

Q1. Define one kilogram, SI unit of mass.  
How is it related to i) quintal  
ii) metric tonne  
and iii) gram.

Ans) One kilogram was defined as the mass of a cylinder of platinum-iridium alloy kept at the International Bureau of Weights and Measures at Sevres near Paris.

Relationship of kilogram with the following units is:-

i) Quintal - 1 quintal = 100 kg

ii) Metric tonne - 1 metric tonne = 1000 kg

iii) Gram - 1 gram =  $\frac{1}{1000}$  kg

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.

One second is defined as  $\frac{1}{86400}$  part of a mean solar day i.e.,

$$1 \text{ s} = \frac{1}{86400} \times \text{one mean solar day.}$$

Relationship of second with the following units is:-

i) Minute - 1 minute = 60 seconds

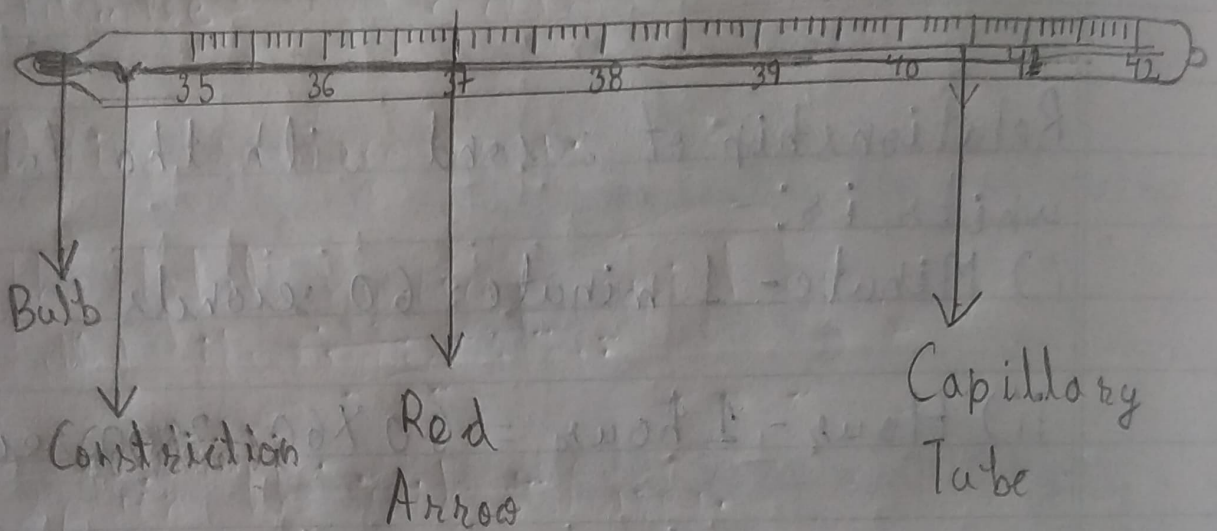
ii) Hour - 1 hour =  $60 \times 60 = 3600$  seconds

iii) 1 day = 24 hours  
 $= 24 \times 60$  mins  
 $= 1440$  mins  
 $= 1440 \times 60$  s  
 $= 86400$  s

iv) 1 year = 365 days  
 $= 365 \times 86400$  s  
 $= 3.15 \times 10^7$  s

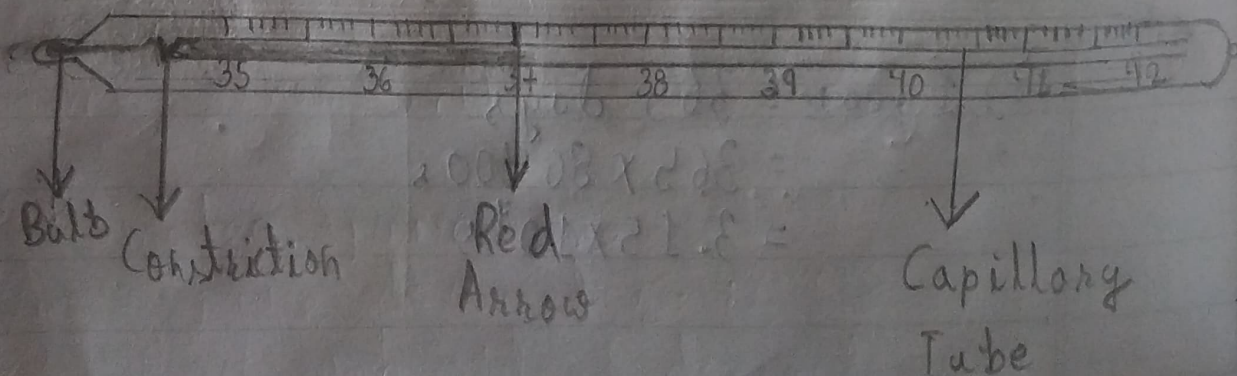
3. Name the instrument used for measuring of the temperature of a person. Draw its labeled neat diagram.

Ans → The instrument used for measuring of the temperature of a person is clinical thermometer.



4) 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 →



Ans) Clinical thermometer is a special thermometer used to measure the temperature of a patient's body.

A clinical thermometer has markings from  $35^{\circ}\text{C}$  to  $42^{\circ}\text{C}$ . It has a slight bend or kink in the stem just above the bulb. This kink is called constriction. This constriction prevents the mercury from falling back all by itself.

5) 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, <sup>degree</sup> celsius (symbol  $^{\circ}\text{C}$ )