

**Physics****Worksheet 10 : 24/09/2020****Class - IX****CHAPTER 5 : STATE OF MATTER AND PRESSURE****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)

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**Creative Questions**

1. The area and height of the object are  $20 \times 10^{-4} \text{m}^2$  and  $10 \times 10^{-2} \text{m}$  respectively. The weight of the object in water and air are 7.84N and 9.8N respectively.
  - a) Calculate the density of the material of the object.
  - b) Does the stem follow Archimedes law? Give mathematical explanation.
  
2. Weight of a crown made of gold in the air is 8.30N. The tension in the string when the crown is suspended underwater is 7.81N. Density of pure gold is  $19300 \text{kg/m}^3$  and depth of water in the container is 12cm.
  - a) Calculate the pressure at the bottom of the container.
  - b) Determine whether the crown is made of pure gold or not.