

**START OF QUIZ**  
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## Question 1

Topic: Lecture 4

Source: Lecture 4

We didn't talk about it in class, but how do you think a parenthetical clause (where an explanatory or tangential clause is inserted into another) might be accounted for in a CFG or feature grammar? You can assume that it works similarly for all different types of phrases.  
(1)

## Question 2

Topic: Lecture 3

Source: Lecture 3

Explain why the following rule is not valid in a CFG:  $\text{dog VB} \rightarrow \text{dog barks}$  (1)

### Question 3

Topic: Lecture 1

Source: Lecture 1

Write the parenthetical parse of the following sentence: "Yertle the Turtle is king of the pond."

(1)

## Question 4

Topic: Lecture 4

Source: Lecture 4

Briefly describe how underspecification works in a feature grammar. (1)

## Question 5

Topic: Lecture 3

Source: Lecture 3

In class, we discussed how CFGs do not explicitly allow for optionality in the grammar. How can we adapt our grammars to allow for optional elements? (1)

## Question 6

Topic: Lecture 2

Source: Lecture 2

Imagine you're working on analysing customer feedback, and your boss wants you to identify the most common complaints. How might you use your parsing knowledge to automate and distill the most common complaints? You can assume that complaints have already been labeled with the product they are complaining about. You can also assume that just sorting the frequency of tokens is going to be insufficient. (2)

## Question 7

Topic: Lecture 1

Source: Lecture 1

Imagine someone develops a new parser that has 100



## Question 8

Topic: Lecture 2

Source: Lecture 2

Do you think that we could do dependency parsing and a constituency-based task (such as chunking) at the same time? What features of the tasks might support each other (additive qualities), and which might make such a task more difficult (adversarial qualities)? (2)

## Question 9

Topic: Long

Source: Lecture 4

Imagine you're building a tool to help second language learners of language X. You have a grammar of their first language (L1), and a grammar of the language they are trying to learn (X). How might you build a tool that learns how to translate a production from L1 into X? Describe any additional data or tools you might need, and the process you would use to learn a “production-translation grammar”. Also explain how you could use this to create illustrative examples of how the syntax of language X works.

**END OF QUIZ**