

**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

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 2

Topic: Lecture 4

Source: Lecture 4

What does it mean for two feature structures to be incompatible, and what happens during parsing when this occurs? (1)

### Question 3

Topic: Lecture 3

Source: Lecture 3

Why can a CFG production only have a single non-terminal on the LHS? Answer both why it must be singular, and why it must be a non-terminal. (1)

## Question 4

Topic: Lecture 1

Source: Lecture 5

Write the parenthetich parse of the following sentence: “You’re going to need a bigger boat!”(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 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 7

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 8

Topic: Lecture 4

Source: Lecture 4

Given the following parse trees, calculate the PARSEVAL score. GOLD: (S (NP (DT The) (NN professor)) (VP (VBD discussed) (NP (DT the) (NN student) (PP (IN of) (NP (DT the) (NN colleague) (PP (IN from) (NP (NN France))))))))

SYSTEM: (S (NP (DT The) (NN professor)) (VP (VBD discussed) (NP (DT the) (NN student) (PP (IN of) (NP (DT the) (NN colleague)))) (PP (IN from) (NP (NN France)))))))

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 2

When learning a language (whether an L1 or L2), speakers often make grammatical mistakes, but are still understandable by other speakers. What do you think this says about the role of syntax in language, and how do you think it could help us create more robust language recognition systems? (3)

# END OF QUIZ