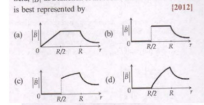


QUES 02:-

An infinitely long hollow conducting cylinder with inner radius $R/2$ and outer radius R carries a uniform current density along its length. The magnitude of the magnetic field, $|\vec{B}|$, as a function of the radial distance r from the axis is best represented by



$\text{For } r < \frac{R}{2}, B = 0$
 For $\frac{R}{2} \leq r < R,$
 $B = \frac{\mu_0 I}{2} \left[r - \frac{R^2}{2r} \right]$
 For $r > R, B = \frac{\mu_0 I}{2\pi r}$
 Hence graph (d) correctly depicts $|\vec{B}|$ versus r graph.

