

EXPLANATION TO THE ANSWER CLAIMED

Solution:

Consider K_1 and K_2 as Radius of gyration of solid sphere and hollow sphere respectively.

For Radius of Gyration of Solid Sphere

$$\frac{2}{5}MR^2 = MK_1^2 \dots\dots\dots \text{Equation - 1}$$

For Radius of Gyration of Hollow Sphere

$$\frac{2}{3}MR^2 = MK_2^2 \dots\dots\dots \text{Equation - 2}$$

Dividing equation 1 by 2 we get

$$\frac{K_1^2}{K_2^2} = \frac{3}{5}$$

Hence, $\frac{K_1}{K_2} = \sqrt{\frac{3}{5}}$

As per the above solution Ratio $\frac{K_1}{K_2} = \sqrt{\frac{3}{5}}$, which is not given in any of the four options in the question.

Answer given by NTA provisional answer key of NEET 2023 is $\frac{K_1}{K_2} = \frac{3}{5}$ which is challengeable as per the above solution provided.