

**START OF QUIZ**

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I agree that all answers provided are in my own words, and that I will not discuss the contents of this quiz with any of my fellow students until after the exam period has completed for everyone. Furthermore, any response that used generative AI tools has been rephrased into my own interpretation, and has been appropriately cited.

Signature: \_\_\_\_\_

## Question 1

Topic: Lecture 4

Source: Lecture 4

Briefly describe “fence-posting”, and why it’s useful for parsing evaluation. (1)

## Question 2

Topic: Lecture 3

Source: Lecture 3

Explain how phrasal attachment errors produce ambiguity. Provide an example other than what we discussed in class. (1)

### Question 3

Topic: Lecture 2

Source: Lecture 2

If you had a cascaded pipeline of constituency and dependency parsers, which would you run first? What are the risks of getting it backwards? (1)

## Question 4

Topic: Lecture 2

Source: Lecture 2

In dependency parsing, why might modifiers (like adjectives or adverbs) be easier to detect than obliques, and how does this relate to the chunking exercises we did in the lab? (1)

## Question 5

Topic: Lecture 3

Source: Lecture 3

Explain why the following rule: “with  $\rightarrow$  IN” is not valid in a CFG. (1)

## Question 6

Topic: Lecture 1

Source: Lecture 5

Imagine that two linguists are creating a treebank, but even though they have a clear annotation schema, they disagree on annotations about 10 percent of the time. How could you mitigate the effects of this disagreement on your downstream parser? (2)

## Question 7

Topic: Lecture 1

Source: Lecture 5

You are building a parser for a language with much freer word order than English. What assumptions do you need to weaken before building the parser. Do you think it will have much of an impact on the quality of the parser? (2)

## Question 8

Topic: Lecture 4

Source: Lecture 4

Given the following parse trees, calculate the PARSEVAL score. GOLD: (S (NP (DT The) (NNS tourists)) (VP (VBD photographed) (NP (DT the) (NN mountain) (PP (IN with) (NP (NN snow))))))) SYSTEM: (S (NP (DT The) (NNS tourists)) (VP (VBD photographed) (NP (DT the) (NN mountain)) (PP (IN with) (NP (NN snow)))))) Also briefly describe whether any errors are "syntacto-semantic" errors (ie, an error that requires real-world knowledge to arrive at the correct parse). (2)

## Question 9

Topic: Long

Source: Lecture 1

You have a generative AI model that produces English text. How might you use a constituency parser to evaluate the quality of the text, and why would that be insufficient? Give an example of one error that could be detected by the parser, and one that couldn't.  
(3)

# END OF QUIZ