CBSE CLASS 6 SCIENCE – CHAPTER 7
WORKSHEET SET 2 (MEDIUM LEVEL)

Class 6 Science | Chapter 7: Temperature and its Measurement | Level: Medium

Name: _____	Class: 6 Section: _____
Date: _____	

Section A: Multiple Choice Questions

Choose the correct option.

1. In Activity 7.1, the same tap water felt cool to one hand and warm to the other because
(a) the water changed its temperature
(b) our sense of touch can mislead us
(c) the thermometer was broken
(d) the hands were of different sizes

2. 37 °C is the same temperature as
(a) 98.6 °F
(b) 100 °F
(c) 273 K
(d) 37 K

3. A clinical thermometer cannot measure the temperature of boiling water because
(a) it is too heavy
(b) the temperature is outside its range
(c) it has no bulb
(d) it is digital

4. To convert a temperature from the Celsius scale to the Kelvin scale, we add
(a) 100
(b) 37
(c) 273.15
(d) 98.6

5. The range of a laboratory thermometer is usually
(a) 10 °C to 100 °C
(b) –10 °C to 110 °C
(c) 32 °C to 45 °C
(d) 35 °C to 42 °C

6. A thermometer has 10 divisions between 0 °C and 10 °C. Its smallest value is
(a) 0.1 °C
(b) 0.5 °C
(c) 1 °C
(d) 10 °C

7. A temperature measured in the armpit with a digital thermometer is about
(a) 0.5 °C to 1 °C lower than the actual body temperature
(b) 0.5 °C to 1 °C higher than the actual body temperature
(c) exactly the same
(d) 10 °C lower

8. Which is the correct way to use a laboratory thermometer?

(a) Let the bulb touch the bottom of the beaker
(b) Tilt the thermometer
(c) Read it with the eye in line with the liquid level while it is in the water
(d) Hold it by the bulb

9. Non-contact (infrared) thermometers were useful during COVID-19 because they

(a) are cheaper than all others
(b) measure temperature without touching, reducing the spread of disease
(c) use mercury
(d) can measure ice

10. While ice is melting, its temperature

(a) keeps rising
(b) keeps falling
(c) remains constant
(d) becomes 100 °C

Section B: Fill in the Blanks

Fill in the blanks with the correct word or number.

1. The normal temperature is the _____ body temperature of a large number of healthy people.

2. Body temperature is influenced by age, time of the day and _____ level.

3. The temperature of human beings does not normally go below 35 °C or above _____ °C.

4. The Fahrenheit scale is not used in most _____ studies anymore.

5. The Celsius, Fahrenheit and Kelvin scales are named in honour of _____.

6. While writing a temperature, a _____ is left between the number and the unit.

7. The mark of the scale with which the top of the liquid column coincides is the temperature _____.

8. The lowest to highest temperature a thermometer can measure is its _____.

9. The alcohol in a laboratory thermometer is coloured _____ so that it is easily seen.

10. As we approach the summer season, the air temperature generally _____.

Section C: True or False

Write True or False.

1. The symbol for kelvin is written as °K. (_____)

2. For temperatures of more than one degree, we write "degrees" in the full form of the unit. (_____)

3. A clinical thermometer can measure the temperature of boiling water. (_____)

4. The temperature must be read while the thermometer is immersed in the water. (_____)

5. A perfectly healthy person may have a normal temperature slightly different from 37.0 °C. (_____)

6. Pulse rate alone is a reliable indicator of fever. (_____)

7. In "degree Celsius", the word "degree" starts with a capital letter. (_____)

8. A laboratory thermometer should be held vertically and not tilted. (_____)

9. The temperature of water keeps rising while it is boiling. (_____)

10. Infrared thermometers have to touch the person's body to measure temperature. (_____)

Section D: Match the Following (10 × 1 = 10 marks)

Match the items in Column A with Column B. Write the letter in the bracket.

