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Unit 5 - Week 4:

Course outline

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Week 4:

- Lecture 16: Introduction to Truth Trees
- Lecture 17: Truth Tree Rules and their Application
- Lecture 18: More on Truth-Tree Recovery of Partial Truth - Values
- Lecture 19: Using the Truth Trees
- Lecture 20: More on Truth Trees
- Quiz : Week 4:Assignment
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Week 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 \vee D rule does not bifurcate into two branches.

No, the answer is incorrect.

Score: 0

Accepted Answers:

d) The \vee 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**

$[(A \bullet B), (A \vee (\sim B \bullet C))]$

- a) The set is consistent.

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The truth tree for the following argument:

$$\sim O \bullet \sim P$$

$$(Q \supset \sim O) \equiv \sim P$$

$$R / \therefore Q \bullet R$$

- 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:

4 points

$$((V \supset X) \bullet V) \supset \sim X$$

- 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?

1 point

"Both the $\sim \supset D$ rule and $\sim \bullet D$ rule bifurcates into two branches."

- a) True
- b) False

No, the answer is incorrect.

Score: 0

Accepted Answers:

b) False

7) True or false?

1 point

"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:

1 point

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

No, the answer is incorrect.

Score: 0

Accepted Answers:

c) A completed open branch

9) If done correctly, the truth tree from the following shows:
 $(P \bullet \sim Q), R, (\sim P \vee \sim R)$

1 point

- a) A closed tree
 b) An open tree

No, the answer is incorrect.

Score: 0

Accepted Answers:

a) A closed tree

10) True or false?

1 point

"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

Accepted Answers:

b) False



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