Logic Gate Quiz

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

Options

(1) ((B) and (C)) and (C)

(2) not (((B) and (C)) or (C))

(3) ((B) or (C)) or (C)

(4) ((B) and (C)) or (C)

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

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

Options

(1) (B) and (B)

(2) not ((B) or (B))

(3) (B) or (B)

(4) not ((B) or (B))

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)) or (A)

(2) ((A) or (A)) and (A)

(3) ((A) and (A)) or (A)

(4) not (((A) or (A)) or (A))

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

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

Options

(1) (((B) and (A)) or (not (B))) and (not (A))

(2) (((B) and (A)) and (not (B))) or (not (A))

(3) (((B) and (A)) and (not (B))) and (not (A))

(4) (((B) and (A)) and ((B))) and ((A))

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

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

Options

(1) ((B) or (not (A))) and (not (C))

(2) ((B) or (not (A))) or (not (C))

(3) ((B) or ((A))) and ((C))

(4) ((B) and (not (A))) and (not (C))

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

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

Options

(1) ((A) and (not (A))) and (C)

(2) ((A) or ((A))) and (C)

(3) ((A) or (not (A))) or (C)

(4) ((A) or (not (A))) and (C)

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

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

Options

(1) (((A) or (A)) and (not (B))) and (B)

(2) (((A) or (A)) or (not (B))) and (B)

(3) (((A) and (A)) or (not (B))) and (B)

(4) (((A) or (A)) or (not (B))) or (B)

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

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

Options

(1) (B) and (not (B))

(2) (B) or (not (B))

(3) (B) and ((B))

(4) (B) and ((B))

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

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

Options

(1) (((B) and (not (A))) and (not (B))) or (not (A))

(2) (((B) or (not (A))) and (not (B))) and (not (A))

(3) (((B) or (not (A))) and (not (B))) or (not (A))

(4) (((B) or (not (A))) or (not (B))) or (not (A))

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

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

Options

(1) (C) and (C)

(2) not ((C) and (C))

(3) not ((C) and (C))

(4) (C) or (C)

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

Question 11: Which expression corresponds to the given truth table?

Options

(1) (((B) or (not (B))) or (not (B))) and (not (B))

(2) (((B) or (not (B))) and (not (B))) and (not (B))

(3) (((B) or ((B))) and ((B))) and ((B))

(4) (((B) and (not (B))) and (not (B))) and (not (B))

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

Question 12: Which expression corresponds to the given truth table?

Options

(1) not ((A) and (A))

(2) (A) or (A)

(3) (A) and (A)

(4) not ((A) and (A))

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

Question 13: Which expression corresponds to the given truth table?

Options

(1) (A) and ((B))

(2) (A) and ((B))

(3) (A) or (not (B))

(4) (A) and (not (B))

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

Question 14: Which expression corresponds to the given truth table?

Options

(1) ((A) or (B)) or (A)

(2) ((A) and (B)) or (A)

(3) ((A) or (B)) and (A)

(4) not (((A) or (B)) or (A))

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

Question 15: Which expression corresponds to the given truth table?

Options

(1) (((A) or (B)) and (not (B))) or (B)

(2) (((A) or (B)) and (not (B))) and (B)

(3) (((A) and (B)) and (not (B))) and (B)

(4) (((A) or (B)) or (not (B))) and (B)

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

Question 16: Which expression corresponds to the given truth table?

Options

(1) (((B) and (not (B))) or (not (A))) or (not (C))

(2) (((B) and (not (B))) and (not (A))) or (not (C))

(3) (((B) or (not (B))) or (not (A))) or (not (C))

(4) (((B) and (not (B))) or (not (A))) and (not (C))

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	0

Question 17: Which expression corresponds to the given truth table?

Options

(1) (((B) or (A)) and (not (B))) or (B)

(2) (((B) and (A)) and (not (B))) or (B)

(3) (((B) or (A)) or (not (B))) or (B)

(4) (((B) or (A)) and (not (B))) and (B)

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

Question 18: Which expression corresponds to the given truth table?

Options

(1) (B) or (A)

(2) not ((B) or (A))

(3) (B) and (A)

(4) not ((B) or (A))

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

Question 19: Which expression corresponds to the given truth table?

Options

(1) (((C) or (not (A))) and (A)) and (not (C))

(2) (((C) and (not (A))) and (A)) or (not (C))

(3) (((C) and (not (A))) and (A)) and (not (C))

(4) (((C) and (not (A))) or (A)) and (not (C))

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

Question 20: Which expression corresponds to the given truth table?

Options

(1) ((A) and (not (C))) and (not (C))

(2) ((A) and (not (C))) or (not (C))

(3) ((A) or (not (C))) and (not (C))

(4) ((A) and ((C))) and ((C))

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	0
1	1	0	1
1	1	1	0

Question 21: Which expression corresponds to the given truth table?

