Cosmo School

Physics	Worksheet 7 : 18/08/2020	Class - IX

C H A P T E R 5 : S T A T E O F M A T T E R A N D P R E S S U R E

Instructions:

✓ Watch the uploaded video class from school's website/You Tube channel. For becoming more clear about the basics, watch more than once, if needed.

✓ Contact me in case of any difficulty in understanding.

(Questions given in this worksheet are important questions for all exams)

Creative Questions

1. Mina sat with her little brother beside the pond. Her brother hold a ball of mass of 200g and of volume 250cm^3. Suddenly the ball fell into the pond. The depth of the pond was 3m. (Density of water is 1000kg/m^3 and g = 9.8 ms^{-2}).

    a) Determine the pressure of water at the bottom of the pond.

    b) Will the ball sink into the water? - Explain your opinion mathematically.

2. A body of mass 2.5 kg having length, breadth and height 25cm, 15cm and 5cm respectively.

    a) Object of the above stem when placed on the floor, calculate the highest and lowest magnitude of pressure that will exert on the floor.

    b) The object of the stem is placed in water of 4°C, whether it will float or immerse in the water? Explain with mathematical analysis.