Energy: Types of energy, Expression for Kinetic Energy, Gravitational potential energy, Elastic potential energy

CLASS-IX

SUBJECT : PHYSICS
CHAPTER NUMBER: 11
CHAPTER NAME : WORK AND ENERGY

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Home Assignment

1. A stone of mass 1 kg is raised through 1m height –
(1) The loss of gravitational potential energy by the stone is 1 joule
(2) The gain of gravitational potential energy by the stone is 1 joule
(3) The loss of gravitational potential energy is 9.8 joule
(4) The gain of gravitational potential energy is 9.8 joule

2. A ball is dropped from a height of 10m. If the energy of the ball reduces by 40% after striking the ground, the ball will rebound to –
(1) 4m (2) 6m (3) 10m (4) 9.8 m

3. Two masses m and 9m are moving with equal kinetic energies. The ratio of the magnitudes of their momenta is
(1) 1 : 1 (2) 1 : 3 (3) 3 : 1 (4) 1 : 9

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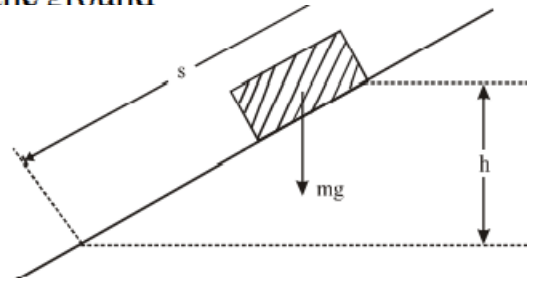
4 Potential energy of your body is minimum when you –

(1) are standing
(2) are sitting on a chair
(3) are sitting on the ground
(4) lie down on the ground

5. The work done against gravity in moving the block a distance s up the slope is –

(1) mh
(2) mgs
(3) ms
(4) mgh



6. If the K.E. of a body is increased by 300%, its momentum will increase by –

(1) 100%
(2) 150%
(3) $\sqrt{300}\%$
(4) 175%

7. Consider the following two statements :

1. Linear momentum of as system of particle is zero.
2. Kinetic energy of a system of particle is zero. Then –

(1) 1 implies 2 and 2 implies 1
(2) 1 does not imply 2 and 2 does not imply 1
(3) 1 implies 2 but 2 does not imply 1
(4) 1 does not imply 2 but 2 implies 1

THANKING YOU

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