




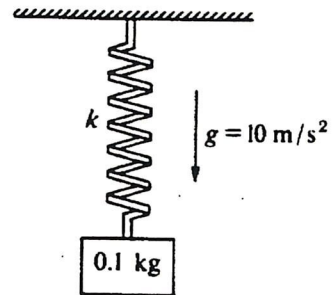


22. A uniform rigid bar of weight W is supported in a horizontal orientation as shown above by a rope that makes a 30° angle with the horizontal. The force exerted on the bar at point O , where it is pivoted, is best represented by a vector whose direction is which of the following?

- (A) 
 (B) 
 (C) 
 (D) 
 (E) 

Questions 23-24



A 0.1-kilogram block is attached to an initially unstretched spring of force constant $k = 40$ newtons per meter as shown above. The block is released from rest at time $t = 0$.

23. What is the amplitude of the resulting simple harmonic motion of the block?

- (A) $\frac{1}{40}$ m (B) $\frac{1}{20}$ m (C) $\frac{1}{4}$ m
 (D) $\frac{1}{2}$ m (E) 1 m

24. At what time after release will the block first return to its initial position?

- (A) $\frac{\pi}{40}$ s (B) $\frac{\pi}{20}$ s (C) $\frac{\pi}{10}$ s
 (D) $\frac{\pi}{5}$ s (E) $\frac{\pi}{4}$ s