# Final Exam

Back to Week 12

**25/25** points earned (100%)

Quiz passed!

Text

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1 / 1 points

1.
Sentence A: "I did not see Shaun White win the gold medal in the 2010 Winter Olympics"

Sentence B: "Shaun White won the gold medal in the 2010 Winter Olympics"

1 / 1

points

2.
How would you represent the sentence "Exactly one student passed the test" in First Order Logic (FOL)?

1 / 1
points

3.
IBM models 1, 2, and 3 for machine translation are about the following (in any order).

1 / 1
points

4.
What is the "measure" of the word "natural" as needed to stem it by the Porter stemmer?

1 / 1
points

5.
"Mildly context-sensitive grammars" like Tree Adjoining Grammars (TAG) and Combinatory Categorial Grammars (CCG) are used in NLP for several reasons. Which of the statements below is *false*?

1 / 1
points

6.

Consider the two nouns "eagle" and "goose" (in their most frequent senses). What word is likely to be their Lowest Common Subsumer (LCS) in WordNet?

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1 / 1 points

7.

Which of the following part of speech categories is open class?

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1 / 1 points

8.

Consider the following bilingual (French-English) corpus.

pomme verte

green apple

une pomme

an apple

Considering only the following two alignment types:

| | and X

that is, {1,2} and {2,1}.

After the EM algorithm converges, what will be the probability P(verte|apple)?

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1 / 1 points

9.

The Lappin and Leass co-reference resolution algorithm uses multiple features. What is the relative importance of these four features?

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1 / 1 points

10.

What does this logical expression mean in English:

∃e: Arriving(e) ∧ Arriver(e, Speaker) ∧ Destination(e, NewYork) ∧ IntervalOf(e,i) ∧ EndPoint(i,p) ∧ Precedes(p, Now)

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1 / 1 points

11.

Adverbs are used to specify all of the following *except*

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1 / 1 points

12.

One problem with the basic top-down parser is the following.

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1 / 1 points

13.

The CKY (Cocke-Kasami-Younger) parsing algorithm only works when...

1 / 1 points

14.
What is the worst-case complexity of the CKY (Cocke-Kasami-Younger) parsing algorithm for finding (a) a single parse, if one exists, (b) all parses?

1 / 1 points

15.
What are the three types of entries that the Earley parser stores in the chart?

1 / 1 points

16.
Which of the following is *not* an evaluation metric used for constituent parsing?

1 / 1 points

17.
Which of the following features is most strongly correlated with low PP (prepositional phrase) attachment?

1 / 1

points

18.
Consider the following two sequences of parts of speech (each sequence corresponds to a sentence).

DT JJ NN PRP VBP TO VB DT NN IN VB IN DT NNS

DT NN IN DT NN NN RB VBZ PRP VB RP NNS

What is the maximum likelihood estimate (MLE) for the probability of the bigram "NN IN"?

1 / 1 points

19.
Which of the following 5 statements about dependency parsing and projectivity is correct?

1 / 1 points



20.
In the class, we mentioned a number of applicat s of language models.
Which of the following was *not* mentioned as a possible application.

1 / 1 points

21.
In Word Sense Disambiguation, what does the "One sense per collocation" refer to?

1 / 1 points

22.
In the absence of any other relevant information, how should an out of vocabulary (OOV) word be tagged?

1 / 1 points

23.
Which of the following methods is used for part of speech tagging?

1 / 1 points

24.
The definition of a Hidden Markov Model (HMM) includes all of these parts, *except*...

1 / 1 points

25.
Acronyms can be highly ambiguous and very confusing in NLP.

In this course, NLP stands for...

1. Sentence A presupposes but doesn't entail Sentence B.
2. ∃ x: student(x) ∧ passed (x, test) ∧ [∀y: (student (y) ∧ passed(y, test)) ==> x=y]
3. lexical translation, position-based alignment, fertility
4. 3
5. They are both equivalent to Tree Substitution Grammars (TSG).
6. bird
7. adjectives
8. 0
9. recency > subject > direct object > indirect object
10. I arrived in New York
11. agent
12. It explores options that don't match the words in the input sentence.
13. the grammar has been converted to Chomsky Normal form.
14. (a) cubic, (b) exponential
15. scan, predict, complete
16. BLEU score
17. of
18. 0.4
19. MST Parser is non-projective, Malt Parser is projective.
20. semantic role labeling
21. The correct sense of an ambiguous word (A) is consistent across sentences, as long as the same word (B) appears nearby.
22. noun
23. Transformation based learning.
24. Start symbol