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Q. 13 Define one kilogram, the S.I. unit of mass. How is it related to (i) quintal (ii) ~~hour~~, (iii) ~~day~~ and (iv) ~~year~~? metric tonne and (ii) gram.

Ans The mass of 1 litre of water at  $4^{\circ}\text{C}$  is taken as 1 kg.

$$1 \text{ quintal} = 100 \text{ kg}$$

$$1 \text{ metric ton} = 10 \text{ quintal} = 1000 \text{ kg}$$

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

The S.I. unit of time is second. In short form we write it as 's'. One ~~second~~ second is the time interval between the two consecutive ticks that you hear from pendulum wall clock.

$$1 \text{ min} = 60 \text{ s}$$

$$1 \text{ h} = 60 \text{ min} = 3600 \text{ s}$$

$$1 \text{ day} = 24 \text{ h} = 3600 \text{ s}$$

$$1 \text{ year} = 365 \text{ days} = 3.15 \times 10^7 \text{ s}$$

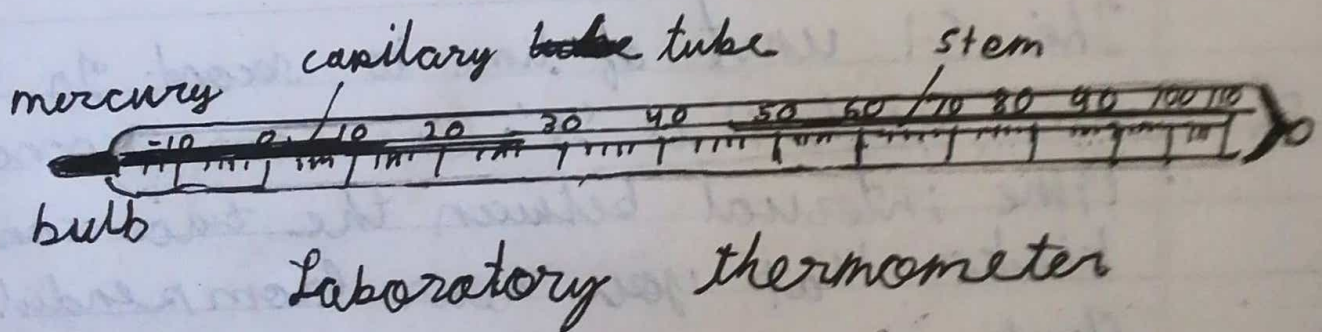
18. Name the (i) S.I. unit and (ii) one common unit of temperature. ~~of a~~ write their symbols also.



Ans The S.I. unit of temperature is kelvin (symbol K) common unit of temperature is degree centigrade (symbol  $^{\circ}\text{C}$ )

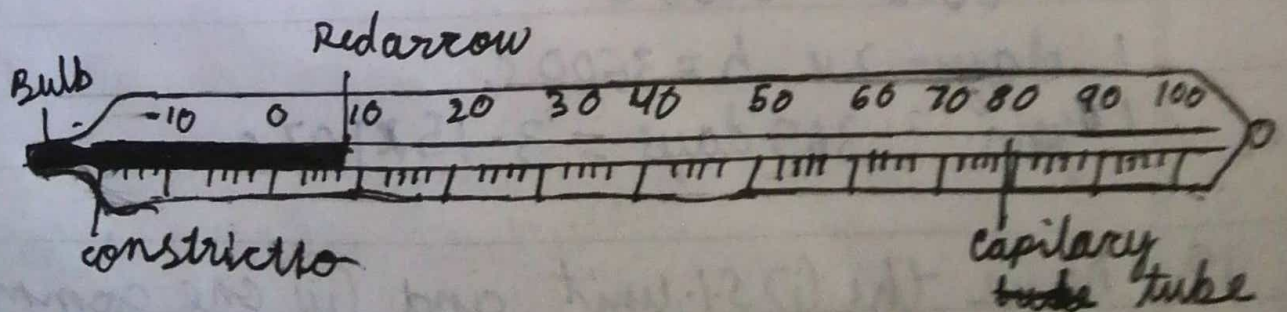
19) Name the instrument used for measuring of the temperature of a person. Draw its labelled neat diagram.

Ans The temperature is measured with a thermometer.



21)

Diagram



Q 21)

What is a clinical thermometer? state its special features. Draw a neat labelled diagram of a clinical thermometer showing the range of temperature marked on it.

Ans.

Doctors use a special thermometer called the clinical thermometer for measuring the temperature of the patient's body. This thermometer has the marking 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 the constriction. This constriction prevents the mercury from falling back all by itself. The temperature of a healthy person is  $37^{\circ}\text{C}$ . This temperature is marked by a red arrow.