B/66 $I_{xx} = I_{yy} = I_{zz} = 2\left(\frac{2}{5}mr^2 + mb^2\right) + \frac{2}{5}mr^2$

$$= m\left(\frac{6}{5}r^2 + 2b^2\right) = I$$

$I_{xy} = I_{yz} = I_{xz} = 0$

Thus for any axis OM through O, Eq. B/10 gives $I_M = I(l^2 + m^2 + n^2) = I$ independent of l, m, n.