START OF QUIZ
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Question 1

Topic: Lecture 5
Source: Lecture 5

Describe why CNF is necessary for the CYK algorithm. (1)

Question 2

Topic: Lecture 8
Source: Lecture 8

Describe what we mean by a cascaded learning model, and one advantage and disadvantage to using one. (1)

Question 3

Topic: Lecture 6
Source: Lecture 6

Briefly describe the role of the scanner, predictor, and completer in the Earley Parser. (1)

Question 4

Topic: Lecture 7
Source: Lecture 7

Briefly describe how dependency parsing differs from constituency parsing. (1)

Question 5

Does Chu-Liu-Edwards algorithm collapse all cycles in a graph? Explain. (1)

Question 6

Topic: Lecture 5
Source: Lecture 5

Do you think we could modify CYK with a feature grammar? What benefits would it provide, and what difficulties would it present? (2)

Question 7

In class, we saw that LLMs can struggle with long-term dependencies, why do you think that is, given what you know about language models and dependency parsing. (2)

Question 8

Topic: Lecture 6
Source: Lecture 6

Imagine that we want to take the best of both worlds of the CYK parser and the Earley parser. To take advantage of parallel processing, we create a "meet-in-the-middle" parser that simultaneously starts parsing from the top and the bottom. Describe at least 2 difficulties with this approach. (2)

Question 9

Topic: Long
Source: Lecture 6

Often, modern NLP tools work not with words, but with subword units. What modifications would we need to make to the Earley parser in order to work with subword units (for example: "agreement" might get split into "agree" and "-ment"). Where would they need to occur in the parser, and how do you think it might benefit and harm the algorithm? (3)

END OF QUIZ