 23 June 2021)

Which of the following is NOT related to the architecture of a computer?

Select the correct option

- | | |
|----------------------------------|-------------------------|
| <input type="radio"/> | Memory addressing modes |
| <input type="radio"/> | Instruction set |
| <input checked="" type="radio"/> | Control signals |
| <input type="radio"/> | I/O mechanisms |
- 

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Question # 6 of 30 (Start time: 09:02:03 AM, 23 June 2021)

A collection of -----is called a micro program.

Select the correct option

- | | |
|----------------------------------|------------------------|
| <input type="radio"/> | large scale operations |
| <input type="radio"/> | DMA |
| <input type="radio"/> | Registers |
| <input checked="" type="radio"/> | Microinstructions |

Question # 7 of 30 (Start time: 09:02:18 AM, 23 June 2021)

In Type C instruction of SRC, _____ bits are allocated for constant value.

Select the correct option

- | | |
|----------------------------------|----|
| <input type="radio"/> | 22 |
| <input type="radio"/> | 21 |
| <input type="radio"/> | 16 |
| <input checked="" type="radio"/> | 17 |
- 

Question # 8 of 30 (Start time: 09:02:33 AM, 23 June 2021)

The SRC uses a hazard detection unit. The hazard can be resolved using either pipeline stalls or by _____

Select the correct option

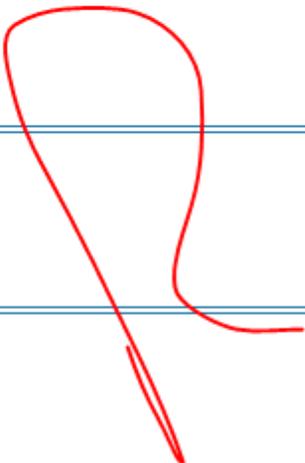
- | | |
|----------------------------------|------------------------|
| <input type="radio"/> | Instruction forwarding |
| <input type="radio"/> | Data compressing |
| <input type="radio"/> | Instruction handling |
| <input checked="" type="radio"/> | Data forwarding |
- 

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Question # 9 of 30 (Start time: 09:02:48 AM, 23 June 2021)

There are _____ types of reset operations in SRC.

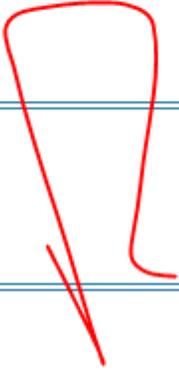
Select the correct option

- | | |
|----------------------------------|-------|
| <input type="radio"/> | Four |
| <input checked="" type="radio"/> | Two |
| <input type="radio"/> | Three |
| <input type="radio"/> | Five |
- 

Question # 10 of 30 (Start time: 09:03:04 AM, 23 June 2021)

In _____ instruction format of EAGLE processor, there is no field reserved for operands.

Select the correct option

- | | |
|----------------------------------|--------|
| <input checked="" type="radio"/> | Type Z |
| <input type="radio"/> | Type X |
| <input type="radio"/> | Type Y |
| <input type="radio"/> | Type V |
- 

Question # 11 of 30 (Start time: 09:03:19 AM, 23 June 2021)

_____ provides a temporary storage for the address of memory location to be accessed.

Select the correct option

<input checked="" type="radio"/>	MAR
<input type="radio"/>	MBR
<input type="radio"/>	PC
<input type="radio"/>	LPC



Question # 12 of 30 (Start time: 09:03:35 AM, 23 June 2021)

Which one of the following registers holds the address of the next instruction to be executed?

Select the correct option

- | | |
|----------------------------------|----------------------|
| <input type="radio"/> | Instruction Register |
| <input checked="" type="radio"/> | Program Counter |
| <input type="radio"/> | Accumulator |
| <input type="radio"/> | Address Mask |
- 

Question # 13 of 30 (Start time: 09:03:49 AM, 23 June 2021)

Total

The control signal LIR allows the IR (Instruction Register) to read the instruction which is initially stored in _____ register.

Select the correct option

- Register A
- MAR
- PC
- MBR

R

Question # 14 of 30 (Start time: 09:04:04 AM, 23 June 2021)

Execution time of a program with respect to the processor is calculated as:

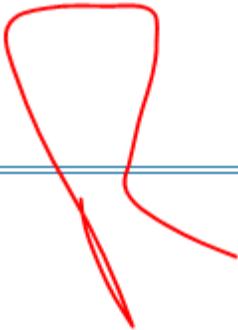
Select the correct option

- | | |
|----------------------------------|---|
| <input checked="" type="radio"/> | Execution Time = $IC \times CPI \times T$ |
| <input type="radio"/> | Execution Time = $IC \times T$ |
| <input type="radio"/> | Execution Time = $IC \times CPI \times MIPS$ |
| <input type="radio"/> | Execution Time = $CPI \times T \times MFLOPS$ |
- 

Question # 15 of 30 (Start time: 09:04:18 AM, 23 June 2021)

Which of the following is NOT an advantage of register-to-register data transfer?

