Winter_25_Quiz_4 - Results

Attempt 1 of 1

Written Feb 4, 2025 7:30 PM - Feb 4, 2025 7:45 PM

Attempt Score	**16 / 20 - 80 %**
Overall Grade (Highest Attempt)	**16 / 20 - 80 %**

Question 1

In a multiplexer with 64 data inputs, the number of control inputs is equal to:

- ◯ 4
- ◯ 8
- ✔ ◯ 6

Question 2

What type of digital logic gates are commonly used in the implementation of a digital comparator?

- ✔ ◯ XOR gates
- ◯ AND gates
- ◯ NAND gates
- ◯ NOR gates

Question 3

Using the 8-bit ALU configuration given bellow obtain the Output value?

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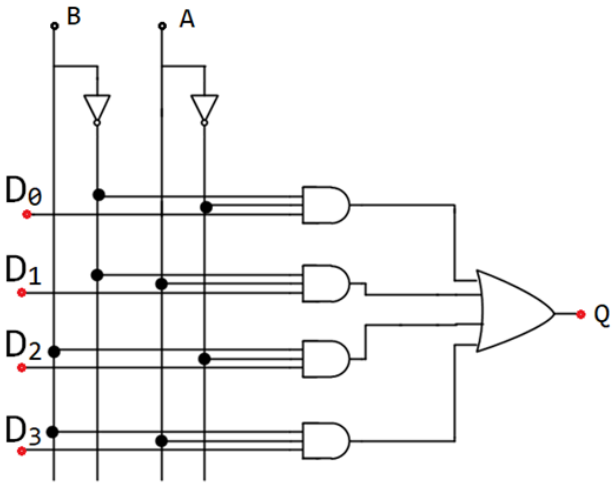
	A	B	INVA	F0	F1	ENA	ENB	INC	Output
1	00000010	00000111	1	1	1	1	1	1	

- 00001001
- ✔ 00000101
- 00001010
- 11111011

Question 4

In the following decoder if A =1 and B = 0 then the value of Q = ?



- D3
- D2
- ✔ D1
- D0

Question 5

If a 8-bit register (R) contains the binary value 0010 0110 (38 in decimal), what is the result of the expression R >> 2?

- ✖ 9.5

- ➡ ◯ 9
- ◯ 152
- ◯ 17.5
- ◯ 76

Question 6

In a multiplexer, what is the purpose of the control inputs?

- ◯ To control the output signal
- ✔ ◯ To select which input to pass to the output
- ◯ To determine the number of inputs
- ◯ To enable or disable the multiplexer

Question 7

Using the 8-bit ALU configuration given bellow obtain the Output value?

	A	B	INVA	F0	F1	ENA	ENB	INC	Res
1	00000011	00000111	1	0	0	1	1	0	

- ◯ 11111011
- ➡ ◯ 00000100
- ◯ 00000111
- ✖ ◯ 00000011

Question 8

What is the purpose of the carry input (Cin) in a full adder?

- ◯ It represents the carry out from the current adder
- ◯ It represents the borrow in a subtraction operation
- ◯ It represents the borrow out in a subtraction operation
- ✔ ◯ It represents the carry from the previous adder

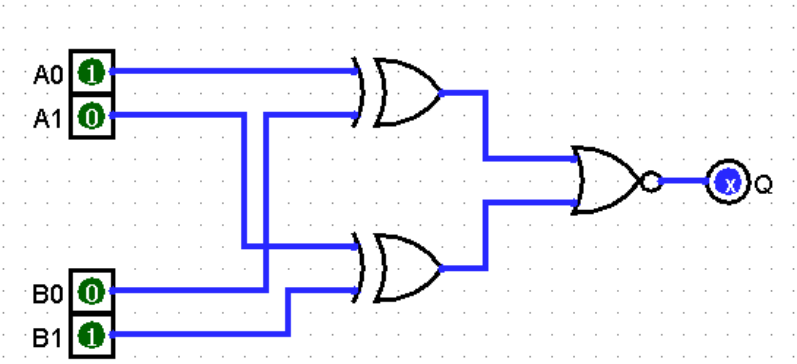
Question 9

Which component of an ALU is responsible for performing arithmetic operations?

- Half adder
- Decoder
- Comparator
- ✓ Full adder

Question 10

The Q value is :



- none of the mentioned
- 1
- ✓ 0

Done