DATE:
17 SEP 2020

SUBJECT : SCIENCE

CHAPTER-7:

TEMPERATURE AND HEAT

TOPIC-3:

LABORATORY THERMOMETER

LABORATORY THERMOMETER

Laboratory thermometer: The thermometer that is used to measure temperature of any substance or object is called Laboratory thermometer.

Construction & working of Laboratory thermometer: It is made of a uniform capillary glass tube. It has a bulb and body part. Mercury is used in it as liquid and the bulb contains mercury. Scale is calibrated over the thin capillary glass tube. Lower limit of this thermometer is -10^0C and upper limit is 110^0C . On heating mercury expands and rises up through the capillary tube. With the help of the scale temperature reading can be recorded.

Working principle: Liquids expand on heating and contract on cooling.

Uses: it is used to measure temperature of substance or objects.

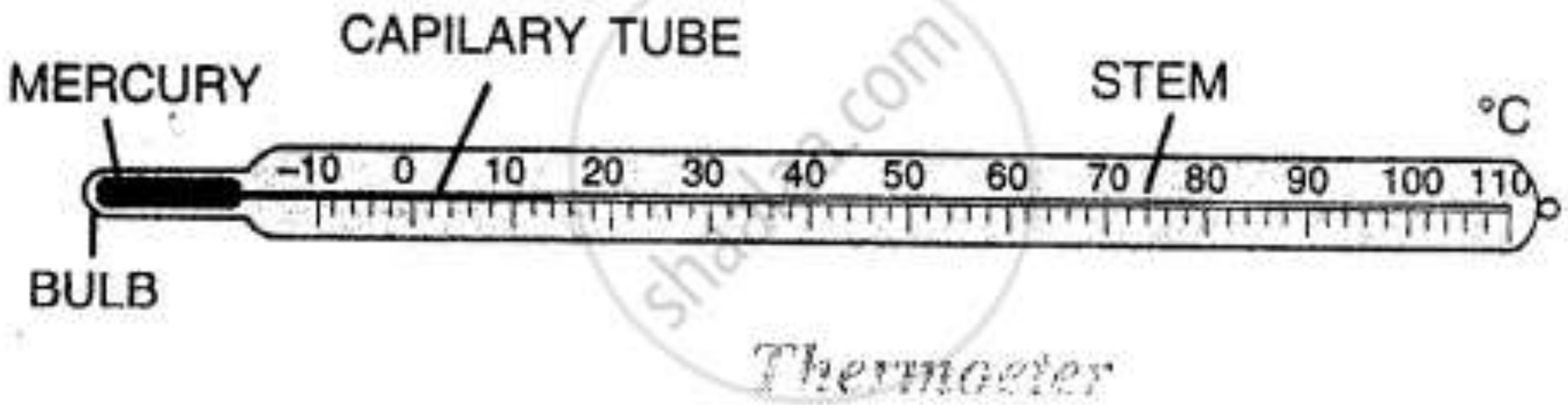

Fig: Laboratory Thermometer

SIMILARITIES AND DIDDERENCES BETWEEN CLINICAL & LABORATORY THERMOMETER

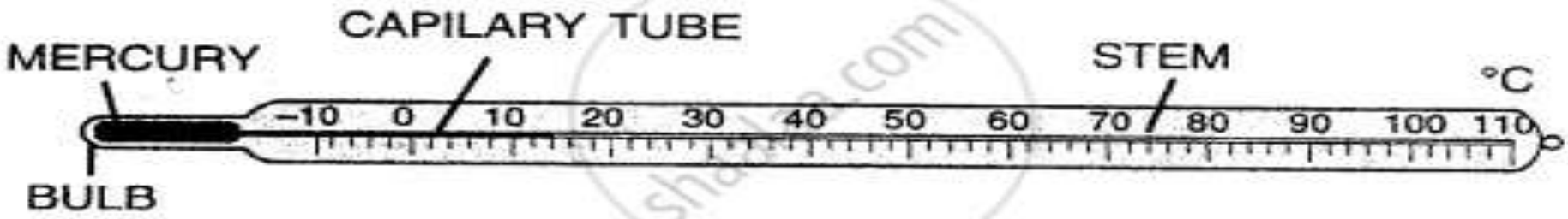

FIG: LABORATORY THERMOMETER

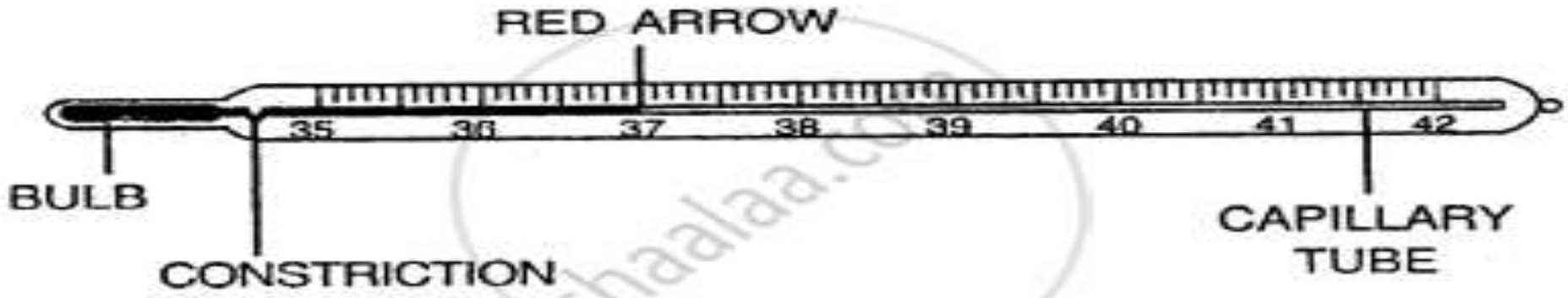

FIG: CLINICAL THERMOMETER

SIMILARITIES:

1. Both are made of capillary glass tube.
2. Mercury is used in both as liquid

DIFFERENCES:

1. Temperature range of clinical thermometer is 35-42 degree Celsius but temperature range of laboratory thermometer is -10 degree Celsius to 110 degree Celsius
2. Clinical thermometer has kink but laboratory thermometer does not have kink
3. Clinical thermometer is short but laboratory thermometer is long in size.

QUESTIONS: HOME ASSIGNMENT

1. What do you understand by laboratory thermometer?
2. What is the temperature range of laboratory thermometer?
3. Laboratory thermometer does not have kink? Give reason.
4. Write any three differences between clinical thermometer and laboratory thermometer
5. What is the working principle of laboratory thermometer?
6. Draw the diagram of a laboratory thermometer and describe its construction and working.
7. Can we use laboratory thermometer to measure human body temperature? Give reason to support your answer.