START OF QUIZ
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Question 1

Topic: Lecture 6
Source: Lecture 6

Describe the purpose of the dot. (1)

Question 2

Topic: Lecture 7
Source: Lecture 7

Why do we use a combination of a stack and a queue in SR parsing? (1)

Question 3

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 4

Topic: Lecture 5
Source: Lecture 5

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

Question 5

Topic: Lecture 5
Source: Lecture 5

What is fenceposting? Give two reasons we need it in the CYK algorithm. (1)

Question 6

Topic: Lecture 8
Source: Lecture 8

Imagine that we have a dependency parser that has a very good UAS (90+), but a very bad LAS (50-). Do you think that we could use the output of this parser as input to a neural translation model as is, or do you think that we should first re-train the labeling part of the algorithm to increase LAS? Doing both is probably the best solution, but I'm asking if you think that we could use the output of the existing model, even as we try to improve the quality of the labels. Explain. (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 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 7

We often think of NLP as a pipeline - first we POS-tag, then we dependency parse, then we ... Imagine a situation where we have a cyclical learning process - first we solve one task, which informs a second, which then informs the next iteration of the first, etc. Let's consider POS-tagging and Dependency parsing as our two tasks. Describe if you think this could be a reasonable approach to iterative ML, and some of the benefits and disadvantages of such a process. Be specific! Now, consider adding constituency parsing into the loop. Where might be the most appropriate location to include it? Provide a justification. (3)

END OF QUIZ