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TENDER HEART HIGH SCHOOL; SEC-33B, CHD

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Subject - PHYSICS

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CLASS - VII

Chapter - Heat

⇒ Q1: → Define heat?

Ans: → Heat is a form of energy that makes us feel hot or cold. Heat can flow from a hot body to a cold body.

⇒ Q2: → How heat plays a significant role in our daily lives give an example?

Ans: → Sun is a vast source of heat energy. The heat energy of the sun makes water to become warm and evaporate from the ponds and lakes as water vapour and form clouds.

⇒ Q3: → Write S.I unit of heat.

Ans: The S.I unit of heat is Joule (J).

⇒ Q4: → Write other units of Heat Energy.

Ans: → Calorie (Cal) and Kilocalorie (kcal).

⇒ Q5: → Define one Calorie.

Ans: → One Calorie is the heat energy required to increase the temperature of 1g of water by 1°C .

⇒ Q6: → Write a relation b/w Calorie and joule.

Ans: → $1 \text{ Calorie} = 4.2 \text{ joule}$

or $1 \text{ Cal} = 4.2 \text{ J}$

⇒ Q7: → Define Temperature.

Ans: → It tells us about the degree of hotness or coldness of a body. When a body is heated, its temperature rises and when it is cooled, its temperature falls. S.I unit of temperature is Kelvin (K).

Q8: → Name the three kinds of temperature scales that are majorly used to record the temperature.

Ans:
(1) The Celsius scale or centigrade scale.
(2) The Fahrenheit scale and
(3) The Kelvin scale.

Q9: → What is the Kelvin scale of temperature?

Ans: → This scale was invented by British scientist Lord Kelvin. On the Kelvin scale, ice point is marked as 273K and steam point is marked as 373K. This scale is also called the "absolute scale of temperature."

Q10: → What is the Fahrenheit scale of temperature?

Ans: → This scale was invented by Physicist Fahrenheit. On this scale, ice point is marked as 32°F and steam point is marked as 212°F. This scale is divided into 180 equal divisions, Each division is called 1°F.

Q11: → What is the Celsius scale of temperature?

Ans: → This scale was invented by the scientist Celsius. On Celsius scale, ice point is marked as 0°C and steam point is marked as 100°C. This scale is divided into 100 equal divisions, Each division is called 1°C.

Q12: → How are the Celsius and Fahrenheit scales are inter-related?

Ans: →

$$\boxed{\frac{^{\circ}\text{C}}{5} = \frac{^{\circ}\text{F} - 32}{9}}$$

here $^{\circ}\text{C}$ - degree Celsius
 $^{\circ}\text{F}$ - degree Fahrenheit

Q13 :- Write a mathematical relation b/w the Celsius and the Kelvin Scale.

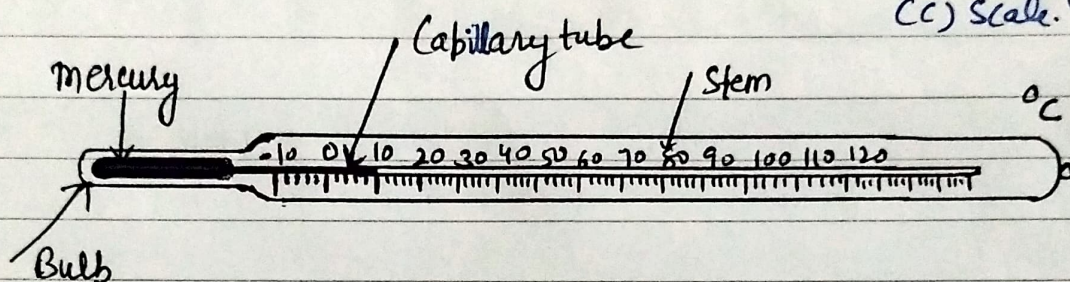
Ans :- Temperature in Kelvin = temperature in $^{\circ}\text{C} + 273$
or $T_K = T_{^{\circ}\text{C}} + 273$

T_K - temp. in Kelvin

$T_{^{\circ}\text{C}}$ - temperature in degree Celsius

Q14 :- Draw a labelled diagram of a Clinical thermometer.

Ans Parts of a thermometer are (a) Bulb (b) Capillary tube (c) Scale.



Q15 :- What is a Clinical thermometer?

Ans The temperature of a body is measured by the thermometer. It works on the thermal expansion of liquids. The most commonly used thermometer is a mercury thermometer that we use in laboratories.

Q16 :- What is thermal expansion?

Ans :- When a solid is heated, its length, area and volume all ~~increase~~ will increase. So, it expands in all directions. Therefore, thermal expansion is the expansion of materials on heating.

Q17 :- Why do telephone wires sag in summer?

Ans Telephone wires are made up of Copper and aluminium. These substances expand during summer. So, the length and the width of the wires get increased, which makes the wires sag.

to be Continued →