1. An object weighs 9.8N in air and 9.0N when fully immersed in water. How much is buoyant force on object.

2. The relative density of mercury is 13.6. What does this statement mean.

3. An engine pulls a train 1km over a level track. Calculate the work done by the Train given that frictional resistance is 5×10^5N.

4. A boy of mass 55kg reens up a flight of 40 stairs, each measuring 0.15m. Calculate the work done by boy.

5. A body of mass 5kg, initially at rest, is subjected to a force of 20N. What is the kinetic energy acquired by the body at the end of 10 s.

6. Two bodies of equal masses move with uniform velocities v and $3v$ resp. Find the ratio of their kinetic energies.

7. How is the power related to the speed at which a body can be lifted. How many kilograms of well a man working at the power of 100W be able to lift at constant speed of 1m/s vertically?

8 Differentiate b/w Energy and Power.

9. How sound propagates in medium?

10. Derive Expression for kinetic energy

11 Derive Expression for potential Energy.

12 Explain Energy conservation in freely falling object.

13. A 5kg ball is thrown upwards with a speed of 10m/s.

(a) Find the potential energy when it reaches the highest point

(b) Calculate maximum height attained by it.