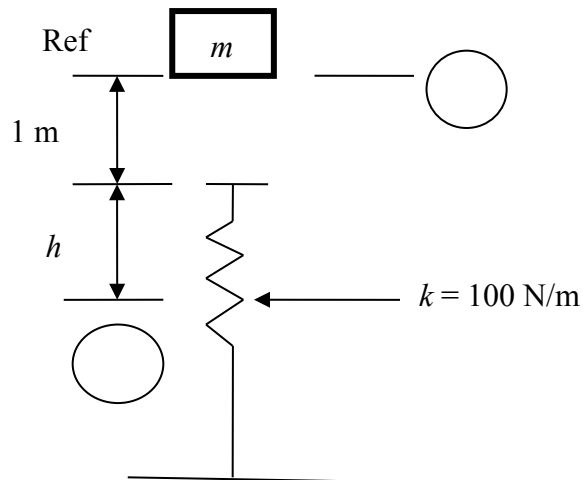


TOPIC

Engineering Mechanics (Statics and Dynamics) – Section VII – Question 18

QUESTION

A 10 kg block is released from rest at Position 1. Which of the following equations represents the reduced form of the conservation of energy necessary to find the maximum compression, h , in the spring at position 2?



- (A) $0 = -98.1h - 98.1 - 50h^2$
- (B) $0 = -98.1h + 50h^2$
- (C) $0 = -98.1h - 98.1 + 50h^2$
- (D) $0 = 98.1h + 98.1 + 50h^2$

HINT

- (1) This is a conservation of mechanical energy (CME) problem.
- (2) M.E. can be stated as:

$$\sum T_1 + \sum V_1 = \sum T_2 + \sum V_2$$

where

T_1 = All kinetic energy at position 1

V_1 = All potential energy at position 1

T_2 = All kinetic energy at position 2

V_2 = All potential energy at position 2

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