

**5.2** A metre scale is moving with uniform velocity. This implies

- (a) the force acting on the scale is zero, but a torque about the centre of mass can act on the scale.
- (b) the force acting on the scale is zero and the torque acting about centre of mass of the scale is also zero.

- (c) the total force acting on it need not be zero but the torque on it is zero.
- (d) neither the force nor the torque need to be zero.

### Solution

② Since the scale is moving with uniform vel. which means  
 $dv=0$  or  $dp=0$

Then acc- to Newton's 2<sup>nd</sup> law  $\Rightarrow F=0$ .

Also the scale is not undergoing any rotational motion  
so torque is also zero.

Ans  $\Rightarrow (b)$