START OF QUIZ
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Academic honesty is essential to the continued functioning of the University of British Columbia as an institution of higher learning and research. All UBC students are expected to behave as honest and responsible members of an academic community. Failure to follow the appropriate policies, principles, rules, and guidelines of the University with respect to academic honesty may result in disciplinary action.

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 3
Source: Lecture 3

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

Question 2

Topic: Lecture 1
Source: Lecture 5

Write the parenthetic parse of the following sentence: "Have fun storming the castle!" (1)

Question 3

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 4

Topic: Lecture 1
Source: Lecture 5

Some languages (such as Mandarin, Japanese, and Yoruba) do not separate adjectives and verbs as clearly as English. Why might this pose a challenge for designing a POS tagset, especially given assumptions we've discussed in class? (1)

Question 5

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 6

Given the following parse trees, calulate 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 7

Imagine you've been assigned the task of converting instructions in a recipe into a list of easy-to-accomplish goals for a cooking robot. How could you use a parser to aid your conversion? (2)

Question 8

Post-positive adjectives are adjectives that occur after the noun phrase they are modifying (such as "attorney/surgeon general", "somewhere nice", "nothing important"). Given that they tend to occur in set phrases, do you think it would be better to write a general class of PostAdj, and create PostAdj phrases in a CFG, or just list them as valid NPs (ie, NP = surgeon general)? Discuss the pros and cons of either decision. (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