

Unit 5 - Week 3 : Unit 3

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Week 3 Assignment 3

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-08-21, 23:59 IST.

1) The switching expression $(A + B) \cdot (A + C) \cdot (A + D)$ is equivalent to

1 point

- $A + B \cdot C \cdot D$
- $A \cdot B + B \cdot C + C \cdot D$
- $A + B \cdot C + C \cdot D + B \cdot D$
- $A \cdot B \cdot C \cdot D$

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

2) The dual of the switching expression $(X + (Y \cdot 0)) + (Z + 1)$ is

1 point

- $(X \cdot (Y + 0)) \cdot (Z \cdot 1)$
- $(X \cdot (Y + 1)) \cdot (Z \cdot 0)$
- $(X + (Y + 0)) \cdot (Z + 1)$
- None of these

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

3) Which of the following switching expressions are false?

1 point

- $(A + B) \cdot C = (A + C) \cdot (B + C)$
- $A + B \cdot C = (A + B) \cdot (A + C)$
- $A + A' \cdot B = A + B$
- $A + A' \cdot B = A + B'$

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

d.

4) The minimized form of the switching expression $F = X' \cdot Y' + X' \cdot Z + Y' \cdot Z + X \cdot Y$ is

1 point

- $F = X' \cdot Y' + X \cdot Y + Z$
- $F = X' \cdot Y' + Y \cdot Z$
- $F = X' \cdot Z + X \cdot Y$
- None of these

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

5) The switching expression $(A \cdot B + A' \cdot B + B \cdot C)'$ in sum-of-products form is

1 point

- $A' \cdot B' + A \cdot B + B' \cdot C$
- B'
- $A' \cdot B' + B' \cdot C'$
- None of these

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

6) Five students A, B, C, D, E volunteer to perform a project, where all the following constraints must be satisfied:

1 point

- Either B or C or both must participate
- Either A or B, but not both, must participate
- Either both A and D participate, or neither participates
- If B participates, then E must also participate

If the variables A, B, C, D and E represent that the corresponding student participate, which of the following logic expression denotes all possible feasible combinations?

- $A' \cdot B \cdot D' \cdot E + A \cdot B' \cdot C \cdot D$
- $A' \cdot B \cdot D + A \cdot B' \cdot C + B \cdot D$
- $A \cdot B' \cdot C \cdot D$
- None of these

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

7) For the 3-input exclusive-OR function of variables A, B and C, the set of all true minterms are

1 point

- $A' \cdot B' \cdot C'$, A.B.C
- $A \cdot B' \cdot C'$, $A' \cdot B \cdot C'$, $A' \cdot B' \cdot C$, A.B.C
- $A \cdot B'$, $A' \cdot B$, B.C', $B' \cdot C$, $A' \cdot C$, A.C'
- None of these

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

8) Which of the following functions are unate?

1 point

- $F = A' \cdot B \cdot C + B \cdot D' + A' \cdot D'$
- $F = A \cdot B \cdot C + A' \cdot B' \cdot C'$
- $F = A \cdot B + B \cdot C + C \cdot A$

- Only (iii)
- Only (i)
- Both (i) and (iii)
- None of these

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

9) What is the smallest number of 2-input NAND gates required to realize the function $F = A \cdot B + C' \cdot D'$, assuming that the variables are only available in uncomplemented forms?

1 point

- 3
- 4
- 5
- 6

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

10) Which of the following are not functionally complete sets?

1 point

- AND, OR, NOT
- NAND, OR
- EXOR, 1
- AND, EXOR, 0

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

d.