| Name: |  |
| :--- | :--- |
| ID: |  |
| Total Score (out of 10 pts): |  |

$-4 / 10$ points for attending-

## Question 1 (6/10 points)

A 2.0 kg solid cylinder of diameter 1.0 m is rolling towards right on a surface without slipping with 4 $\mathrm{rad} / \mathrm{s}$. ( $I_{\text {cy }}=1 / 2 M R^{2}$ )
a) What is the speed of the center of mass?
b) What is the total kinetic energy of the cylinder?

