

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

Truth Table:

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

Option 1: $((E \text{ or } A) \text{ and } (\text{not } B))$

Option 2: $((C \text{ and } (\text{not } E)) \text{ and } D) \text{ and } (\text{not } C)$

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

Option 4: $B \text{ and } B$

Correct Answer: $B \text{ and } B$

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

Truth Table:

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

Option 1: (D) or (C)

Option 2: (B) or (not (A))

Option 3: (((A) or (not (D))) and (C)) or (A)

Option 4: (D) and (not (E))

Correct Answer: (D) or (C)

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

Truth Table:

A	B	C	D	E	F
0	0	0	0	0	0
0	0	0	0	0	1
0	0	0	0	1	0
0	0	0	0	1	1
0	0	0	1	0	0
0	0	0	1	0	1
0	0	0	1	1	0
0	0	0	1	1	1
0	0	1	0	0	0
0	0	1	0	0	1
0	0	1	0	1	0
0	0	1	0	1	1
0	0	1	1	0	0
0	0	1	1	0	1
0	0	1	1	1	0
0	0	1	1	1	1
0	1	0	0	0	0
0	1	0	0	0	1
0	1	0	0	1	0
0	1	0	0	1	1
0	1	0	1	0	0
0	1	0	1	0	1
0	1	0	1	1	0
0	1	0	1	1	1
0	1	1	0	0	0
0	1	1	0	0	1
0	1	1	0	1	0
0	1	1	0	1	1
0	1	1	1	0	0
0	1	1	1	0	1
0	1	1	1	1	0
0	1	1	1	1	1
1	0	0	0	0	0
1	0	0	0	0	1
1	0	0	0	1	0
1	0	0	0	1	1
1	0	0	1	0	0
1	0	0	1	0	1
1	0	0	1	1	0
1	0	0	1	1	1
1	0	1	0	0	0
1	0	1	0	0	1
1	0	1	0	1	0
1	0	1	0	1	1
1	0	1	1	0	0
1	0	1	1	0	1
1	0	1	1	1	0
1	0	1	1	1	1
1	1	0	0	0	0
1	1	0	0	0	1
1	1	0	0	1	0
1	1	0	0	1	1
1	1	0	1	0	0
1	1	0	1	0	1
1	1	0	1	1	0
1	1	0	1	1	1
1	1	1	0	0	0
1	1	1	0	0	1
1	1	1	0	1	0
1	1	1	0	1	1
1	1	1	1	0	0
1	1	1	1	0	1
1	1	1	1	1	0
1	1	1	1	1	1

Option 1: $((A) \text{ and } (C)) \text{ or } (E)$

Option 2: $((E) \text{ and } (C)) \text{ and } (D)$

Option 3: $((C) \text{ and } (B)) \text{ or } (B) \text{ and } (\text{not } (C))$

Option 4: $((A) \text{ or } (\text{not } (D))) \text{ and } (\text{not } (B)) \text{ or } (\text{not } (B))$

Correct Answer: $((A) \text{ or } (\text{not } (D))) \text{ and } (\text{not } (B)) \text{ or } (\text{not } (B))$

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

Truth Table:

A	B	C	D	E	F
0	0	0	0	0	0
0	0	0	0	0	1
0	0	0	0	1	0
0	0	0	0	1	1
0	0	0	1	0	0
0	0	0	1	0	1
0	0	0	1	1	0
0	0	0	1	1	1
0	0	1	0	0	0
0	0	1	0	0	1
0	0	1	0	1	0
0	0	1	0	1	1
0	0	1	1	0	0
0	0	1	1	0	1
0	0	1	1	1	0
0	0	1	1	1	1
0	1	0	0	0	0
0	1	0	0	0	1
0	1	0	0	1	0
0	1	0	0	1	1
0	1	0	1	0	0
0	1	0	1	0	1
0	1	0	1	1	0
0	1	0	1	1	1
0	1	1	0	0	0
0	1	1	0	0	1
0	1	1	0	1	0
0	1	1	0	1	1
0	1	1	1	0	0
0	1	1	1	0	1
0	1	1	1	1	0
0	1	1	1	1	1
1	0	0	0	0	0
1	0	0	0	0	1
1	0	0	0	1	0
1	0	0	0	1	1
1	0	0	1	0	0
1	0	0	1	0	1
1	0	0	1	1	0
1	0	0	1	1	1
1	0	1	0	0	0
1	0	1	0	0	1
1	0	1	0	1	0
1	0	1	0	1	1
1	0	1	1	0	0
1	0	1	1	0	1
1	0	1	1	1	0
1	0	1	1	1	1
1	1	0	0	0	0
1	1	0	0	0	1
1	1	0	0	1	0
1	1	0	0	1	1
1	1	0	1	0	0
1	1	0	1	0	1
1	1	0	1	1	0
1	1	0	1	1	1
1	1	1	0	0	0
1	1	1	0	0	1
1	1	1	0	1	0
1	1	1	0	1	1
1	1	1	1	0	0
1	1	1	1	0	1
1	1	1	1	1	0
1	1	1	1	1	1

