Started on	Wednesday, 3 July 2024, 5:30 AM
State	Finished
Completed on	Wednesday, 3 July 2024, 5:36 AM
Time taken	6 mins 10 secs
Grade	**6.00** out of 10.00 (**60**%)

Question 1

Incorrect

Mark 0.00 out of 1.00

How many outputs does a 2-to-4 decoder have?

- a. 2 ✖
- b. 3
- c. 4
- d. 8

Question 2

Correct

Mark 1.00 out of 1.00

To implement a 2-input AND gate, you need:

- a. Two NAND gates ✔
- b. Two NOR gates
- c. Two XOR gates
- d. Two OR gates

Your answer is correct.

Question 3

Incorrect

Mark 0.00 out of 1.00

A 4-to-1 multiplexer has:

- a. 2 control inputs ✖
- b. 3 control inputs
- c. 4 control inputs
- d. 5 control inputs

Your answer is incorrect.

Question 4

Correct

Mark 1.00 out of 1.00

How many outputs does a 3-to-8 decoder have?

- a. 2
- b. 3
- c. 8 ✔
- d. 6

Question 5

Incorrect

Mark 0.00 out of 1.00

A 4-variable Karnaugh map has how many cells in total?

- a. 4 ✖
- b. 8
- c. 16
- d. 32

Question 6

Correct

Mark 1.00 out of 1.00

The output of a 4-input OR gate is 0 only when:

- a. All inputs are 0 ✔
- b. All inputs are 1
- c. Any of the inputs is 1
- d. All inputs are X (undefined)

Question 7

Correct

Mark 1.00 out of 1.00

In a combinational circuit:

- a. The output depends on the current input only ✔
- b. The output depends on the current and previous inputs
- c. The output depends on the current and future inputs
- d. The output depends on the internal state of the circuit

Your answer is correct.

Question 8

Incorrect

Mark 0.00 out of 1.00

A decoder is a combinational circuit that _____.

- a. Converts a binary number to a decimal numberX (undefined)
- b. Converts a decimal number to a binary number
- c. Converts a binary number to a set of outputs
- d. Converts a set of outputs to a binary number

Question 9

Correct

Mark 1.00 out of 1.00

In a 3-to-8 decoder, how many input lines are there?

- a. 3 ✔
- b. 8
- c. 11
- d. 5

Your answer is correct.

Question 10

Correct

Mark 1.00 out of 1.00

What is the maximum number of select lines required for a 16-to-1 multiplexer?

- a. 3
- b. 4 ✔
- c. 8
- d. 16