## QUES 01

A block of mass M is held against a rough vertical wall by pressing it with a finger. If the coefficient of friction between the block and the wall is μ and the acceleration due to gravity is g, calculate the minimum force required to be applied by the finger to hold the block against the wall?

Sol. Let F force is applied by the finger on a body of mass M to hold rest against the wall.
Under the balanced condition
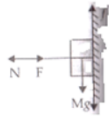
F = N
And f = Mg
$$\Rightarrow \mu F = Mg$$
or $F = \frac{Mg}{\mu}$ is the minimum force to hold the block against the wall at rest.