

**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 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 2

Topic: Lecture 4

Source: Lecture 4

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

### Question 3

Topic: Lecture 1

Source: Lecture 5

Up to this point, we've largely ignored function words, but they are extremely influential in parsing. Give 2 reasons why. (1)

## Question 4

Topic: Lecture 3

Source: Lecture 3

CFGs do not explicitly allow for optionality. How do we handle optionality in a CFG? (1)

## Question 5

Topic: Lecture 2

Source: Lecture 2

What properties of English syntax make regular expressions suitable for chunking? Do you think that this functionality would extend to many other languages? Briefly explain. (1)

## Question 6

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 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 3

Source: Lecture 3

Clitics are a special type of syntactic headache. Unlike affixes, which attach at the word level, clitics can attach at the phrase level. For example: “The man who saw the bird’s camera was not quick enough.” or “Those of us who lived through the ’90s’ve experienced a world without the internet.” Explain why phrase-level clitic attachment is problematic for a CFG, and discuss how (if at all) a CFG could be adapted to model this behavior. (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