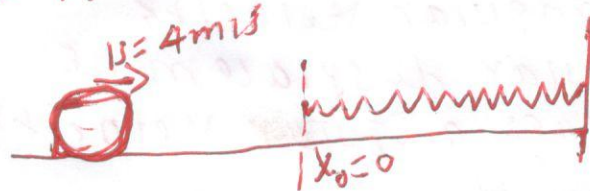


Exercise

1, A diver of mass m drops from a board 20m above the surface of water, find his/her speed 5m above the surface of water? ($g = 10 \text{ m/s}^2$)
(Use C.M.E)

2, A spherical ball of mass 0.25kg collides with the free end of a horizontal spring connected to a rigid wall, if the ball travels with a speed of 4m/s and the spring constant of 400N/m, through what distance will the spring get compressed if it is stopped by the spring?



3, Motion of a particle along XY-plane. A 5kg particle moves from the origin to the position having coordinates $x = 4 \text{ m}$ & $y = 4 \text{ m}$ under the influence of gravity acting in a negative Y-direction. Find the work done by gravity from 'O' to 'Y' along the following paths,

a, OXY

b, OZY

c, OY

