

**START OF QUIZ**

**Student ID:**

**58115197,Zhang,Miaolin**

## Question 1

Topic: Lecture 7

Source: Lecture 7

Briefly describe how the stack changes for a SHIFT operation. (1)

## Question 2

Topic: Lecture 6

Source: Lecture 6

Describe the purpose of the dot. (1)

### Question 3

Topic: Lecture 7

Source: Lecture 7

Why do we use a combination of a stack and a queue in SR parsing? (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 difference between top-down and bottom-up parsing (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 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 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 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**