

**START OF QUIZ**  
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## Question 1

Topic: Lecture 5

Source: Lecture 5

ChatGPT differs significantly from even other neural Q/A systems. Provide at least 2 significant differences, and briefly describe them. (2)

## Question 2

Topic: Lecture 6

Source: Lecture 6

Provide a reasonable logical representation of the question “Who starred in Casablanca?” (1)

### Question 3

Topic: Lecture 8

Source: Lecture 8

Imagine that we have a dialogue system trained with reinforcement learning. What part of a dialogue might result in a negative reward (ie, a penalty) to the system's policy algorithm?  
(2)

## Question 4

Topic: Lecture 7

Source: Lecture 7

How might we make Eliza more robust (don't just say that you would have her use Chat-GPT's API). (1)

## Question 5

Topic: Lecture 6

Source: Lecture 6

Explain the purpose of mean reciprocal rank, and how it works. (1)

## Question 6

Topic: Lecture 5

Source: Lecture 5

Describe the two ways that we can construct Q/A databases, and how they differ. (2)

## Question 7

Topic: Lecture 7

Source: Lecture 7

We discussed slot error rate in class, but it's fully-supervised. Can you think of a distantly-supervised way to calculate essentially the same thing? (1)



## Question 8

Topic: Lecture 8

Source: Lecture 8

Do you think a dialogue policy state graph is a Markov Chain? Briefly describe why or why not. (If you can't remember Markov chains, we talked about them in DSCI 572). (1)

## Question 9

Topic: Long

Source: Lecture 8

As more data and computing power are becoming available, chatbots are becoming more generalists, able to answer questions in a large variety of topics. That said, specialized dialogue bots can often be very good at their jobs (such as Watson being much better at Jeopardy than ChatGPT). Can you think of a way that we might be able to leverage the strengths of each system to improve the other? Write out pseudocode for where you might inject dialogue bots into ChatGPT, and simultaneously use ChatGPT to improve the dialogue systems. This is a huge, theoretical problem, and I'm not looking for you to solve it - I'm just interested in your thought process about where the models might be able to build off each other. (3)

**END OF QUIZ**