Unit 5 - Week 4: Assignment

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

Due on 2018-09-12, 23:59 IST.

1) Which of the following claim is true?  
   4 points

   - a) An open tree cannot have a closed branch.
   - b) If a truth tree is closed then every statement in the tree either has been decomposed or is a literal.
   - c) A completed tree must have all its branches closed.
   - d) The number of branches in a truth tree must be greater than one.

No, the answer is incorrect.
Score: 0

Accepted Answers:
   - b) If a truth tree is closed then every statement in the tree either has been decomposed or is a literal.

2) Which of the following claim is not true?  
   4 points

   - a) A truth tree with at least one completed open branch is an open tree.
   - b) A closed tree cannot have an open branch.
   - c) A finite set of statements is consistent iff the set has an open tree.
   - d) The ∨ D rule does not bifurcate into two branches.

No, the answer is incorrect.
Score: 0

Accepted Answers:
   - d) The ∨ D rule does not bifurcate into two branches.

3) Select the correct option from the given choices: The truth-tree of the following set shows:  
   4 points

   \[(A \cdot B), (A \lor (\sim B \cdot C))\]

   - a) The set is consistent.
The truth tree for the following argument:

\(-Q \cdot -P\)

\((Q \supset -O) \supset -P\)

\(R /: Q \cdot R\)

a) Shows that the argument is valid
b) Shows that the argument is invalid.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b) Shows that the argument is invalid.

5) The truth tree for the following argument:

\(((V \supset X) \cdot V) \supset \sim X\)

a) Shows that it is a tautology.
b) Shows that it is a contradiction.
c) Shows that it is a contingent.

No, the answer is incorrect.
Score: 0
Accepted Answers:
c) Shows that it is a contingent.

6) True or false?

“Both the \(\sim \supset D\) rule and \(\sim \cdot D\) rule bifurcates into two branches.”

a) True
b) False

No, the answer is incorrect.
Score: 0
Accepted Answers:
b) False

7) True or false?

“The decomposition rules can be applied to the main connectives and not the sub-connectives.”

a) True
b) False

No, the answer is incorrect.
Score: 0
Accepted Answers:
a) True

8) The recovery of partial truth values of the literals in a truth tree is possible from:

a) A closed tree
b) An open tree
c) A completed open branch
d) A closed branch

No, the answer is incorrect.
Score: 0
9) If done correctly, the truth tree from the following shows:
\[(P \lor \sim Q), R, (\sim P \lor \sim R)\]

- a) A closed tree
- b) An open tree

No, the answer is incorrect.
Score: 0

10) True or false?
"In case of truth tree, any two given propositions such as p and q are logically equivalent if and only if \[p \equiv q\] is not a tautology."

- a) True
- b) False

No, the answer is incorrect.
Score: 0