

Logic Gate Quiz

Question 1: Which expression corresponds to the given truth table?

Options

(1) $(A) \text{ or } (\text{not } (A))$

(2) $((A) \text{ and } (\text{not } (A))) \text{ or } (\text{not } (E))$

(3) $((((E) \text{ or } (\text{not } (D)))) \text{ and } (A)) \text{ or } (\text{not } (B))$

(4) $(A) \text{ and } (D)$

A	B	Q
0	0	1
0	1	1
1	0	1
1	1	1

Question 2: Which expression corresponds to the given truth table?

Options

- (1) (D) and (C)
- (2) (((E) and (not (E))) or (not (D))) or (not (C))
- (3) ((B) or (A)) and (B)
- (4) ((D) and (not (E))) or (not (E))

A	B	Q
0	0	0
0	1	1
1	0	0
1	1	1

Question 3: Which expression corresponds to the given truth table?

Options

- (1) (A) or (A)
- (2) (D) or (C)
- (3) (((A) or (not (E))) or (not (A))) or (C)
- (4) (((B) and (A)) or (A)) or (B)

A	B	Q
0	0	0
0	1	1
1	0	1
1	1	1

Question 4: Which expression corresponds to the given truth table?

Options

- (1) (((B) and (not (A))) and (not (D))) and (C)
- (2) (A) and (not (C))
- (3) ((B) or (B)) or (B)
- (4) (((E) and (B)) or (D)) or (C)

A	B	C	Q
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	1
1	1	1	1

Question 5: Which expression corresponds to the given truth table?

Options

- (1) ((B) or (A)) or (not (D))
- (2) (E) and (not (B))
- (3) ((A) and (not (B))) or (B)
- (4) (E) and (not (E))

A	B	C	Q
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	1

Question 6: Which expression corresponds to the given truth table?

Options

- (1) ((B) or (A)) and (A)
- (2) (B) and (A)
- (3) (B) and (B)
- (4) (((B) or (not (E))) or (E)) and (E)

A	B	C	Q
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	1

Question 7: Which expression corresponds to the given truth table?

Options

- (1) (((A) and (C)) or (not (D))) or (D)
- (2) (((B) and (A)) and (B)) and (A)
- (3) (D) and (C)
- (4) (A) or (C)

A	B	Q
0	0	0
0	1	0
1	0	0
1	1	1

Question 8: Which expression corresponds to the given truth table?

Options

- (1) (((A) and (not (A))) and (A)) and (not (B))
- (2) ((C) and (C)) and (not (B))
- (3) (D) and (B)
- (4) (D) or (not (E))

A	B	Q
0	0	0
0	1	0
1	0	0
1	1	0

Question 9: Which expression corresponds to the given truth table?

Options

- (1) ((D) or (not (A))) or (not (E))
- (2) ((B) or (B)) or (not (D))
- (3) (((A) and (not (D))) and (not (C))) and (A)
- (4) (((A) and (not (B))) or (not (B))) or (not (A))

A	B	Q
0	0	1
0	1	1
1	0	1
1	1	0

Question 10: Which expression corresponds to the given truth table?

Options

(1) $((B \vee \neg A) \vee \neg C) \vee \neg A$

(2) $((B \vee \neg C) \vee B) \vee \neg E$

(3) $B \vee \neg C$

(4) $(A \vee D) \vee \neg B$

A	B	C	Q
0	0	0	1
0	0	1	1
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	1

Answer Key

Question 1: (1) (A) or (not (A))

Question 2: (3) ((B) or (A)) and (B)

Question 3: (4) (((B) and (A)) or (A)) or (B)

Question 4: (3) ((B) or (B)) or (B)

Question 5: (3) ((A) and (not (B))) or (B)

Question 6: (1) ((B) or (A)) and (A)

Question 7: (2) (((B) and (A)) and (B)) and (A)

Question 8: (1) (((A) and (not (A))) and (A)) and (not (B))

Question 9: (4) (((A) and (not (B))) or (not (B))) or (not (A))

Question 10: (1) (((B) or (not (A))) or (not (C))) or (not (A))