CLASS IX (PHYSICS)

ASSIGNMENT

BCM SCHOOL BASANT AVENUE DUGRI

1. When a body falls freely towards the earth, then its total energy

(a) increases

(b) decreases

(c) remains constant

(d) first increases and then decreases

2. 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

3. In case of negative work the angle between the force and displacement is

(a) 0°

(b) 45°

(c) 90°

(d) 180°

4. An iron sphere of mass 10 kg has the same diameter as an aluminium sphere of mass is 3.5 kg. Both spheres are dropped simultaneously from a tower. When they are 10 m above the ground, they have the same

(a) acceleration

(b) momenta

(c) potential energy

(d) kinetic energy

5. 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 ms-2)

(a) 6×103

J

(b) 6 J

(c) 0.6 J

(d) zero

6. Which one of the following is not the unit of energy?

(a) Joule

(b) Newton metre

(c) kilowatt

(d) kilowatt hour

7.The power of a motor pump is 2 kW. How much water per minutes the pump can raise to a height of 10 m? (Given g = 10m s-2)

8. The weight of a person on a planet A is about half that on the earth. He can jump up to 0.4 m height On the surface of the earth. How high he can jump on the planet A?

9. The velocity of a body moving in a straight line is increased by applying a constant force F, for some Distance in the direction of the motion. Prove that the increase in the kinetic energy of the body is Equal to the work done by the force on the body.

10. Is it possible that an object is in the state of accelerated motion due to external force acting on it, but No work is being done by the force? Explain it with an example.

11. Avinash can run with a speed of 8 m s-1 against the frictional force of 10 N, and Kapil can move with A speed of 3 ms-1 against the frictional force of 25 N. Who is more powerful and why?

12. If an electric iron of 1200 W is used for 30 minutes every day, find electric energy consumed in the Month of April.