Option 1: (((E) or (not (B))) or (B)) and (not (C))

Option 2: (B) or (A)

Option 3: (D) and (D)

Option 4: (C) and (not (C))

Correct Answer: (D) and (D)

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

Truth Table:

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

Option 1: $((B) \text{ and } (\text{not } (D))) \text{ and } (\text{not } (A))$

Option 2: $((((C) \text{ or } (\text{not } (D))) \text{ and } (D)) \text{ or } (B))$

Option 3: $((B) \text{ and } (B)) \text{ or } (\text{not } (E))$

Option 4: $(D) \text{ and } (\text{not } (B))$

Correct Answer: $((((C) \text{ or } (\text{not } (D))) \text{ and } (D)) \text{ or } (B))$

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

Truth Table:

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

Option 1: $((D) \text{ and } (\text{not } (C))) \text{ or } (\text{not } (A))$

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

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

Option 4: $(C) \text{ or } (B)$

Correct Answer: $(C) \text{ or } (B)$

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

Truth Table:

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

Option 1: $((E) \text{ or } (\text{not } (A))) \text{ or } (\text{not } (B))$

Option 2: $(A) \text{ and } (B)$

Option 3: $((E) \text{ or } (A)) \text{ and } (A) \text{ or } (B)$

Option 4: $((C) \text{ or } (C)) \text{ and } (C)$

Correct Answer: $(A) \text{ and } (B)$

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

Truth Table:

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

Option 1: (D) or (A)

Option 2: (E) and (not (A))

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

Option 4: (((E) and (B)) or (not (E))) or (E)

Correct Answer: ((C) or (not (B))) and (C)

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

Truth Table:

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

Option 1: $((\neg C) \wedge (\neg B)) \wedge (\neg D) \vee A$

Option 2: $(A \wedge (\neg A)) \vee B$

Option 3: $(D \vee (\neg C)) \wedge (\neg E)$

Option 4: $(A \vee (\neg B)) \wedge (\neg E)$

Correct Answer: $(A \wedge (\neg A)) \vee B$

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

Truth Table:

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

Option 1: (D) or (not (D))

Option 2: ((A) and (D)) and (not (B))

Option 3: (((C) and (not (B))) and (not (E))) or (not (C))

Option 4: (B) and (C)

Correct Answer: (D) or (not (D))

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

Truth Table:

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

Option 1: (E) and (A)

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

Option 3: ((D) or (B)) or (not (A))

Option 4: (D) or (C)

Correct Answer: ((A) and (not (B))) or (B)

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

Truth Table:

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

Option 1: (E) or (E)

Option 2: ((A) and (not (C))) and (not (D))

Option 3: ((D) and (D)) or (not (B))

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

Correct Answer: (((B) and (not (A))) and (not (C))) or (A)

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

Truth Table:

A	B	C	D	E	F
0	0	0	0	0	0
0	0	0	0	0	1
0	0	0	0	1	0
0	0	0	0	1	1
0	0	0	1	0	0
0	0	0	1	0	1
0	0	0	1	1	0
0	0	0	1	1	1
0	0	1	0	0	0
0	0	1	0	0	1
0	0	1	0	1	0
0	0	1	0	1	1
0	0	1	1	0	0
0	0	1	1	0	1
0	0	1	1	1	0
0	0	1	1	1	1
0	1	0	0	0	0
0	1	0	0	0	1
0	1	0	0	1	0
0	1	0	0	1	1
0	1	0	1	0	0
0	1	0	1	0	1
0	1	0	1	1	0
0	1	0	1	1	1
0	1	1	0	0	0
0	1	1	0	0	1
0	1	1	0	1	0
0	1	1	0	1	1
0	1	1	1	0	0
0	1	1	1	0	1
0	1	1	1	1	0
0	1	1	1	1	1
1	0	0	0	0	0
1	0	0	0	0	1
1	0	0	0	1	0
1	0	0	0	1	1
1	0	0	1	0	0
1	0	0	1	0	1
1	0	0	1	1	0
1	0	0	1	1	1
1	0	1	0	0	0
1	0	1	0	0	1
1	0	1	0	1	0
1	0	1	0	1	1
1	0	1	1	0	0
1	0	1	1	0	1
1	0	1	1	1	0
1	0	1	1	1	1
1	1	0	0	0	0
1	1	0	0	0	1
1	1	0	0	1	0
1	1	0	0	1	1
1	1	0	1	0	0
1	1	0	1	0	1
1	1	0	1	1	0
1	1	0	1	1	1
1	1	1	0	0	0
1	1	1	0	0	1
1	1	1	0	1	0
1	1	1	0	1	1
1	1	1	1	0	0
1	1	1	1	0	1
1	1	1	1	1	0
1	1	1	1	1	1

