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

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**Date of Examination: 13th October 2021**

**Duration: 15 minutes (for writing answers) + 5 minutes (for taking photos, concatenating, and uploading to moodle)**

**Subject: CS60025 Algorithmic Game Theory**

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Let  $d$  be the last digit (from right) of your roll number. Suppose we have 3 buyers who want to buy 2 goods A and B. Each good can be allocated to any buyer independent of the other good. Their valuations are as follows.

Bundle	$v_1$	$v_2$	$v_3$
$\emptyset$	0	0	0
{A}	$d + 1$	$d$	$d + 1$
{B}	$d + 2$	$d + 3$	$d + 2$
{A, B}	$d + 3$	$d + 3$	$d + 4$

[10 Marks]