Instructions 1

Please provide the best answer. You can use NetLogo while answering this exam.

Question 2

What are the two terms that W. Brian Arthur used to describe the way agents are modeled as making decisions in the El Farol Bar P

- A. inductive reasoning, bounded rationality

- B. deductive reasoning, bounded rationality

- C. inductive reasoning, perfectly rational

- D. heuristics, bag of strategies

Question 3

Visualization is important for agent-based modeling because...

- A. visualization is better than statistics.

- B. visualization can more easily represent some complex concepts that might be difficult for people to understand from a table of numbers.

- C. it is one of the major differences between ABM and other modeling methods.

- D. the only ABMs that work are those with good visuals.

Question 4

NetLogo like many languages, uses numbers to correspond to colors. What is the NetLogo number for the base color of red?

- A. 5

- B. 15

- C. 10.1

- D. 19.9

Question 5

Why is it sometimes useful to look at the median and the mean of an agent property distribution?

- A. They provide completely different insights into the model.

- B. They can tell you exactly what kind of distribution you have.

- C. The mean is rarely descriptive of the overall agent population.

- D. The mean and the median are the same for a perfectly normal distribution. Looking at both gives you a better sense of the overall distribution.

Question 6

Given the way that the NetLogo version of the El Farol Bar Problem represents strategies, which of these strategies could not exist in
NetLogo version?

- A. the attendance for this week will be twice last week's attendance

- B. the attendance for this week will be the same as the average attendance at the first three weeks of the beginning of the model run throughout the model r

- C. the attendance for this week will be the same as the attendance two weeks ago

- D. the attendance for this week will be an average of the last five week's attendance

Question 7

How was machine learning used in the combined GA + El Farol Bar Problem model discussed in Unit 3.5?

- A. the GA was used to optimize the overall parameters of the model
- B. the GA optimized the strategy that each agent used to decide whether to attend the bar
- C. the GA controlled the entire model
- D. the GA mixed the drinks at the bar

Question 8

In the extensions that we added to the El Farol Bar Problem, where did we add the code to plot the data?

- A. code tab
- B. info tab
- C. interface tab
- D. bar tab

Question 9

What would happen if all agents made decisions about attending the bar in exactly the same way?

- A. the attendance at the bar would average 60
- B. everyone would either go to the bar or not go to the bar
- C. the attendance at the bar would be 57
- D. this is what the current NetLogo model does

Question 10

How is the El Farol Bar Problem related to the Minority Game?

- A. it isn't
- B. they were created by the same people
- C. they are both perfect representations of a real stock market
- D. In the minority game you get rewarded for being in the minority similar to the way that when less than 60 people attend the bar you get rewarded

Question 11

What was the command that we used to color the turtles based on reward?

- A. scale-color
- B. color
- C. plot
- D. color-swatches