

## Chapter 11 - Study Guide

1. Define \_\_\_\_\_ within the context of Artificial Intelligence.
  - a. Agent
  - b. Procedural knowledge
  - c. Declarative knowledge
  - d. The Turing Test
2. How do the requirements of a video/vision system on a robot differ if the robot itself uses them to control its activities rather than relaying them to a human who controls the robot remotely?
3. Explain the difference between supervised and unsupervised learning in artificial intelligence. Make sure to compare these concepts to human learning in your explanation.
4. Suppose you wanted to train a neural network to do \_\_\_\_\_ (eg. Decide who gets a mortgage, facial recognition of employees, determine whether you should buy/sell/hold a particular stock]. Use the concepts from the chapter to describe the process(es) you might use to create the network?
5. Suppose you have been given a neural network to do \_\_\_\_\_. How could you verify that it is "trustworthy?"
6. Consider the game of [Mario Brothers|Fortnight|Candy Crush]. What information would you want to use to train an AI to play this game? What heuristic could you use to determine which of two agents is better [or which of two situations is better]?
7. When you are texting on your phone the program suggests three word choices for possible next words in your sentence [auto-complete]. How would you build such a system? What would you do to test the system? [To get credit for this question you should make sure your answer contains concepts/vocabulary from the chapter]