
INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR
Algorithmic Game Theory 2021-22: First Class Test

Date of Examination: 28th August 2021

Duration: 25 minutes (for writing answers) + 5 minutes (for taking photos, concatenating, and uploading to moodle)

Subject: CS60025 Algorithmic Game Theory

The last digit of your roll number from right be d_1 . Let us define $d = \max\{1, d_1\}$.

1. Compute all MSNEs of the following game.

- ▷ The set of players (N) : $\{1, 2\}$
- ▷ The set of strategies: $S_i = \{A, B\}$ for every $i \in [2]$

▷ Payoff matrix:

		Player 2	
		A	B
Player 1	A	(d^2, d^2)	$(0, 0)$
	B	$(0, 0)$	(d, d)

[6 Marks]

2. Prove or disprove: there exists a game with d weakly dominant strategy equilibriums.

[4 Marks]