

**START OF QUIZ**

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## Question 1

Topic: Lecture 7

Source: Lecture 7

What is a projective sentence? Why does this matter for the shift-reduce algorithm? (1)

## Question 2

Topic: Lecture 8

Source: Lecture 8

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

### Question 3

Topic: Lecture 6

Source: Lecture 6

Describe the difference between top-down and bottom-up parsing (1)

## Question 4

Topic: Lecture 8

Source: Lecture 8

When training an ML SR parser, why do you think we need to include both the state of the stack, and the state of the buffer? (1)

## Question 5

Topic: Lecture 6

Source: Lecture 6

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

Topic: Lecture 7

Source: Lecture 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 5

Source: Lecture 5

Let's say we wanted to modify PARSEVAL to take ambiguity into account. How might we use a PCFG and two gold references to account for ambiguous parsing? (2)

## Question 9

Topic: Long

Source: Lecture 5

In class, all of our parsing examples contained a single clause, so were relatively easy to parse. Consider the sentence: "Xihan finished her work early, so she decided to go for a walk in the park.". This sentence has 2 clauses (one dependent, and one independent). Draw out the chart for the dependent clause (you can start with "she"). You can provide any reasonable grammar (the only POS you might need that we haven't talked about in class is "TO" for non-finite verb markers like "to"), although the clause must be produced from an "S" rule. Secondly, describe how you would represent multiple S clauses in a grammar, and why the parser wouldn't stop when it successfully parses one of them. (3)

**END OF QUIZ**