

Class: VII
Mid Term Examination 2025-2026
Science
Set A1

Time Allowed: 2½ h

MM: 60

Genal Instructions:

- The question paper consists of three sections.
- Please attempt all questions of one section together.
- Do not mix your answers from one section into another.
- Attempt three separate sections of Physics, Chemistry and Biology on three separate answer sheets.

Section A(Physics)

MM: 20

General instructions for Physics portion:

- Please check that the Physics question paper has 4 printed pages.
- Physics question paper consists of 8 questions.
- All questions are compulsory. However, an internal choice is provided in some questions.

For question number 1 write the correct option out of 4 choices. (write only correct answer with correct serial number, no need to write the words) **(1) × 3 = (3)**

1 (i)

A smoke detector is a device that detects smoke and sounds an alarm. Suppose you are fitting a smoke detector in your room. The most suitable place for this device will be

- (a) near the floor
- (b) in the middle of a wall
- (c) on the ceiling
- (d) anywhere in the room

1 (ii)

Choose the WRONG statement.

- (a) A switch is the source of electric current in a circuit.
- (b) A switch helps to complete or break the circuit.

(c) A switch helps us to use electricity as per our requirement.

(d) When the switch is in 'OFF' position, there is an air gap between its terminals.

1 (iii)

Which one is a good conductor of electricity?

(a) glass coin

(b) wood coin

(c) metal coin

(d) plastic coin

For question number 2 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.

2.

Assertion (A): A battery is made by placing two or more cells in random order.

Reason (R): A battery is formed when the positive terminal of one cell is connected to the negative terminal of the next. (1)

3. State whether the statements given below is TRUE or FALSE (1) × 2 = (2)

(i) (a) Some ice cubes placed in a dish melt into water after sometime. The ice cubes get heat for this transformation from surrounding air.

(ii) The thin wire inside the glass bulb of the lamp glows. The glowing thin wire is called the filament of the lamp.

For question number 4, fill up the blanks with correct word (s)/ scientific expression. (write only correct answer with correct serial number, no need to write the words)

(1) × 2 = (2)

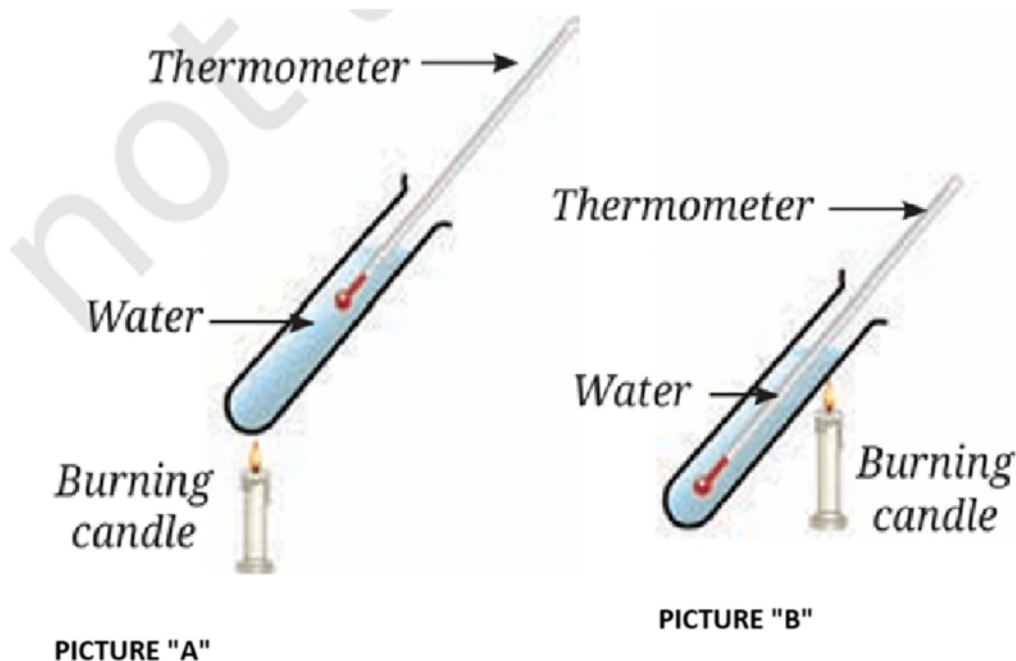
4.

(a) Hollow bricks used to construct the outer walls of houses in hot regions, have _____ filled in them.

(b) An LED has _____ terminals.

5. Suppose the '+' and '-' symbols cannot be read on an electric cell. Suggest a method to identify the two terminals of this cell. You can answer using fully labelled picture also. (2)

6. Study the picture shown below and answer in which case (which picture) the thermometer will show higher rise in temperature if in the beginning of experiment before heating was started, both thermometers were showing same temperature figure. Explain Why? (2)



7.

Read following passage and answer the questions followed.

People living in coastal areas experience an interesting phenomenon caused by the heating and cooling of land and water at different rates. As the land gets heated faster than water during the day, it causes warm air above the land to rise. This causes cooler air to move from the sea towards the land. This movement of cooler air from the sea to the land is called sea breeze.

Hence, in hot places, sea breeze relieves people from the heat. That is why, windows of the houses in coastal areas are placed facing the sea.

7. (a) What causes the air above the land to rise during the day in coastal areas? (1)

7. (b) What is the direction of flow of wind during sea breeze (where to where)? (1)

7. (c) During day what acts as a heat source land or sea? (1)

For question number 8, either do 8 (a) fully with its all parts OR do 8 (b) fully with its all parts. (any one only out of two). Write clear and correct serial number of the one you are attempting. Do not do/touch both of them.

8.(a)

Draw a circuit diagram using scientific symbols electrical components showing (not picture of artistic skills). All components should be in same circuit.

(i) one LED

(ii) One cell

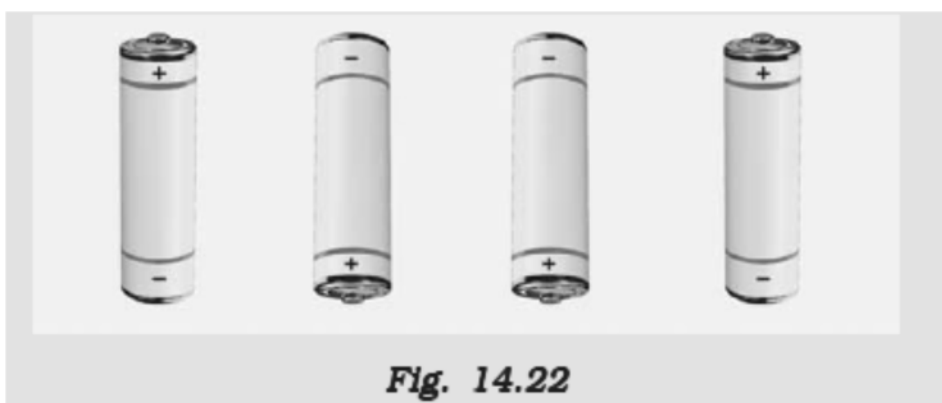
(iii) One switch in closed position

(iv) Direction of electric current (5)

OR

8 (b)

(i) Following picture shows four cells fixed on a board. Draw lines to indicate how you will connect their terminals with wires to make a battery of four cells. Draw the exactly same diagram on your answer sheet and then do. (4)



8 (b)

(ii) What is a battery? How is it different from a cell? (1)