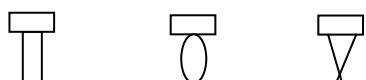


HOTS CLASS-VIII(PHYSICS,2017-18)

1. Why does water act as a good reservoir of heat?
2. With respect to a longitudinal wave like sound wave define the following:-
 - (a) Frequency
 - (b) Wavelength
 - (c) Amplitude
3. In your house an electrical equipment is installed. When it is switched on, you are getting electric shock while touching its body. Identify the defect in the installation which is causing this shock.
4. Three different types of nails are drawn below:-



Which nail will be most convenient to use? Explain.

5. By which characteristics of sound you will be able to identify music from violin and sitar? (both are played with the same frequency)
6. State any two differences between sound wave and light wave.
7. Two substances A and B are rubbed with each other. Then B is touched with a positively charge electroscope. It is observed that the divergence between the leaves decreases.
Identify the charges in A and B. Explain why does divergence decreases when B is touched with the disc?
8. The frequencies of two different sources of sound are in the ratio 3:5. If the wavelengths are in the ratio of 2:5 then find the ratio of speed of sound for these two sources.
9. Calculate the heat required to raise the temperature of 50 g of ice from -5°C to 10°C . Given specific heat capacity of ice and water are $0.5 \text{ cal g}^{-1}\text{C}^{-1}$ and $1 \text{ cal g}^{-1}\text{C}^{-1}$ respectively. Latent heat of fusion of ice is 80 cal g^{-1} .