Work Power &Energy (WORKSHEET 4)

1. When an air bubble rises in water, what happens to its potential energy?

2. What should be the angle between the force and the displacement for maximum and minimum work?

3. What is work done in holding a 15kg suitcase while waiting for a bus for 15 minutes?

4. A light body and a heavy body have same kinetic energy. Which one has greater linear momentum?

5. Can a body have energy without momentum?

6. A particle moves along the x – axis form x = 0 t x = 5m influence of force given by F = 7 – 2x + 3x$_2$. Calculate the work done in doing so.

7. A body of mass 3kg makes an elastic collision with another body at rest and Continues to move in the original direction with a speed equal to one – third of its Original speed. Fine the mass of the second body.

8. Show that for a freely falling body the sum of its kinetic energy and potential energy remains constant at all points during its fall?

9. Ball A of mass m moving with velocity U collides head on with ball B of mass m at rest. If e be the coefficient of restitution then determine the ratio of final velocities of A and B after the collision.

10. If the momentum of the body increases by 20% what will be the increase in the K.E. of the body?