HUL381/ELL457: Assignment 3

Maximum Marks: 6

Submission deadline: **11/18 April, in class**

Instructions: This is a paper-reading assignment, where we will be reading two of the classic papers in the area of Cognitive Science. Please submit *handwritten* **answers to the following questions. You should primarily refer to the assigned papers, but may also consult any other materials you find useful. However, your answers should be written entirely in your own words. Any direct copying detected will be regarded as plagiarism and dealt with accordingly. If you refer to sources outside of the assigned papers, you must mention them in a list of references at the end. Please remember to write your name and entry no. on your submissions.**

1 Part A: Alan Turing's *Computing Machinery and Intelligence*

Please download the paper from `http://web.iitd.ac.in/~sumeet/Turing50.pdf`. There is also a short summary available at `http://sqapo.com/turing.htm`, which you may find useful. The recent movie *The Imitation Game*, starring Benedict Cumberbatch as Turing, is also partly based on this paper.

Answers to this part are due **Monday 11th April**, in class. As a rough guideline, you should aim for the first answer to be around 150–200 words, and the second answer to be around 200–300 words.

1. Describe Turing's 'imitation game' (now famous as the 'Turing test'). What scientific question(s) is this test designed to address? **[1]**

2. Turing lists a number of possible objections to his view that computers will be able to pass the Turing test in 50 years. It has now been 65 years since the paper came out, and we still do not have a clear indication of any machine having passed the Turing test. Which of the objections do you feel might be the most convincing/prominent reason for this? Explain your choice. **[1.5]**

2 Part B: John Searle's *Minds, Brains, and Programs*

Please download the paper from `http://web.iitd.ac.in/~sumeet/Searle80.pdf`. You should also refer to the discussion on this in the assigned chapter by Steven Pinker.

Answers to this part are due **Monday 18th April**, in class. As a rough guideline, you should aim for the first two answers to be around 150–200 words each, and the third answer to be around 200–300 words.

1. John Searle says that "Instantiating a computer program is never by itself a sufficient condition of intentionality." What does he mean here by 'intentionality'? What does he believe would have to be added on to computer programs in order to endow them with intentionality? **[1]**

2. What does Searle think about the Turing test? Do you think his views on the meaning or utility of the Turing test would differ from Turing's own views? Why or why not? **[1]**

3. Pinker says that "My own view is that Searle is merely exploring facts about the English word *understand*. Searle himself uses the words *understand* and *understanding* many times in his paper. Why is the notion of understanding so central to this debate, and how do Pinker and Searle differ in the ways they interpret this notion? **[1.5]**