Cosmo School

Physics | **Worksheet 7 : 29/10/2020** | **Class - IX**

CHAPTER 6 : EFFECT OF HEAT ON MATTER

Instructions:

- ✓ Read the chapter in your book - quickly and thoroughly, preferably more than once.
- ✓ Watch the uploaded video classes of this chapter 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

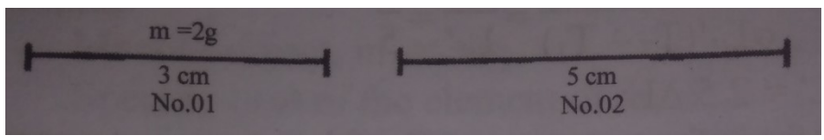
(Solve Yourself)

1. The distance between two pillars of electricity is 30cm. The upper wire of length of 30.01m with two pillars in certain day of summer season. The temperature was 30°C on that day. The linear co-efficient of upper wire is 16.7 x $10^{-6}K^{-1}$. In winter, temperature of air was 4°C in certain day and the wire was broken up on that day.

a) Express the air temperature in Fahrenheit scale.

b) The reason for breaking the wire - explain with mathematical analysis.

2. Observe the following figure, read the stem carefully, and answer the questions.



Two copper wires are taken in above figure. Specific heat of copper is 400 $Jkg^{-1}K^{-1}$ and co-efficient of superficial expansion of copper is 33.4 x $10^{-6}K^{-1}$.

a) What amount of heat will be needed to increase the temperature 10°C of No.01 wire?

b) Will the linear expansion be equal if the temperature increases up to 20°C of two wires? Analyze it.