KALPAVRUKSHA MODEL SCHOOL

Answers of Assignment-3

Class: VII **Sub: Physics** **Date: 24.7.2021**

Topic: TEMPERATURE AND HEAT

I. Answers:

1. **Define heat energy.**
   ANS: When there is a temperature difference between two bodies, a certain type of energy flows between them. This is called heat energy.

2. **What is the unit of measuring heat?**
   ANS: The unit of measuring heat is calories or joules.

3. **Define atoms**.
   ANS: The fundamental particle of any matter is called an atom.

4. **Define molecules**.
   ANS: A cluster of atoms is called a molecule.

5. **List the precautions in handling mercury clinical thermometers.**
   ANS: (a) Wash the thermometer well and dip it in an antiseptic liquid before and after using it.
   (b) Be careful while using a thermometer. It can break easily. Mercury is a toxic substance.

6. **Which thermometer will you use to measure the temperature of the day?**
   ANS: We use Laboratory thermometers to measure the temperature of the day.

7. **Why is conduction only possible in solids?**
   ANS: Conduction can take place in Solids, liquids and gases. But it is maximum in solids as their atoms and molecules are located closer. Metals are the best solids to conduct the heat as they have tightly packed atoms which can pass the kinetic energy and the free electrons to the nearby atoms and lead to conduction.

8. **Why are stainless steel cooking utensils usually provided with copper bottoms?**

ANS: Stainless steel cooking utensils are usually provided with copper bottoms because copper is a better conductor of heat than stainless steel.

9. State differences between the laboratory and clinical thermometer.

ANS:

Clinical thermometer	Laboratory thermometer
1. A clinical thermometer reads temperature from $35^{O}C$ to $42^{O}C$	1. Laboratory thermometer ranges between $-10^{O}C$ to $110^{O}C$.
2. Clinical thermometer has a kink near the bulb	2. While there is no kink in the laboratory thermometer.
3.Clinical thermometer is most suitable to measure temperature of human body	3. Laboratory thermometers can measure the temperature of objects, places.

10.Differentiate between Celsius scale and Fahrenheit scale.

ANS:

Celsius	Fahrenheit
1. It was invented by Andre Celsius.	1. It was invented by D G Fahrenheit.
2. There are 100 divisions.	2. There are 180 divisions.
3. The boiling point of water is 100 degrees and melting point is 0 degrees.	3. The boiling point of water is 212 degrees and melting point is 32 degrees.

11.State similarities between the laboratory thermometer and the clinical thermometer.

ANS: Similarities between the laboratory thermometer and the clinical thermometer are

1. They consist of a long, narrow, uniform glass tube.
2. They have a bulb containing mercury at the end of the tube.
3. They are marked with Celsius scale on the glass tube.

12.Which thermometer will you use to measure the temperature of your friend?

ANS: Mercury clinical thermometer and digital thermometer both can be used to measure the temperature of your friend.