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Unit 6 - Week 5

Course outline

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Lecture 21: Formal Proof of Validity

Lecture 22: Valid Argument Forms:

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Lecture 24: Understanding the Rules

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Week 5:Assignment

The due date for submitting this assignment has passed. **Due on 2018-09-12, 23:59 IST.**
As per our records you have not submitted this assignment.

1) 1 point

'An argument form is an array of symbols with only statement variables and it is not an actual argument.'

- a) True
- b) False

- a)
- b)

No, the answer is incorrect.
Score: 0

Accepted Answers:
a)

2) 1 point

'The formal derivation procedure does not rely on the truth-preserving quality of the valid argument forms.'

- a) True
- b) False

- a)
- b)

No, the answer is incorrect.
Score: 0

Accepted Answers:
b)

3) 1 point

'The Hypothetical Syllogism Rule says if you have $(r \supset s) \bullet (p \supset r)$ and $r \bullet p$ then

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e Dev

- a)
 b)

No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

4)

1 point

Which of the following is correct?

- a) $(p \supset q) \equiv (\sim q \supset \sim p)$ is the rule called Exportation.
 b) Rules of Replacement work only in one direction.
 c) p is a semantic consequence of q iff q is true whenever p is true.
 d) The Rules of Replacement may be applied to the parts of a statement as well as to the statement as a whole.

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

d)

5) Consider the following proof:

1 point

1. $G \vee (H \vee I)$
2. $(H \supset J) \bullet (I \supset K)$
3. $(J \vee K) \supset (G \vee I)$
4. $\sim G / \therefore I$
5. $H \vee I$
6. $J \vee K$
7. $G \vee I$
8. I

Which of the following claims is/are true:

- a) Line number 5 is obtained from line number 2 and 4 by D. D.
 b) Line number 7 is obtained from line number 3 and 6 by M. P.
 c) Line number 6 is obtained from line number 2 and 5 by C. D.
 d) Line number 8 is obtained from line number 7 by Simp.

- a)
 b)
 c)
 d)

No, the answer is incorrect.

Score: 0**Accepted Answers:**b)
c)

6)

1 point

Consider the following argument.

"If it does not rain and the sky is clear, then we can go for either swimming or biking."

If it does not rain then if we go for swimming, then we have to take the van. There

is no rain and the sky is clear. We shall not go for biking. Hence we shall take the

van." [R: rain, C: sky is clear, S: go for swimming, B: go for biking, V: take the van]

The correct translation of the argument is:

1. $(\sim R \bullet C) \supset (S \vee B)$

2. $\sim R \supset (S \supset V)$

3. $\sim R \bullet C$

4. $\sim B / \therefore V$

a) True

b) False

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

a)

7)

1 point

Considering the above argument from question no. 6, which of the following claims is/are false?

a) From $\sim R \supset (S \supset V)$, $(\sim R \bullet S) \supset V$ can be derived by Exportation.b) By Simp. From $(\sim R \bullet C) \supset (S \vee B)$, we can derive $\sim R \bullet C$.

c) Modus Ponens can be applied to line number 1 and 3.

d) From $\sim R \bullet C$, we can derive C by Simp. in the next step. a) b) c) d)**No, the answer is incorrect.****Score: 0****Accepted Answers:**b)
d)

8) True or false? 1 point

“In Addition rule, from p and q as premise 1 and premise 2, we can get $p \bullet q$.”

- a) True
- b) False

- a)
- b)

No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

9) 1 point

From $p \supset q$, we can derive both $\sim p \vee q$ and $\sim q \supset \sim p$ separately by applying the following two rules:

- a) The Material Implication rule and Commutation rule respectively.
- b) The Exportation rule and Transposition rule respectively.
- c) The Transposition rule and Material Equivalence rule respectively.
- d) The Material Implication and Transposition rule respectively.

- a)
- b)
- c)
- d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

d)

10) True or false? 1 point

“The Association rule says that $p \bullet (q \bullet r)$ is equivalent to $(p \bullet q) \vee r$.”

- a) True
- b) False

- a)
- b)

No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

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