

**START OF QUIZ**

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## Question 1

Topic: Lecture 2

Source: Lecture 2

If a language has a highly synthetic morphology (many affixes), would you expect it to have a higher or lower Type-Token Ratio (TTR) than a language with less rich morphological structure? Briefly explain why. (1)

## Question 2

Topic: Lecture 2

Source: Lecture 2

Why is it important to understand the intended audience and time period of a corpus when conducting linguistic analysis? (1)

### Question 3

Topic: Lecture 3

Source: Lecture 3

What is the Big O time complexity of finding the elements in a set that intersect with an iterable (ie, string, list, etc)? Briefly explain. (1)

## Question 4

Topic: Lecture 4

Source: Lecture 4

Given a list of tuples where the first element is a string and the second is an integer, write a short piece of code to sort the list in descending order based on the second element. Briefly explain your approach. (1)

## Question 5

Topic: Lecture 3

Source: Lecture 3

When we nest deep structures in dictionaries, we lose their  $O(1)$  benefits. Can you think of a better way to represent complex data sets? (1)

## Question 6

Topic: Lecture 4

Source: Lecture 4

In French, negation is often indicated by "ne ... pas" (ie, "je ne parle pas" - "I am not speaking"; "tu ne conduis pas" - "You are not driving", etc.). However, in speech, one of the two is often dropped: "je ne parle." or "tu conduis pas.". Using this information, how would you determine whether a corpus was composed of written or spoken French? You don't need to write the code, but explain the logic that you would use to come to this conclusion. (2)

## Question 7

Topic: Lecture 1

Source: Lecture 1

Write a function that capitalizes the first letter of each word in a string, without using the `.title()` method or any external libraries. What are some assumptions that you are making? (2)



## Question 8

Topic: Lecture 1

Source: Lecture 1

You are given a sentence. Write a function to count how many words in the sentence start with a vowel, without using loops or list comprehensions. (2)

## Question 9

Topic: Long

Source: Lecture 1

Write a function that validates if a string matches a phone number format, such as (123) 456-7890. What types of invalid inputs should the function check for? Are there edge cases we would be willing to accept? How would we handle those? Write 3 test cases - 2 that should pass, and one that should fail. (3)

**END OF QUIZ**