Select the correct option

- | | |
|----------------------------------|--------------|
| <input type="radio"/> | Constant CPI |
| <input type="radio"/> | Simpler |
| <input type="radio"/> | Faster |
| <input checked="" type="radio"/> | Compact |
- 

Question # 16 of 30 (Start time: 09:04:32 AM, 23 June 2021)

jump [ra+c2] is an _____ instruction

Select the correct option

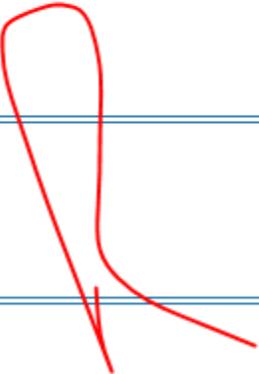
- | | |
|----------------------------------|----------------------|
| <input type="radio"/> | Conditional jump |
| <input type="radio"/> | Shift |
| <input checked="" type="radio"/> | Unconditional jump |
| <input type="radio"/> | Arithmetic and logic |
- 

Question # 17 of 30 (Start time: 09:04:53 AM, 23 June 2021)

Which of the following branch instructions has a condition which is always executed?

Select the correct option

<input checked="" type="radio"/>	JUMP
<input type="radio"/>	JMI
<input type="radio"/>	JZ
<input type="radio"/>	JPL

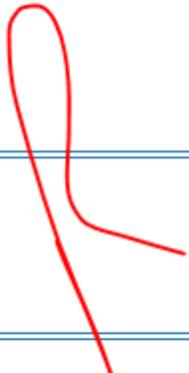


Question # 18 of 30 (Start time: 09:05:09 AM, 23 June 2021)

RTL statements separated by _____ are always executed in same clock pulse.

Select the correct option

<input type="radio"/>	Hash (#)
<input type="radio"/>	Colon (:)
<input checked="" type="radio"/>	Comma (,)
<input type="radio"/>	Semi-colon (;)



Question # 19 of 30 (Start time: 09:05:26 AM, 23 June 2021)

Total Marks: 1

For any of the instructions that are a part of the instruction set of the SRC, there are certain _____ required; which may be used to select the appropriate function for the ALU to be performed, to select the appropriate registers, or the appropriate memory location.

Select the correct option

<input type="radio"/>	Memory
<input type="radio"/>	Registers
<input type="radio"/>	None of the given
<input checked="" type="radio"/>	Control signals



Question # 20 of 30 (Start time: 09:05:41 AM, 23 June 2021)

Total Mark:

Which of the following register(s) is/are programmer invisible and is/are required to hold an operand or result value while the bus is busy transmitting some other value?

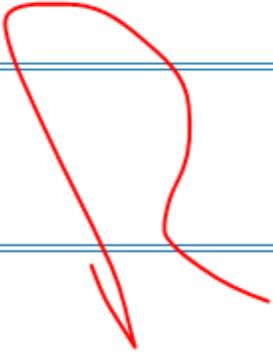
Select the correct option

- | | |
|----------------------------------|-------------------------|
| <input type="radio"/> | Memory address register |
| <input type="radio"/> | Memory Buffer Register |
| <input checked="" type="radio"/> | Registers A and C |
| <input type="radio"/> | Instruction Register |

Question # 21 of 30 (Start time: 09:05:55 AM, 23 June 2021)

Which of the following is responsible for generating signals for external events?

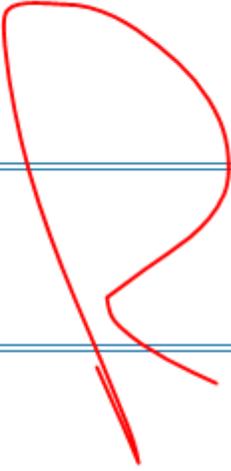
Select the correct option

- | | |
|----------------------------------|--------------------------------|
| <input type="radio"/> | "CON" control signal |
| <input checked="" type="radio"/> | Interrupt generator |
| <input type="radio"/> | Control unit signals generator |
| <input type="radio"/> | Exception generator |
- 

Question # 22 of 30 (Start time: 09:06:10 AM, 23 June 2021)

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

Select the correct option

- | | |
|----------------------------------|-----------------------|
| <input type="radio"/> | 3-Address Instruction |
| <input type="radio"/> | 1-Address Instruction |
| <input type="radio"/> | 2-Address Instruction |
| <input checked="" type="radio"/> | 0-Address Instruction |
- 

Question # 23 of 30 (Start time: 09:06:25 AM, 23 June 2021)

Which of the following is not a part of processor state?

