Physical quantities and measurements :-

1) Define one kilogram, the S.I unit of mass. How is it related to (i) quintal (ii) metric tonne and (iii) gram ?

Ans. The mass of of 1 litre water at 4°c is taken as 1kg.

I quintal = 100 kg
1 metric ton = 10 quintal = 1000 kg
$1g = \frac{1}{1000}$ kg or 1kg = 1000g

2) Name and define the S.I unit of time. How is it related to (i) minute (ii) hour (iii) day and (iv) year ?

Ans. The S.I unit of time is second (s). One second is the time interval between the two consecutive ticks that you hear from pendulum wall clock.
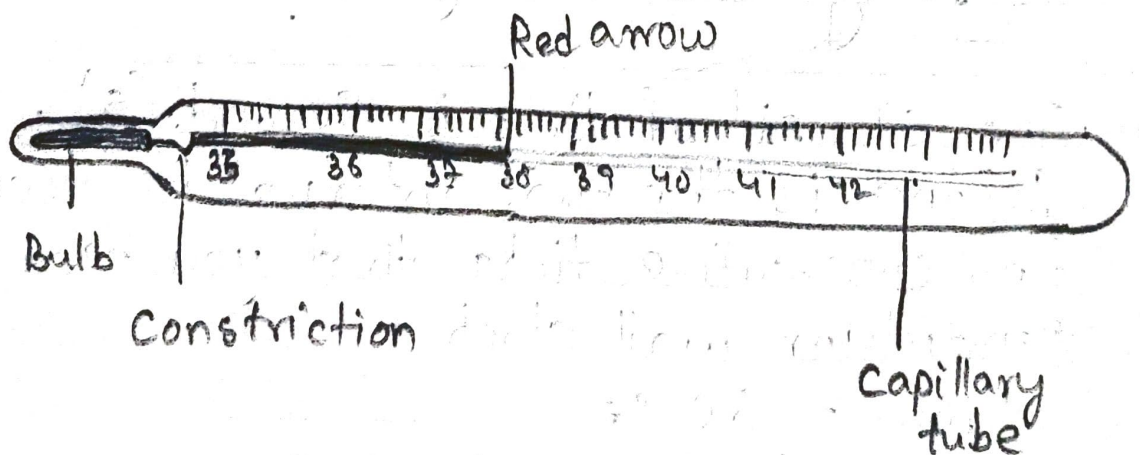
I min = 60 s
I hr = 60 min = 3600 s
I day = 24 h = 86400 s
I year = 365 days = 3.15×10^7 s.

3) Name the S.I unit and one common unit of temperature. Write their symbols also.

Ans- The S.I unit of temperature is kelvin (symbol K).
Common unit of temperature is degree centigrade (Symbol °c)

4) Name the instrument used for measuring of the temperature of a person. Draw its labeled neat diagram.

Ans- Clinical thermometer

Red arrow

35   36   37   38   39   40   41   42

Bulb

Constriction

Capillary tube

5) What is a clinical thermometer? state its special feature. Draw a labeled neat diagram of a clinical thermometer showing the range of temperature marked on it!

Ans. The thermometer used to measure human body temperature is called clinical thermometer.

In clinical thermometer the temperature ranges from 35 to 42°C.

It has kink, which prevents immediate back flow of mercury.

Red arrow

35   36   37   38   39   40   41   42

Bulb

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