

Work Power & Energy Important Questions Test



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A car is accelerated on a levelled road and attains a velocity 4 times of its initial velocity. In this process the potential energy of the car-

- (a) does not change
- (b) becomes twice to that of initial
- (c) becomes 4 times that of initial
- (d) becomes 16 times that of initial

Ans. A

Potential energy depends on height and there is levelled road, no change in height. So Potential energy does not change.

A girl is carrying a school bag of 3 kg mass on her back and moves 200 m on a levelled road. The work done against the gravitational force will be? ($g = 10 \text{ ms}^{-2}$)

- (a) $6 \times 10^3 \text{ J}$
- (b) 6 J
- (c) 0.6 J
- (d) zero

Ans. d

In this case the angle between force and displacement is "90°".

$$W = FS \cos\theta$$

$$\text{And } \cos 90^\circ = 0$$

$$\text{So } W = 0$$

Water stored in a dam possesses-

- (a) no energy
- (b) electrical energy
- (c) kinetic energy
- (d) potential energy

Ans. D

It possess only Potential energy.

Potential energy and kinetic energy are types of-

- (a) Electrical energy
- (b) Magnetic energy
- (c) Thermal energy
- (d) Mechanical energy

Ans D

A body is falling from a height h . After it has fallen a height $h/2$, it will possess-

- (a) only potential energy
- (b) only kinetic energy
- (c) half potential and half kinetic energy
- (d) more kinetic and less potential energy

. Name the energy transfers which occur when electric bell rings

a. electrical energy to sound energy

b. sound energy to electrical energy

c. electrical energy to light energy

d. chemical energy to electrical energy to light energy

. Ans A

Name the energy transfers which occur when a torch is on

- a. electrical energy to sound energy
- b. sound energy to electrical energy
- c. electrical energy to light energy
- d. chemical energy to electrical energy to light energy

Ans B

Name the device that converts electrical energy into mechanical energy

- a. Electric motor
- b. Electric generator
- c. Electric bulb
- d. Solar cel

Ans A

A bullet fired from a gun can pierce a target due to its

- a) Mechanical energy
- b) Heat energy
- c) Kinetic energy
- d) Acceleration

Answer: c

When a body slides against a rough horizontal surface, the work done by friction is

- a) Positive
- b) Zero
- c) Negative
- d) Constant

Answer: c

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