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## Unit 3 - Week 2:

### Course outline

How to access Portal?

Week 1:

Week 2:

Lecture 6: History of Symbolic Language

Lecture 7: Propositional Logic: Syntax

Lecture 8: Connectives, Scope of Connectives

Lecture 9: Truth-functional Connectives, Propositional Variables, Propositional Constants

Lecture 10: Symbolization with Connectives

Quiz : Week 2: Assignment

Feedback for Week 1

Week 3:

### Week 2: Assignment

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment. **Due on 2018-09-05, 23:59 IST.**

1) Which of the following statement is correct? **4 points**

- a) Zeno of Elea was the first logician from Asia.
- b) Aristotle's contribution to logic was the thesis of Logicism.
- c) Leibniz noted the similarities between the mathematical operators, e.g. multiplication, and the logical operators, e.g. the conjunction.
- d) After the dark ages, Greek logic was brought back to Europe by George Boole.

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*c) Leibniz noted the similarities between the mathematical operators, e.g. multiplication, and the logical operators, e.g. the conjunction.*

2) Find out the incorrect claim: **4 points**

- a) Simple propositions are structurally simple.
- b) Binary or dyadic connectives can connect two or more than two propositional statements at a time.
- c) 'Delhi is not in Japan' is not a simple proposition.
- d) In propositional logic, a bona-fide syntactically correct proposition is a truth-value bearer.

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*b) Binary or dyadic connectives can connect two or more than two propositional statements at a time.*

3) The statement 'The Navy will take a beating at Jakarta if intelligence is not detailed' is example of: **4 points**

a) Conjunction

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Score: 0

Accepted Answers:

c) *Material conditional.*

4) Given that P is true, Q is false, R is true and S is unknown, the truth-value of  $(Q \bullet R) \supset (P \vee S)$  is true.

4 points

- a) True.
- b) False.
- c) Cannot be determined.
- d) Truth-value is uncertain.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a) *True.*

5) The correct translation for the statement "Chocolate and cookies both will not be served" is:

4 points

- a)  $\sim (C \bullet K)$
- b)  $\sim C \vee \sim K$
- c)  $\sim C \bullet \sim K$
- d)  $\sim C \supset \sim K$

No, the answer is incorrect.

Score: 0

Accepted Answers:

c)  $\sim C \bullet \sim K$ 

6) True or false?

1 point

"In  $p \supset q$ ,  $p$  is a necessary condition."

- a) True
- b) False

No, the answer is incorrect.

Score: 0

Accepted Answers:

b) *False*

7) The correct translation for "Ravi is neither intelligent nor handsome" is  $\sim (I \bullet H)$ . [I: Ravi is intelligent, H: Ravi is handsome].

1 point

True or false?

- a) True
- b) False

No, the answer is incorrect.

Score: 0

Accepted Answers:

b) *False*

8) True or false?

1 point

"A material implication is false if both the antecedent and the consequence are false."

- a) True  
 b) False

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*b) False*

9) Find out the simple proposition of Propositional Logic from the following:

**1 point**

- a) Pranab Mukherjee is not the present President of India.  
 b) The instant increase of the food prices in the country has several reasons.  
 c) The fact that inflation has gone up does not imply that the economy is doing well.  
 d) Sonam is naughty, whereas Mona is shy.

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*b) The instant increase of the food prices in the country has several reasons.*

10) The correct translation for "If Sriram plays but Mukti does not play then Hansha will play if Rita will play" will be  $(S \bullet \sim M) \supset (R \supset H)$ . True or false? **1 point**

- a) True  
 b) False

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*a) True*

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