

HW8: Digital Logic

Due Feb 8 at 11:59pm**Points** 17**Questions** 5**Available** until Feb 10 at 11:59pm**Time Limit** None

This quiz was locked Feb 10 at 11:59pm.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	20 minutes	14 out of 17

Score for this quiz: **14** out of 17

Submitted Feb 3 at 7:05pm

This attempt took 20 minutes.

Question 1

4 / 4 pts

Given the following logic equation:

$$Y = \sim A \& B + A \& \sim B$$

For a system with:

- Input variables: A,B
- Output variable: Y

Determine if each output column cell is a logic 1 or a logic 0.

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

Answer 1:

Correct!

0

Answer 2:

Correct!

1

Answer 3:

Correct!

1

Answer 4:

Correct!

0

Question 2

1 / 4 pts

Given the following logic equation:

$$Y = \sim A \& \sim B + A \& \sim B$$

For a system with:

- Input variables: A,B
- Output variable: Y

Determine if each output column cell is a logic 1 or a logic 0.

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

Answer 1:

You Answered

0

Correct Answer

1

Answer 2:

You Answered

1

Correct Answer

0

Answer 3:

Correct!

1

Answer 4:

1

You Answered

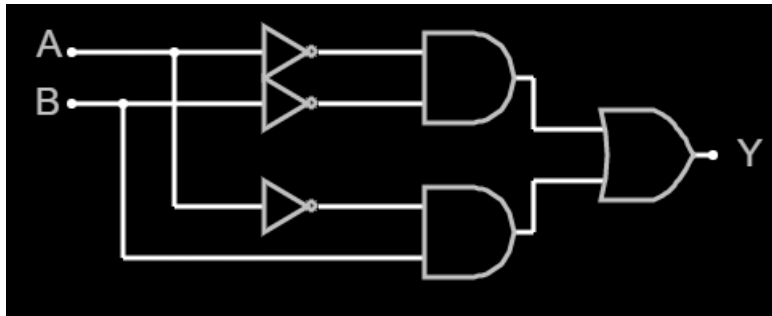
Correct Answer

0

Question 3

3 / 3 pts

Select the logic equation that represents the following circuit:



☐ $Y = A \& B + A \& \sim B$

☒ $Y = \sim A \& \sim B + \sim A \& B$

☐ $Y = A \& B + \sim A \& B$

☐ $Y = \sim A \& B + A \& \sim B$

☐ $Y = \sim A \& \sim B + A \& \sim B$

☐ $Y = A \& B + \sim A \& \sim B$

☐ $Y = \sim A \& B + \sim A \& \sim B$

☐ $Y = A \& \sim B + A \& B$

☐ $Y = A \& \sim B + \sim A \& \sim B$

☐ $Y = \sim A \& \sim B + A \& B$

☐ $Y = \sim A \& B + A \& B$

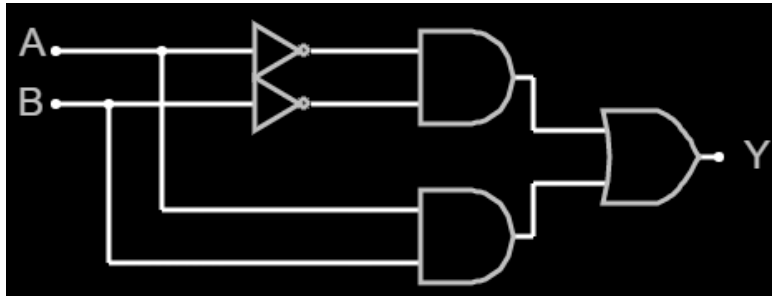
☐ $Y = A \& \sim B + A \& \sim B$

Correct!

Question 4

3 / 3 pts

Select the logic equation that represents the following circuit:



☐ $Y = A \& \sim B + \sim A \& \sim B$

☐ $Y = \sim A \& B + \sim A \& \sim B$

☐ $Y = A \& \sim B + A \& \sim B$

☐ $Y = A \& B + A \& \sim B$

☐ $Y = A \& B + \sim A \& \sim B$

☐ $Y = A \& B + \sim A \& B$

☐ $Y = \sim A \& B + A \& \sim B$

☐ $Y = \sim A \& \sim B + A \& \sim B$

☐ $Y = \sim A \& B + A \& B$

☐ $Y = A \& \sim B + A \& B$

☐ $Y = \sim A \& \sim B + \sim A \& B$

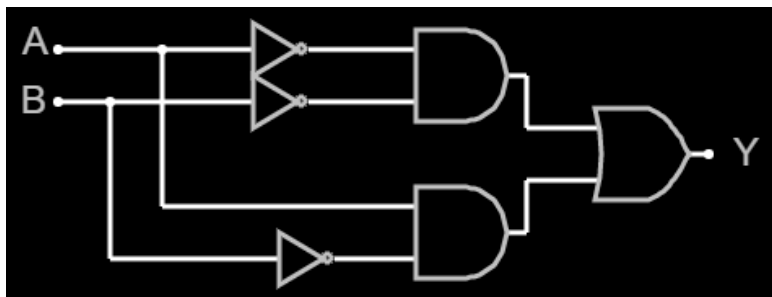
☒ $Y = \sim A \& \sim B + A \& B$

Correct!

Question 5

3 / 3 pts

Select the logic equation that represents the following circuit:



☐ $Y = A \& \sim B + A \& \sim B$

☐ $Y = \sim A \& B + A \& B$

☐ $Y = A \& \sim B + \sim A \& \sim B$

☐ $Y = A \& B + \sim A \& B$

☐ $Y = \sim A \& \sim B + \sim A \& B$

☐ $Y = \sim A \& B + \sim A \& \sim B$

☐ $Y = A \& B + A \& \sim B$

☐ $Y = A \& B + \sim A \& \sim B$

☐ $Y = \sim A \& B + A \& \sim B$

☐ $Y = \sim A \& \sim B + A \& B$

☐ $Y = A \& \sim B + A \& B$

☒ $Y = \sim A \& \sim B + A \& \sim B$

Correct!

Quiz Score: **14** out of 17