START OF QUIZ
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Question 1

Topic: Lecture 7
Source: Lecture 7

Briefly describe how the stack changes for a ARC-RIGHT operation. (1)

Question 2

Topic: Lecture 7
Source: Lecture 7

What is a projective sentence? Why does this matter for the shift-reduce algorithm? (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 5
Source: Lecture 5

Imagine we extended our algorithm to allow for ternary branching (ie, 3 NTs on the RHS). What impact would that have on the complexity of the CYK algorithm? (1)

Question 5

Topic: Lecture 8
Source: Lecture 8

Why do we evaluate UAS and LAS separately? (1)

Question 6

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 7

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 8

Topic: Lecture 8
Source: Lecture 8

In class, we mentioned that graph-based parsing can handle non-projective parses, but it has cubic time complexity. How would you go about improving the complexity to (mostly) linear time, while still being able to handle non-projective parses? Describe why this solution works. Hint: we talked about a simple solution in class. (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