Select the correct option

- | | |
|----------------------------------|-----------|
| <input type="radio"/> | PC |
| <input type="radio"/> | IR |
| <input type="radio"/> | Registers |
| <input checked="" type="radio"/> | Stack |
- 

Question # 24 of 30 (Start time: 09:06:41 AM, 23 June 2021)

In "Jump [8]" instruction, the size of the constant field is _____ bits.

Select the correct option

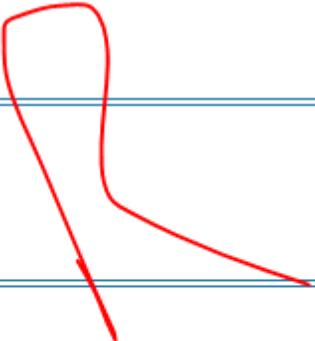
- | | |
|----------------------------------|----|
| <input type="radio"/> | 4 |
| <input checked="" type="radio"/> | 8 |
| <input type="radio"/> | 16 |
| <input type="radio"/> | 5 |
- R*

Question # 25 of 30 (Start time: 09:06:59 AM, 23 June 2021)

Which of the followings is a behavioral RTL description to enable the exceptions?

Select the correct option

<input checked="" type="radio"/>	$IE \leftarrow 1$
<input type="radio"/>	$IE \leftarrow -1$
<input type="radio"/>	$IE \leftarrow 8$
<input type="radio"/>	$IE \leftarrow 0$



Question # 26 of 30 (Start time: 09:07:15 AM, 23 June 2021)

Total

In EAGLE processor, which of the following notations is used to represent a memory word stored at address 8?

Select the correct option

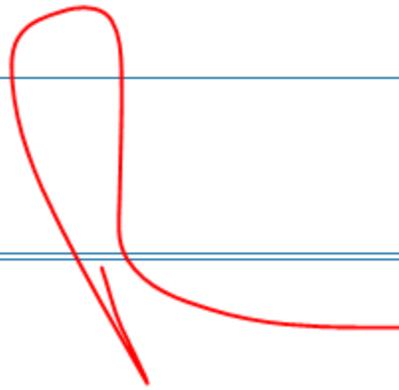
- | | |
|----------------------------------|-----------------------------------|
| <input type="radio"/> | $M[8]<0..15> := M[9] \oplus M[8]$ |
| <input type="radio"/> | $M[8]<0..15> := M[8] \oplus M[9]$ |
| <input type="radio"/> | $M[8]<15..0> := M[8] \oplus M[9]$ |
| <input checked="" type="radio"/> | $M[8]<15..0> := M[9] \oplus M[8]$ |

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Question # 27 of 30 (Start time: 09:07:29 AM, 23 June 2021)

Which one of the following circuit design levels is called the gate level?

Select the correct option

- | | |
|----------------------------------|--------------------|
| <input type="radio"/> | Circuit Level |
| <input type="radio"/> | Machine Level |
| <input type="radio"/> | Mask Level |
| <input checked="" type="radio"/> | Logic Design Level |
- 

Question # 28 of 30 (Start time: 09:07:46 AM, 23 June 2021)

Total

The Memory Buffer Register (MBR) has a _____ connection with both the memory sub-system and the registers/ALSU.

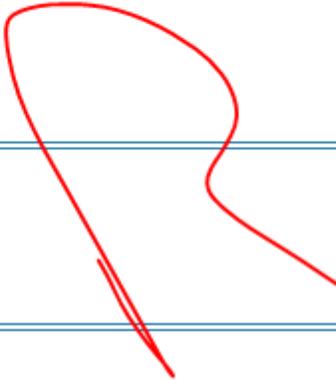
Select the correct option

- | | |
|----------------------------------|------------------|
| <input type="radio"/> | uni-directional |
| <input checked="" type="radio"/> | bi-directional |
| <input type="radio"/> | tri-directional |
| <input type="radio"/> | zero-directional |
- 

Question # 29 of 30 (Start time: 09:08:01 AM, 23 June 2021)

The result is stored in the destination register in _____ stage of the Pipeline.

Select the correct option

- | | |
|----------------------------------|-------------------|
| <input type="radio"/> | ALU5 operation |
| <input checked="" type="radio"/> | Register write |
| <input type="radio"/> | Instruction fetch |
| <input type="radio"/> | Memory access |
- 

Question # 30 of 30 (Start time: 09:08:15 AM, 23 June 2021)

_____ is an example of Miscellaneous instruction.

Select the correct option

<input checked="" type="radio"/>	Halt
<input type="radio"/>	Call
<input type="radio"/>	Store
<input type="radio"/>	Shiftl

