

PYQSide

JEE MAIN WORK, ENERGY AND POWER — POTENTIAL ENERGY, POTENTIAL ENERGY OF A SPRING — PYQS

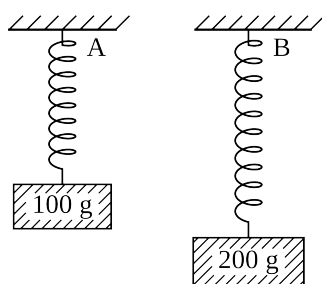
Max. Marks: 8

Questions: 2

Section A (MCQ)

- Q.1** Two blocks with masses 100 g and 200 g are attached to the ends of springs A and B as shown in figure. The energy stored in A is E . The energy stored in B, when spring constants k_A , k_B of A and B, respectively satisfy the relation $4k_A = 3k_B$, is :

[JEE Main 2026 (Online) 23rd January Morning Shift]



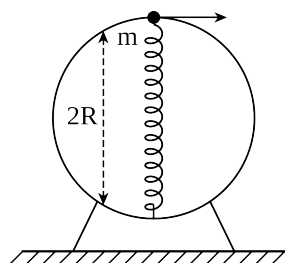
- (1) $4E$ (2) $2E$ (3) $\frac{4}{3}E$ (4) $3E$

Scan or tap for the full solution



- Q.2** A bead of mass ' m ' slides without friction on the wall of a vertical circular hoop of radius ' R ' as shown in figure. The bead moves under the combined action of gravity and a massless spring (k) attached to the bottom of the hoop. The equilibrium length of the spring is ' R '. If the bead is released from top of the hoop with (negligible) zero initial speed, velocity of bead, when the length of spring becomes ' R ', would be (spring constant is ' k ', g is acceleration due to gravity)

[JEE Main 2025 (Online) 28th January Morning Shift]



- (1) $\sqrt{2Rg + \frac{kR^2}{m}}$ (2) $\sqrt{3Rg + \frac{kR^2}{m}}$
 (3) $\sqrt{2Rg + \frac{4kR^2}{m}}$ (4) $2\sqrt{gR + \frac{kR^2}{m}}$

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2												
Ans.	4	2												