Work Power &Energy (WORKSHEET 1)

1 . A body of mass 5 kg is placed at the origin, and can move only on the x-axis. A force of 10 N is acting on it in a direction making an angle of o 60 with the x-axis and displaces it along the xaxis by 4 metres. The work done by the force is (a) 2.5 J (b) 7.25 J (c) 40 J (d) 20 J

Solution : (d)

2. A horizontal force of 5 N is required to maintain a velocity of 2 m/s for a block of 10 kg mass sliding over a rough surface. The work done by this force in one minute is

(a) 600 J (b) 60 J (c) 6 J d)6000 J

Solution : (a)

3.A box of mass 1 kg is pulled on a horizontal plane of length 1 m by a force of 8 N then it is raised vertically to a height of 2m, the net work done is

(a) 28 J (b) 8 J (c) 18 J (d) None of above

Solution : (a)

4. 10 kg satellite completes one revolution around the earth at a height of 100 km in 108 minutes. The work done by the gravitational force of earth will be

(a) 108 $\times$100 $\times$10 J (b) J 100* 108 $\times$ 10 (c) J 108/ 100 $\times$ 10 (d) Zero

Solution : (d)