

**START OF QUIZ**

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## Question 1

Topic: Lecture 4

Source: Lecture 4

Some verbs in English can take either one or two objects (such as "see" - I see a bird vs. I see a bird with binoculars). Explain, in terms of lambda calculus, why we would need separate predicates for these different uses of "see". (2)

## Question 2

Topic: Lecture 1

Source: Lecture 1

Define the LCS. Why is it important for calculating word similarity? (2)

### Question 3

Topic: Lecture 4

Source: Lecture 4

How would you describe the following sentence in FOL (you don't need to write the FOL statement - just describe how it would be structured)? After climbing a great hill, one only finds that there are many more hills to climb.

## Question 4

Topic: Lecture 3

Source: Lecture 3

Prove that  $A \leftrightarrow B \iff A \rightarrow B \ \& \ B \rightarrow A$  (1)

## Question 5

Topic: Lecture 2

Source: Lecture 2

How might translation affect WSD? (1)

## Question 6

Topic: Lecture 1

Source: Lecture 1

What is the relationship between a tree and its roots?

## Question 7

Topic: Lecture 3

Source: Lecture 3

Describe the effect that negation has on other logical operators - specifically, conjunction, disjunction, existence, and universality. You don't need to write this in FOL - a couple of sentences are fine. (2)



## Question 8

Topic: Lecture 2

Source: Lecture 2

What is the purpose of a dictionary gloss? (1)

## Question 9

Topic: Long

Source: Lecture 2

Neural models are often seen as a black box, where all we can observe is the output. That said, there is a lot of information available in the output of a neural model. Briefly describe how you might be able to use tools like LIWC (or GI) to build an AI-detector. Please list any assumptions about available data and experiments you would have to run. (3)

**END OF QUIZ**