INDIAN SCHOOL AL WADI AL KABIR

CLASS: VI	**DEPARTMENT: SCIENCE 2026-2027**	**DATE: 03/09/2026**
WORKSHEET NO: 6	**TOPIC: TEMPERATURE AND ITS MEASUREMENT**	**NOTE: A4 FILE FORMAT**
CLASS & SEC:	**NAME OF THE STUDENT:**	**ROLL NO:**

I. OBJECTIVE-TYPE QUESTIONS

1. The freezing point of water on the Celsius scale is
   a) 100 °C
   b) 32 °C
   c) 0 °C
   d) 212 °C

2. Digital thermometers measure temperature using which sensors?
   a) Light sensors
   b) Sound sensors
   c) Heat sensors
   d) Pressure sensors

3. What is the temperature range of a laboratory thermometer?
   a) -10 °C to 120 °C
   b) -10 °C to 110 °C
   c) 10 °C to 50 °C
   d) 37 °C to 40 °C

4. Which substance was traditionally used in thermometers but is now avoided due to toxicity?
   a) Alcohol
   b) Glycerin
   c) Water
   d) Mercury

5. The SI unit of temperature is
   a) kelvin
   b) degrees Celsius
   c) degree Fahrenheit
   d) None of the above

6. Identify the type of thermometer shown in the picture.

a) Laboratory thermometer
b) Clinical thermometer
c) Infrared thermometer
d) Room thermometer

7. What is the normal temperature of a healthy human body in Celsius and Fahrenheit?

a) 35.1°C, 97.6 °F
b) 37.0 °C, 98.6 °F
c) 36.2 °C, 99.6 °F
d) 37.8 °C, 100.6 °F

For the following questions, two statements are given- one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (A), (B), (C), and (D) as given below:

A) Both A and R are true, and R is the correct explanation of the assertion.
B) Both A and R are true, but R is not the correct explanation of the assertion.
C) A is true, but R is false.
D) A is false, but R is true

8. **Assertion (A):** The maximum and minimum air temperatures do not stay constant.
Reason (R): They vary daily due to weather factors like cloud cover, humidity, or wind.

9. **Assertion (A):** Infrared thermometers were widely used during the COVID-19 pandemic.
Reason (R): Infrared thermometers can measure temperature without direct contact with the body.

10. **Assertion (A):** Normal body temperature can vary from person to person.
Reason (R): The body temperature can be measured using a laboratory thermometer.

II. VERY SHORT ANSWER TYPE QUESTIONS (2 M):

1. Define temperature. Name the instrument used to measure temperature.
[Hint: Temperature is a reliable measure of the hotness or coldness of a body. The instrument used to measure temperature is called a thermometer.]

2. Why is a digital thermometer considered safer and more accurate than a mercury thermometer? (WBQ)
[Hint: A digital thermometer uses heat sensors to provide a digital readout, eliminating the risk of mercury exposure and providing a precise, easy-to-read measurement. It is less prone to reading errors like mercury clinical thermometers.]

3. What is the purpose of the kink in mercury thermometers?

[Hint: The kink (constriction or slight bend) in a clinical thermometer prevents mercury from falling back immediately, allowing the temperature to be read accurately after removal from the body.]

4. Identify the type of thermometer shown in the picture. Name the liquid used in it?

[Hint: the type of thermometer shown in the picture is laboratory thermometer. The liquid used in the laboratory thermometer is generally alcohol (colored red to make it easily seen) or mercury.]

5. Give reason:

a) A clinical thermometer has a range between 35 ˚C and 42 ˚C.
[Hint: The temperature of the human body does not go below 35 ˚C or above 42 ˚C.]

b) The temperature of hot water should be measured by keeping the laboratory thermometer immersed in hot water.
[Hint: Because there is no kink in the laboratory thermometer, the liquid column level comes down when you take the thermometer out of the hot water.]

6. Why is it necessary to wash the tip of the clinical thermometer before and after use?
[Hint: Washing the tip of the thermometer before and after use helps prevent the spread of germs and ensures accurate readings. It is essential for maintaining hygiene, especially when measuring the temperature of different individuals.]

III. SHORT ANSWER TYPE QUESTIONS (3M):

1. i) How can we convert the temperature from Celsius scale to Kelvin scale?
   [We can easily convert the temperature from Celsius scale to Kelvin scale by using the equation:
   Temperature in Kelvin scale = Temperature in Celsius scale + 273.15]

   ii) Convert 70 ℃ to Kelvin.
   [Hint: Temperature in Kelvin scale = Temperature in Celsius scale + 273.15
   = 70 + 273.15
   = 343.15 K].

