Ch-2   Physical   Quantities   and   Measurement

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

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

                    S.I Unit = g

1 quintal = 100 kg
1 metric tonne = 10 quintal = 1000kg = 10^3 kg
1 g = $\frac{1}{1000}$ kg   or   1 kg = 1000 g
                ↓
           10^{-3} kg

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

The SI unit of time is second   which is
denoted by s'

           One second is   the time interval
between the two   consecutive ticks
that we   hear from the pendulum
wall   clock.

1 min = 60 s
1 hr = 60 min = 3,600 s
1 day = 24 hr = 1440 min = 86,400 s
1 year = 365 days = 8760 hr = 5,25,600 min
= 3.15 × 10⁷ s = 3.15 × 1,00,00,000
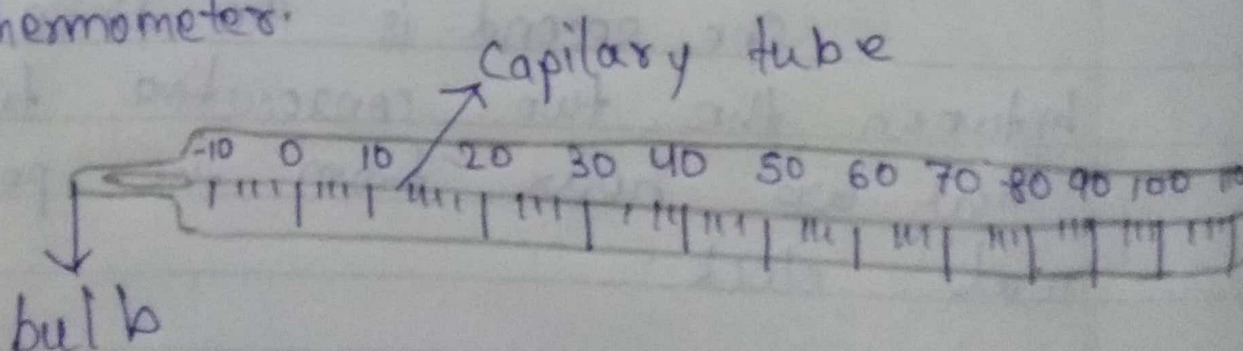= ~~3,15 31,53~~ 3,15,36,000

Q- Name the:
1. S.I Unit and
2. one common unit of temperature, write their symbols also.

Ans- The SI unit of temperature is Kelvin, K. Common unit of temperature is degree centigrade or celcius, °C

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

The temperature is measured with a thermometer.

Capilary tube

-10 0 10 20 30 40 50 60 70 80 90 100

bulb

Q - What is a clinical thermometre? State its special feature. Draw a labelled neat diagram of a clinical thermometre showing the range of temperature marked on it.

Ans- Doctors use a special thermometre called the clinical thermometer for measuring the temperature of the pationts body. This thermometer has markings from 35°c to 45°c. It has a slight bend or kink in the stem just above the bulb, this kink is called the constriction which prevents the mercury from falling back all by itself. The temperature of a healthy person is 37°c and is marked by a red arrow.

Red arrow

35 36 37 38 39 40 41 42

Bulb

Constriction

Capillary tube