COL202: Discrete Mathematical Structures. I semester, 2017-18.
Quiz 5
24 August 2017
Maximum Marks: 4

Name	Ent. No.

Important: Keep your answer within the box. Anything written outside the box will be treated as rough work. Do your rough work on the free space on the flip side of this sheet.

Q. If $\mathbb{N}_+$ is the set of positive integers, i.e., natural numbers *without 0*, we say that $a \in \mathbb{N}_+$ divides $b \in \mathbb{N}_+$ if there exists a $q \in \mathbb{N}_+$ such that $b = aq$. Let us denote this as $a \preceq b$. Show that $\preceq$ is a partial order on $\mathbb{N}_+$. Is it also a partial order on $\mathbb{Z} \setminus \{0\}$, i.e. the set of all integers excluding 0?