

**START OF QUIZ**  
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## Question 1

Topic: Lecture 2

Source: Lecture 2

In class, I mentioned that we rarely do WSD explicitly, because we would need one model / word. In COLX 521, we saw that we could lemmatize words to reduce them to a common form. Why couldn't we do something similar (like reducing all synonyms to a common hypernym) for WSD? (2)

## Question 2

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)? Before running, you must learn to walk.

### Question 3

Topic: Lecture 2

Source: Lecture 2

How might translation affect WSD? (1)

## Question 4

Topic: Lecture 3

Source: Lecture 3

What is the Modus Ponens conclusion available from the following statements (if Modus Ponens does not apply, state so) Explain. Examples: A: Only humans attend University. B: Bill attends University; C: ?; A: All red cars are fast. B: Alice's car is blue. C: ?; A: Cheese is made from milk B: Mice like cheese. C: ?; A: Rain is necessary for plants to grow. B: It has not been raining. C: ? (1)

## Question 5

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 6

Topic: Lecture 1

Source: Lecture 1

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

## Question 7

Topic: Lecture 1

Source: Lecture 1

What is the relationship between a banana and a fruit?



## Question 8

Topic: Lecture 3

Source: Lecture 3

Given that A is True, B is False, and C is True, list 3 complex statements that are true, and 2 that are false.

(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**