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## Unit 9 - Week 8

### Course outline

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Lecture 36 : First Order Predicate Logic

Lecture 37 : Quantifiers

Lecture 38 : Scope of a Quantifier

Lecture 39 : Multiple Quantifiers

Lecture 40 : Understanding Overlapping Quantifiers Sharing Predicates and Scope

Quiz : Week 8 Assignment 8

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### Week 8 Assignment 8

The due date for submitting this assignment has passed. **Due on 2018-10-03, 23:59 IST.**  
As per our records you have not submitted this assignment.

1) An individual variable is just a place maker and not a name. 1 point

- a) True  
b) False

- a)  
 b)

No, the answer is incorrect.

Score: 0

Accepted Answers:

a)

2) 1 point

Where [ $Px$ : x is a person,  $Lxy$ : x likes y  $Gx$ : x is great], the correct reading of ' $(\exists x)(\forall y)[Lxz \supset Gz]$ ' is 'If someone is liked by everyone, then that someone is great'

- a) True  
b) False

- a)  
 b)

No, the answer is incorrect.

Score: 0

Accepted Answers:

a)

3) In  $(\forall x) Gx \supset Nx$ , every occurrence of the x is a bound occurrence. 1 point

- (a) True  
(b) False

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b)

4)

1 point

The correct symbolization of “Bonny is both rich and handsome, but he is not intelligent” is:  $(Rs \vee Bs) \bullet \sim Is$ . [Where  $Rx$ :  $x$  is rich,  $Bx$ :  $x$  is handsome,  $Ix$ :  $x$  is intelligent,  $b$ : Bonny].

a) True

b) False

 a) b)

No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

5)

1 point

The correct symbolization of “No milk products are expensive” is:  $\sim(\forall y)(My \supset Ey)$  [Where  $Mx$ :  $x$  is milk product,  $Ex$ :  $x$  is expensive].

a) True

b) False

 a) b)

No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

6)

1 point

Where [U.D.: Living creatures,  $Bx$ :  $x$  is a bee-eater,  $Mx$ :  $x$  is a mammal,  $Tx$ :  $x$  is with tail ]

The correct translation of ‘If any bee-eater is mammal, then if all bee-eaters are creatures with tails, then it too will be with a tail’ is  $(\forall y)[(By \bullet My) \supset (\forall x)(Bx \supset Ty)]$

(a) True

(b) False

 a) b)

No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

7)

1 point

The correct symbolization of “All good students are ambitious, but a few ambitious people are successful” is:  $(\forall x) (Gx \supset Ax) \bullet (\exists x) (Ax \bullet \sim Sx)$ , [Where UD: People, Gx: is a good student, Ax: x is ambitious, Sx: x is successful].

- a) True  
b) False

- a)  
 b)

No, the answer is incorrect.

Score: 0

Accepted Answers:

a)

8)

1 point

Where [Sx: x is a student, Ox: x is overlooked], the correct symbolization of “All and only students are overlooked” is:  $[(\forall y) (Sy \supset Oy)] \supset [(\exists x) (Ox \vee Sx)]$ .

- a) True  
b) False.

- a)  
 b)

No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

9)

1 point

Which of the following claims is/are not true?

- a) Individual constants have a fixed constant reference tied up to some particular thing within the domain.  
b) The correct translation of the statement “Socrates is a philosopher” will be, ‘Sp’ [where s: Socrates, Px: x is a philosopher].  
c) The lower case alphabets from ‘a’ to ‘z’ are used to refer to individual constants.  
d) The individual variables do not have any fixed reference.

- a)  
 b)  
 c)  
 d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

c)

10)

1 point

True or false?

The correct symbolization of the statement “If anything is found, some owner will be informed” is: ‘ $(\forall y) [Fx \supset (Oy \supset Iy)]$ ’. [Where Fx: x is found; Ox: x is owner; Ix: x will be informed.]

a) True

b) False

a)

b)

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*b)*

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