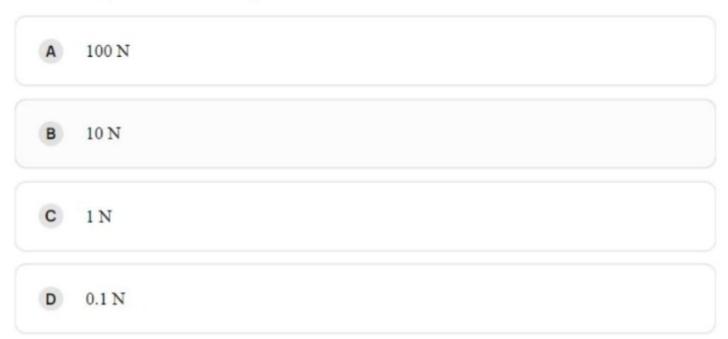
A ball weighing 10 gm hits a hard surface vertically with a speed of 5 $\rm ms^{-1}$ and rebounds with the same speed. The ball remains in contact with the surface for 0.01s . The average force exerted by the surface on ball is :



Correct option is B)

Given,

$$v = 5m/s$$

$$m = 10g = 0.01kg$$

$$t = 0.01s$$

Newton 2nd law,

$$F = \frac{\Delta P}{t}$$

$$F = \frac{mv - (-mv)}{t} = \frac{2mv}{t}$$

$$F = \frac{2 \times 0.01 \times 5}{0.01} = 10N$$

$$F = 10N$$

The correct option is B.