2. Fill in the given box.

SCALES OF TEMPERATURE	UNIT	SYMBOL
Celsius scale	……	……...
……	degree Fahrenheit	……...
……..	……	K

[Hint:

SCALES OF TEMPERATURE	UNIT	SYMBOL
Celsius scale	**degree Celsius**	**℃**
Fahrenheit scale	degree Fahrenheit	**°F**
Kelvin scale	**kelvin**	K

3. What is the role of a thermometer in daily life and scientific experiments, and how does it contribute to accurate temperature measurement? (WBQ)
   [Hint: Different types of thermometers are useful in daily life and science. They help us:
   - **Check accurate body temperature that helps in diagnosing illnesses.**
   - **Measure temperature in science experiments to obtain accurate results.**
   - **Check room temperature to maintain a comfortable indoor environment.**

   Accurate temperature readings are important for safety and correct results. Different thermometers are used for different purposes.]

4. a) Rahul visited the doctor for a checkup. The doctor told him he had a normal body temperature of 98.6 degrees. What temperature scale did the doctor use? Write the symbol of the same.
   [Hint: The Doctor used the Fahrenheit scale of temperature. The symbol for the Fahrenheit scale is ˚F.]

b) What are the precautions to be taken while using a digital clinical thermometer? (WBQ)

[Hint:
i) Read the instruction manual before use.
ii) The tip of the thermometer is to be washed with soap and water before and after use.
iii) The digital portion or display should be out of water while washing.
iv) Do not hold the thermometer by the tip(bulb).]

5. What is the importance of measuring air temperature?

[Hint: Measuring air temperature is important because it helps us:

- **Predict the weather.**
- **Understand climate change.**
- **Help farmers grow crops.**
- **Keep people safe and comfortable, ensuring safe living and working conditions.]**

IV. LONG ANSWER TYPE QUESTIONS (5M):

1. Describe the three broad classifications of thermometers.

Clinical thermometer	Laboratory thermometer	Room thermometer
The thermometer that **measures our body temperature** is called a clinical thermometer	A laboratory thermometer is used to **measure the temperature of objects** other than the human body.	Used to **measure the temperature of the air or the room.** Used to measure daily maximum and minimum air temperatures.
The range of a clinical thermometer is from 35 ˚C to 42˚C	The range of a laboratory thermometer is generally from -10 ˚C to 110 ˚C	A typical room thermometer measures temperature within a range of -20 °C to 50 °C
A clinical thermometer can be a digital clinical thermometer, infrared clinical thermometer or mercury clinical thermometer.	Mercury or alcohol is used as a liquid in a laboratory thermometer.	Typically found in laboratories, hospitals, clinics, or weather stations. Mercury or colored alcohol is used.

V. SOURCE-BASED/ CASE STUDY-BASED QUESTIONS

During a science lesson, the teacher explained that temperature can be measured using different scales. The three commonly known temperature scales are the **Celsius scale, Fahrenheit scale and Kelvin scale**. On the Celsius scale, water freezes at **0 °C** and boils at **100 °C** under normal conditions. On the Fahrenheit scale, water freezes at **32 °F** and boils at **212 °F**. The Kelvin scale is mainly used in scientific studies, and its unit is called **kelvin (K)**. The teacher explained that the same temperature can have different numerical values on different scales. For example, normal human body temperature is about **37 °C**, which is **98.6 °F**. The students

learned that temperature scales provide standard ways of expressing how hot or cold something is. They also understood that Celsius is commonly used in daily life, while Kelvin is widely used in scientific measurements.

i) Name the three temperature scales mentioned in the passage.
[Hint: The three temperature scales are Celsius, Fahrenheit and Kelvin.]

ii) What are the freezing and boiling points of water on the Celsius scale?
[Hint: On the Celsius scale, water freezes at 0 °C and boils at 100 °C.]

iii) What is the normal human body temperature in Celsius and Fahrenheit?
[Hint: Normal human body temperature is about 37 °C, which is approximately 98.6 °F.]

ANSWERS FOR OBJECTIVE TYPE QUESTIONS [1 to 10]:

1. **c) 0 °C**
2. **c) Heat sensors**
3. **b) -10 to 110 °C**
4. **d) Mercury**
5. **a) Kelvin**
6. **d) Room thermometer**
7. **b) 37.0 °C, 98.6 °F**
8. **A) Both A and R are true, and R is the correct explanation of the assertion.**
9. **A) Both A and R are true, and R is the correct explanation of the assertion.**
10. **C) A is true, but R is false.**

Prepared by: *Ms Sithara Sharaf*	*Checked by:* *HOD Science*