Options

(1) (((B) and (A)) or (A)) or (A)

(2) (((B) or (A)) or (A)) or (A)

(3) (((B) and (A)) and (A)) or (A)

(4) (((B) and (A)) or (A)) and (A)

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

Question 22: Which expression corresponds to the given truth table?

Options

(1) (((A) and (B)) and (not (B))) or (not (A))

(2) (((A) or (B)) and (not (B))) or (not (A))

(3) (((A) or (B)) or (not (B))) or (not (A))

(4) (((A) or (B)) and (not (B))) and (not (A))

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

Question 23: Which expression corresponds to the given truth table?

Options

(1) ((B) or (not (A))) or (A)

(2) ((B) or (not (A))) and (A)

(3) ((B) or ((A))) and (A)

(4) ((B) and (not (A))) and (A)

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

Question 24: Which expression corresponds to the given truth table?

Options

(1) not ((C) or (A))

(2) not ((C) or (A))

(3) (C) or (A)

(4) (C) and (A)

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

Question 25: Which expression corresponds to the given truth table?

Options

(1) ((B) and (not (A))) or (not (A))

(2) ((B) or (not (A))) or (not (A))

(3) ((B) or (not (A))) and (not (A))

(4) ((B) or ((A))) or ((A))

A	B	C	Q
0	0	0	1
0	0	1	1
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 26: Which expression corresponds to the given truth table?

Options

(1) ((A) and (not (B))) and (B)

(2) ((A) or ((B))) and (B)

(3) ((A) or (not (B))) or (B)

(4) ((A) or (not (B))) and (B)

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

Question 27: Which expression corresponds to the given truth table?

Options

(1) (((B) and (not (B))) and (B)) or (not (C))

(2) (((B) or (not (B))) and (B)) and (not (C))

(3) (((B) or (not (B))) or (B)) or (not (C))

(4) (((B) or (not (B))) and (B)) or (not (C))

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

Question 28: Which expression corresponds to the given truth table?

Options

(1) ((A) and (not (A))) and (not (B))

(2) ((A) and ((A))) and ((B))

(3) ((A) or (not (A))) and (not (B))

(4) ((A) and (not (A))) or (not (B))

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

Question 29: Which expression corresponds to the given truth table?

Options

(1) ((A) or (not (C))) or (B)

(2) ((A) and (not (C))) or (B)

(3) ((A) and ((C))) or (B)

(4) ((A) and (not (C))) and (B)

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	0
1	1	0	1
1	1	1	1

Question 30: Which expression corresponds to the given truth table?

Options

(1) (((C) and (not (B))) and (not (B))) and (not (C))

(2) (((C) and ((B))) and ((B))) and ((C))

(3) (((C) and (not (B))) or (not (B))) and (not (C))

(4) (((C) and (not (B))) and (not (B))) or (not (C))

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

Answer Key

Question 1: (4) ((B) and (C)) or (C)

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

Question 3: (1) ((A) or (A)) or (A)

Question 4: (3) (((B) and (A)) and (not (B))) and (not (A))

Question 5: (1) ((B) or (not (A))) and (not (C))

Question 6: (4) ((A) or (not (A))) and (C)

Question 7: (2) (((A) or (A)) or (not (B))) and (B)

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

Question 9: (3) (((B) or (not (A))) and (not (B))) or (not (A))

Question 10: (1) (C) and (C)

Question 11: (2) (((B) or (not (B))) and (not (B))) and (not (B))

Question 12: (3) (A) and (A)

Question 13: (4) (A) and (not (B))

Question 14: (1) ((A) or (B)) or (A)

Question 15: (2) (((A) or (B)) and (not (B))) and (B)

Question 16: (1) (((B) and (not (B))) or (not (A))) or (not (C))

Question 17: (1) (((B) or (A)) and (not (B))) or (B)

Question 18: (1) (B) or (A)

Question 19: (3) (((C) and (not (A))) and (A)) and (not (C))

Question 20: (1) ((A) and (not (C))) and (not (C))

Question 21: (1) (((B) and (A)) or (A)) or (A)

Question 22: (2) (((A) or (B)) and (not (B))) or (not (A))

Question 23: (2) ((B) or (not (A))) and (A)

Question 24: (3) (C) or (A)

Question 25: (2) ((B) or (not (A))) or (not (A))

Question 26: (4) ((A) or (not (B))) and (B)

Question 27: (4) (((B) or (not (B))) and (B)) or (not (C))

Question 28: (1) ((A) and (not (A))) and (not (B))

Question 29: (2) ((A) and (not (C))) or (B)

Question 30: (1) (((C) and (not (B))) and (not (B))) and (not (C))