

SCIE300 Reading Assignment 6 (RA6)

90 points

Question 1 (10 points)

In section 1, Turing describes an “imitation game,” which these days is called the *Turing test*. Turing actually describes two versions of his imitation game. The first version involves three humans. In this first version of the imitation game: (a) Who are the players? (b) What are the rules for winning the game? (c) Who do you think will win on average?

Question 2 (5 points)

The second version of the imitation game involves two humans and a computer. (Note that Turing often uses the word “machine” where we would use “computer.”) This second version is what we commonly refer to as the Turing test today. What are the rules for winning the second version?

Question 3 (20 points)

In section 6, Turing rebuts nine possible objections to his belief that a computer program could, in principle, win the imitation game. The objections are numbered (1)-(9). From these nine objections, choose the one objection that you find *most* compelling. (a) Explain why you believe your chosen objection may be plausible. (b) Which part of Turing’s rebuttal to your chosen objection do you believe may be incorrect?

Question 4 (10 points)

In a few sentences, explain why the chapter by Margaret Boden is entitled “Of Humans And Hoverflies.”

Question 5 (15 points)

Consider one of the claims examined by Boden, which we could paraphrase in the following way:

Neuroprotein is a substance that can support intelligence, whereas metal and silicon cannot

Does Boden agree or disagree with this claim? In a few sentences of your own words, summarize her argument.

Question 6 (10 points)

Consider John Searle’s so-called *Chinese room* argument, which Searle employs to demonstrate his claim that computer programs cannot possess understanding. Do you agree with Searle’s argument? Justify your answer in a few sentences.

Question 7 (20 points)

Briefly compare and contrast the beliefs of Turing and Boden regarding the possibility that computer programs can exhibit creativity. Specifically, list one or two points on which Turing and Boden would agree, and one or two points on which they would disagree. In the areas of disagreement that you highlighted, give your own opinion: who do you think is correct, Turing or Boden? Explain your answer in one or two additional sentences.