

Surprise Quiz

Course Name: Artificial Intelligence
Marks: 12

Code: CS 571/561
Time: 40 minutes

Answer ALL the questions

Submission Mode: Online

1. The answers can be done in either handwritten or typed format.

- Every page of the answer sheet **MUST** include the **Roll Number, Name, and Page number**. You should number your pages as you go along.
- You have to make a single PDF file for the submission. The file name **MUST** be your **<roll_number_name>**. For example, 1821cs05_Soumitra_Ghosh.pdf

2. Upload your answer file within the stipulated time in the following link:

<https://www.dropbox.com/request/yxFRQiyiOy49TNnh7xm5>

Q (a). Write a recursive algorithm *PL-TRUE* (s, m) that returns true if and only if the sentence s is true in the model m , where m assigns a truth value for every symbol in s . The algorithm should run in time linear in the size of the sentence.

(b). Give three examples of sentences that can be determined to be true or false in a partial model that does not specify a truth value for some of the symbols.

(c). Show that the truth value (if any) of a sentence in a partial model cannot be determined efficiently in general.

5+2+5