

**START OF QUIZ**

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## Question 1

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 2

Topic: Lecture 5

Source: Lecture 5

Why do we only care about the "upper triangle"? (1)

### Question 3

Topic: Lecture 6

Source: Lecture 6

In class, we mentioned that the Earley and CYK parsers are both cubic complexity, but that in practice, the Earley Parser is typically faster. Why do you think that is? (1)

## Question 4

Topic: Lecture 8

Source: Lecture 8

What information do you think the word tokens on the stack/buffer are providing to the ML SR parser? (1)

## Question 5

Topic: Lecture 6

Source: Lecture 6

Describe the purpose of the dot. (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

A deque is a data structure that mimics the operations of both a stack and a queue (ie, items can be added or removed to either end - check your 512 notes!). Do you think this data structure would be sufficient to replace the stack and buffer from SR parsing? Justify your answer. (2)



## Question 8

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 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**