Work And Energy(Previous years NTSE Ques)

CLASS-IX

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

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Home Assignment

1. If the kinetic energy of a body increases by 300%, by what percent shall the linear momentum of the body increase?

a. 200%
b. 100%
c. 150%
d. 300%

2. A standard 100W electric bulb in series with a heater is connected across the mains. If the 100W bulb is now replaced by a 200 W bulb, the power output of the heater

   a. Will be halved
   b. Will increase 4 times
   c. Will increase 2 times
   d. Will remain same

3. A lorry and a car moving with the same K.E. are brough to rest by applying the same retarding force, then –
(1) Lorry will come to rest in a shorter distance (2) Car will come to rest in a shorter distance
(3) Both come to rest in a same distance (4) None of the above

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Home Assignment

4. A man weighing 60 kg climbs up 45 steps stair case of a building in 9 seconds. If height of each step is 10 cm, then how much power the man has employed? (Take g = 10 m/s^2)
   a. 300 W
   b. 250 W
   c. 500 W
   d. 450 W

5. If the momentum of a body is increased by 3 times of its initial momentum, then by how much its kinetic energy is increased above its initial value which was 100 J?
   a. 200 J
   b. 300 J
   c. 900 J
   d. 800 J

6. A pump draws 1000 kg of water per minute from a well 12m deep. Then the power of the pump in H.P unit would be very nearly equal to (given g = 10 m/s^2)
   a. 2.0
   b. 2.3
   c. 2.63
   d. 2.5

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THANKING YOU

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