Option 1: (C) or (not (E))

Option 2: (A) or (not (D))

Option 3: ((E) and (D)) and (A)

Option 4: (C) and (not (B))

Correct Answer: (A) or (not (D))

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

Truth Table:

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

Option 1: (E) or (E)

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

Option 3: (((D) and (A)) or (not (D))) or (C)

Option 4: ((B) and (A)) and (A)

Correct Answer: ((B) and (A)) and (A)

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

Truth Table:

A	B	C	D	E	F
0	0	0	0	0	0
0	0	0	0	0	1
0	0	0	0	1	0
0	0	0	0	1	1
0	0	0	1	0	0
0	0	0	1	0	1
0	0	0	1	1	0
0	0	0	1	1	1
0	0	1	0	0	0
0	0	1	0	0	1
0	0	1	0	1	0
0	0	1	0	1	1
0	0	1	1	0	0
0	0	1	1	0	1
0	0	1	1	1	0
0	0	1	1	1	1
0	1	0	0	0	0
0	1	0	0	0	1
0	1	0	0	1	0
0	1	0	0	1	1
0	1	0	1	0	0
0	1	0	1	0	1
0	1	0	1	1	0
0	1	0	1	1	1
0	1	1	0	0	0
0	1	1	0	0	1
0	1	1	0	1	0
0	1	1	0	1	1
0	1	1	1	0	0
0	1	1	1	0	1
0	1	1	1	1	0
0	1	1	1	1	1
1	0	0	0	0	0
1	0	0	0	0	1
1	0	0	0	1	0
1	0	0	0	1	1
1	0	0	1	0	0
1	0	0	1	0	1
1	0	0	1	1	0
1	0	0	1	1	1
1	0	1	0	0	0
1	0	1	0	0	1
1	0	1	0	1	0
1	0	1	0	1	1
1	0	1	1	0	0
1	0	1	1	0	1
1	0	1	1	1	0
1	0	1	1	1	1
1	1	0	0	0	0
1	1	0	0	0	1
1	1	0	0	1	0
1	1	0	0	1	1
1	1	0	1	0	0
1	1	0	1	0	1
1	1	0	1	1	0
1	1	0	1	1	1
1	1	1	0	0	0
1	1	1	0	0	1
1	1	1	0	1	0
1	1	1	0	1	1
1	1	1	1	0	0
1	1	1	1	0	1
1	1	1	1	1	0
1	1	1	1	1	1

Option 1: $((C \vee B) \vee (\neg D)) \vee B$

Option 2: $((A \wedge \neg B) \vee (\neg A)) \vee D$

Option 3: $((C \vee \neg B) \wedge (\neg A)) \vee (\neg D)$

Option 4: $(C \wedge \neg D) \wedge D$

Correct Answer: $((C \vee \neg B) \wedge (\neg A)) \vee (\neg D)$

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

Truth Table:

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

Option 1: (((D) or (B)) and (B)) and (E)

Option 2: (A) or (C)

Option 3: (((A) and (not (D))) and (not (C))) and (not (D))

Option 4: (D) or (D)

Correct Answer: (A) or (C)

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

Truth Table:

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

Option 1: ((E) or (C)) or (not (D))

Option 2: ((B) or (A)) or (not (B))

Option 3: (E) and (D)

Option 4: (((B) or (not (B))) or (D)) and (not (C))

Correct Answer: (((B) or (not (B))) or (D)) and (not (C))

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

Truth Table:

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

Option 1: $((B) \text{ and } (\text{not } (E))) \text{ and } (D)$

Option 2: $(B) \text{ or } (B)$

Option 3: $((C) \text{ or } (D)) \text{ and } (D)$

Option 4: $((E) \text{ or } (\text{not } (B))) \text{ or } (D) \text{ or } (C)$

Correct Answer: $(B) \text{ or } (B)$

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

Truth Table:

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

Option 1: $((E) \text{ or } (\text{not } (A))) \text{ or } (A)$

Option 2: $((((B) \text{ and } (B)) \text{ and } (\text{not } (E))) \text{ and } (\text{not } (D)))$

Option 3: $((B) \text{ and } (\text{not } (D))) \text{ or } (\text{not } (B))$

Option 4: $((C) \text{ and } (E)) \text{ or } (\text{not } (D))$

Correct Answer: $((B) \text{ and } (\text{not } (D))) \text{ or } (\text{not } (B))$

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

Truth Table:

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

Option 1: (C) or (C)

Option 2: (((D) and (not (D))) and (E)) or (not (B))

Option 3: (((A) or (not (A))) or (B)) or (A)

Option 4: ((B) and (not (D))) or (C)

Correct Answer: (((A) or (not (A))) or (B)) or (A)