START OF QUIZ
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Question 1

Topic: Lecture 7
Source: Lecture 7

Briefly describe how the stack changes for a SHIFT 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 5
Source: Lecture 5

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

Question 4

Topic: Lecture 6
Source: Lecture 6

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

Question 5

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 6

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 7

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 8

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 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