SHREE VASISHTHA VIDHYALAYA

Subject-Science

Chapter name- Temperature and its Measurement(Worksheet)

A. Multiple Choice Questions (MCQs)

1. The SI unit of temperature is:
a) Fahrenheit b) Celsius c) Kelvin d) Degree

2. The normal human body temperature is:
a) 37 °C b) 100 °C c) 20 °C d) 0 °C

3. The device used to measure temperature is:
a) Thermometer b) Barometer c) Hygrometer d) Ammeter

4. Freezing point of water in Celsius scale is:
a) 100 °C b) 32 °C c) 0 °C d) 273 K

5. Boiling point of water in Kelvin scale is:
a) 100 K b) 273 K c) 373 K d) 273 °C

6. A clinical thermometer cannot be used to measure very high temperature because:
a) It is made of glass b) It has a small range
c) It is short in length d) It uses mercury

7. Which liquid is commonly used in thermometers?
a) Water b) Mercury c) Oil d) Alcohol

8. The range of a laboratory thermometer is usually:
a) –10 °C to 110 °C b) 0 °C to 50 °C
c) 35 °C to 42 °C d) 100 °C to 200 °C

9. 0 °C is equal to:
a) 273 K b) 100 K c) 373 K d) 32 K

10. The thermometer used by doctors to measure body temperature is:
a) Laboratory thermometer b) Clinical thermometer
c) Digital thermometer d) Gas thermometer

B. Fill in the Blanks

1. The SI unit of temperature is _____.
2. The freezing point of water in Fahrenheit scale is _____.
3. A thermometer used in laboratories is called _____ thermometer.
4. Mercury expands uniformly on _____.
5. The clinical thermometer usually has a range of _____.

C. One Word Answer

1. Temperature at which water boils (in Celsius).
2. Device that measures body temperature instantly without contact.
3. The fixed points used to design Celsius scale.
4. Unit of temperature used in scientific research.
5. The narrow tube in a thermometer.

D. Short Answer Questions

1. Define temperature.
2. State two differences between clinical thermometer and laboratory thermometer.
3. Why is mercury used in thermometers?
4. Write the relation between Celsius scale and Kelvin scale.
5. What precautions should be taken while using a clinical thermometer?

E. Long Answer Questions

1. Explain the construction and working of a clinical thermometer with a neat diagram.
2. Differentiate between Celsius, Fahrenheit, and Kelvin scales of temperature.
3. Describe the laboratory thermometer. Write its range, construction, and use.
4. A clinical thermometer should not be used for measuring laboratory temperature. Explain why.

F. Assertion and Reason Questions

(Choose: a) Both Assertion and Reason are true and Reason is the correct explanation.
b) Both Assertion and Reason are true but Reason is not the correct explanation.
c) Assertion is true but Reason is false.
d) Assertion is false but Reason is true.)

1. Assertion: A clinical thermometer has a kink.
Reason: It prevents mercury from flowing back into the bulb.

2. Assertion: Kelvin scale is called the absolute scale of temperature.
Reason: At 0 K, particles have minimum possible energy.

3. Assertion: Water boils at 100 °C under normal pressure.
Reason: 100 °C is taken as the upper fixed point in Celsius scale.

4. Assertion: Clinical thermometer can measure temperature up to 110 °C.
Reason: It is used to measure human body temperature.

5. Assertion: Digital thermometers are safer than mercury thermometers.
Reason: They do not contain toxic mercury.

G. Numericals

1. Convert the following into Kelvin scale:
a) 25 °C
b) 0 °C
c) 100 °C

2. Convert the following into Celsius scale:
a) 300 K
b) 273 K
c) 373 K