No.	Column A	Answer	Column B
1	Digital thermometer in the armpit	( )	(a) 273.15 K
2	Absolute zero	( )	(b) 15 million degrees Celsius
3	Core of the Sun	( )	(c) Readings of boiling water (97.8 °C to 98.1 °C)
4	Clinical thermometer range	( )	(d) Reads about 0.5 °C to 1 °C lower
5	Fever detection before thermometers	( )	(e) Change in pulse rate
6	50 divisions between 0 °C and 100 °C	( )	(f) Eye in line with the liquid level
7	0 °C in kelvin	( )	(g) Close to –273.15 °C (0 kelvin)
8	Weather forecasts	( )	(h) Smallest value 2 °C
9	Reading a thermometer correctly	( )	(i) 35 °C to 42 °C
10	Table 7.2 (Phiban's class)	( )	(j) Use air temperature data

Section E: Answer in Two Lines

1. Why can we not always rely on our sense of touch?

2. Why are digital thermometers preferred over mercury thermometers?

3. What is the range and smallest value of a typical laboratory thermometer?

4. Write the formula to convert °C to K and convert 27 °C.

5. Why can a laboratory thermometer not be used to measure body temperature?

6. Why did students get slightly different readings of boiling water in Table 7.2?

7. Name two factors that influence body temperature.

8. How can the temperature of small children or old people be measured?

9. State two precautions for using a digital clinical thermometer.

10. What was the use of non-contact thermometers during COVID-19?

Section F: Short Notes

Write short notes on the following. Write 4 or 5 valid points with examples or a neat diagram.

1. Correct way of using a laboratory thermometer (with diagram)

2. Non-contact (infrared) thermometers

3. Normal body temperature and the factors affecting it

4. Rules for writing temperature scales and units

5. Air temperature and weather reports

Section G: Answer in One Word

Read the definition and write the term.

1. The scale of temperature whose unit is kelvin is the _____. _____

2. The lowest temperature that can be achieved, close to –273.15 °C, is called _____.

_____

3. The lowest to highest temperature that a thermometer can measure is its _____.

_____

4. The thermometer commonly available in a school laboratory is the _____ thermometer.

_____

5. Besides the tongue, the digital thermometer can be placed in the _____ for small children.

_____

6. The scale on which the normal body temperature is 98.6 degrees is the _____ scale.

_____

7. The weather parameter monitored at weather stations to make forecasts is _____ temperature.

_____

8. The smallest temperature difference one division of a thermometer can read is its _____ value.

_____

9. A digital thermometer finds temperature with the help of _____. _____

10. The thermometer whose tip is washed with soap and water before and after use is the _____ thermometer. _____

ANSWER KEY – Worksheet Set 2 (Medium Level)

Section A: Multiple Choice Answers

No.	Ans.	Correct option
1	b	our sense of touch can mislead us
2	a	98.6 °F
3	b	the temperature is outside its range
4	c	273.15
5	b	–10 °C to 110 °C
6	c	1 °C
7	a	0.5 °C to 1 °C lower than the actual body temperature
8	c	Read it with the eye in line with the liquid level while it is in the water
9	b	measure temperature without touching, reducing the spread of disease
10	c	remains constant

Section B: Fill in the Blanks

No.	Answer
1	average
2	activity
3	42
4	scientific
5	scientists
6	space
7	reading
8	range
9	red
10	rises

Section C: True or False

No.	Answer	Reason / Correct statement
1	False	It is written as K, without the degree sign.
2	True	—
3	False	It is outside the range of a clinical thermometer.
4	True	The liquid level begins to fall once it is taken out.
5	True	—
6	False	Other situations also affect the pulse rate.
7	False	It starts with a lower-case letter; Celsius has a capital C.
8	True	—

No.	Answer	Reason / Correct statement
9	False	It remains constant while boiling.
10	False	They are non-contact thermometers.

Section D: Match the Following

No.	Column A	Ans.	Column B (correct match)
1	Digital thermometer in the armpit	d	Reads about 0.5 °C to 1 °C lower
2	Absolute zero	g	Close to –273.15 °C (0 kelvin)
3	Core of the Sun	b	15 million degrees Celsius
4	Clinical thermometer range	i	35 °C to 42 °C
5	Fever detection before thermometers	e	Change in pulse rate
6	50 divisions between 0 °C and 100 °C	h	Smallest value 2 °C
7	0 °C in kelvin	a	273.15 K
8	Weather forecasts	j	Use air temperature data
9	Reading a thermometer correctly	f	Eye in line with the liquid level
10	Table 7.2 (Phiban's class)	c	Readings of boiling water (97.8 °C to 98.1 °C)

Section E: Answer in Two Lines

1. **Why can we not always rely on our sense of touch?** After dipping hands in hot and cold water, the same tap water feels cool to one hand and warm to the other.
2. **Why are digital thermometers preferred over mercury thermometers?** Mercury is toxic and difficult to dispose of if the thermometer breaks. Digital readings are also easier to read.
3. **What is the range and smallest value of a typical laboratory thermometer?** Range: –10 °C to 110 °C. Smallest value: 1 °C (10 divisions between two bigger marks 10 °C apart).
4. **Write the formula to convert °C to K and convert 27 °C.** K = °C + 273.15. So 27 °C = 27 + 273.15 = 300.15 K.
5. **Why can a laboratory thermometer not be used to measure body temperature?** It must be read while in the liquid, its smallest value is 1 °C and it can break easily; a clinical thermometer is made for body temperature.
6. **Why did students get slightly different readings of boiling water in Table 7.2?** Possibly because the correct way of reading the thermometer was not followed by all the students.
7. **Name two factors that influence body temperature.** Age, time of the day and activity level (any two).
8. **How can the temperature of small children or old people be measured?** A digital thermometer can be placed in the armpit; the reading is about 0.5 °C to 1 °C lower than the actual temperature.
9. **State two precautions for using a digital clinical thermometer.** Wash the tip with soap and water before and after use; keep the display out of water; do not hold it by the tip.
10. **What was the use of non-contact thermometers during COVID-19?** They measured a person's temperature from a distance, reducing the risk of spreading disease.

Section F: Short Notes (Model Answers)

1. Correct way of using a laboratory thermometer

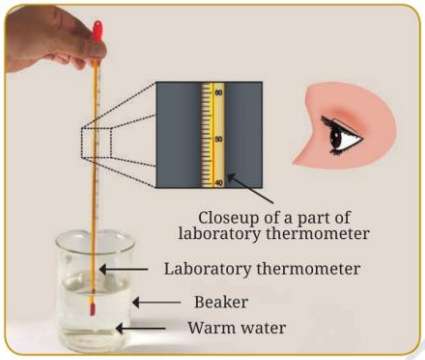
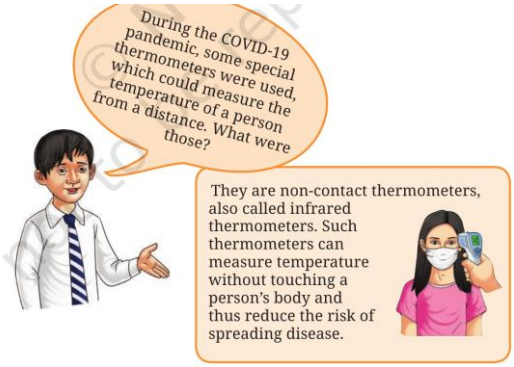


Fig.7.4: Measuring temperature of warm water

- The bulb must be immersed in the water but must not touch the bottom or the sides of the beaker.
- Hold the thermometer vertically; do not tilt it.
- Read the temperature while the thermometer is still in the water.
- The eye must be directly in line with the level of the liquid column.
- Example: wait till the column stops rising when measuring warm water (Activity 7.5).

2. Non-contact (infrared) thermometers



- They measure temperature without touching the person's body.
- They are also called infrared thermometers.
- They reduce the risk of spreading disease.
- They were widely used during the COVID-19 pandemic.
- Example: used to check the temperature of people from a distance.

3. Normal body temperature and the factors affecting it

- The normal temperature of a healthy adult is taken as 37.0 °C (98.6 °F).
- "Normal temperature" is the average body temperature of many healthy people.
- It is influenced by age, time of the day and activity level.
- Human body temperature does not normally go below 35 °C or above 42 °C.
- Example: a healthy person may have a normal temperature slightly different from 37.0 °C.

4. Rules for writing temperature and units

- Names of scales (Celsius scale, Kelvin scale) start with a capital letter.
- "Degree" is written in lower case; Celsius and Fahrenheit start with capitals; "kelvin" is written in lower case.
- Symbols °C, °F and K are capital letters; no degree sign is written with K.
- Leave a space between the number and the unit (37.0 °C); no full stop after the symbol except at the end of a sentence.
- For more than one degree, use "degrees", e.g. 37 degrees Celsius.

5. Air temperature and weather reports



Fig.7.5: Room thermometer

- A room thermometer gives an approximate idea of room temperature.
- Weather reports give the maximum and minimum air temperature of the day.
- These values change from day to day because weather depends on several factors.
- Temperature generally rises as summer approaches and falls in winter.
- Air temperature data are used at weather stations to make weather forecasts.

Section G: Answer in One Word

No.	Answer
1	Kelvin scale
2	absolute zero
3	range
4	laboratory
5	armpit
6	Fahrenheit
7	air
8	smallest
9	heat sensors
10	digital clinical