

Name of the School: _____

SUMMATIVE ASSESSMENT – I (2026–27)
Class X — PHYSICAL SCIENCE (Science – Part I)

English Medium

Model Question Paper — Set A

Time: 1 Hour 30 Minutes

Max. Marks: 40

Name of the Student: _____ Roll No.: _____

Syllabus covered: Ch. 1 Reflection of Light at Curved Surfaces, Ch. 2 Chemical Reactions and Equations, Ch. 3 Acids, Bases and Salts, Ch. 4 Refraction of Light at Curved Surfaces, Ch. 5 Human Eye and Colourful World, Ch. 6 Structure of Atom

Instructions:

1. Part A (30 marks) is to be answered in the answer booklet in the first 1 hour 10 minutes.
2. Section I: Q.1–6 — answer all, 1 mark each. Section II: Q.7–10 — answer all, 2 marks each.
3. Section III: Q.11–14 — each question has internal choice; answer (a) or (b). 4 marks each.
4. Part B (10 marks) is to be answered on the question paper itself in the last 20 minutes.
5. Draw neat, labelled diagrams wherever necessary.

PART – A

Time: 1 Hour 10 Minutes Marks: 30

SECTION – I

Note: Answer ALL the questions. Each question carries 1 mark. $(6 \times 1 = 6)$

1. Find the focal length of a concave mirror whose radius of curvature is 30 cm.
2. Balance the chemical equation: $\text{Fe} + \text{H}_2\text{O} \rightarrow \text{Fe}_3\text{O}_4 + \text{H}_2$
3. Why does dry HCl gas not change the colour of dry blue litmus paper?
4. Find the power of a convex lens of focal length 50 cm.
5. What is myopia?
6. Write the electronic configuration of sodium ($Z = 11$).

SECTION – II

Note: Answer ALL the questions. Each question carries 2 marks. $(4 \times 2 = 8)$

7. An object is placed 15 cm in front of a concave mirror of focal length 10 cm. Find the position of the image and state its nature.
8. What is a displacement reaction? Give one example with a balanced equation.
9. Why does the sky appear blue?
10. Name the four quantum numbers and state what each one tells us about an electron.

SECTION – III

Note: Answer ONE question (a or b) from each of Q.11 to 14. Each question carries 4 marks. $(4 \times 4 = 16)$

11. (a) Draw ray diagrams to show the image formed by a concave mirror when the object is placed (i) beyond C and (ii) between F and P. Write the nature of the image in each case.

OR

- (b) Describe an activity to find the focal length of a concave mirror. List the materials required and the steps.

12. (a) What is pH? Explain the importance of pH in everyday life with any three examples.

OR

- (b) How is baking soda prepared? Write the chemical equation and any three uses of baking soda.

13. (a) With a neat diagram, explain the dispersion of white light by a glass prism.

OR

(b) Explain the formation of a rainbow with a neat diagram.

14. (a) An object is placed at a distance of 20 cm from a convex lens of focal length 15 cm. Find the image distance and magnification. Write the nature of the image.

OR

(b) Write the postulates of Bohr's model of the hydrogen atom. Mention any two limitations of the model.

PART – B

Time: 20 Minutes

Marks: 10

I. Multiple Choice Questions

Choose the correct answer and write its letter in the bracket. ($5 \times 1 = 5$)

1. The type of mirror used by dentists is []
(A) convex (B) concave (C) plane (D) cylindrical
2. Rancidity of food can be prevented by []
(A) adding antioxidants (B) exposing it to air
(C) heating it (D) adding water
3. The pH of pure water at 25 °C is []
(A) 0 (B) 7 (C) 14 (D) 1
4. The least distance of distinct vision for a normal eye is []
(A) 25 m (B) 2.5 cm (C) 25 cm (D) 2.5 m
5. The maximum number of electrons in the M shell is []
(A) 2 (B) 8 (C) 18 (D) 32

II. Fill in the Blanks

($5 \times 1 = 5$)

6. The mirror formula is _____.
7. The chemical formula of Plaster of Paris is _____.
8. The lens used to correct hypermetropia is _____.
9. The image of an object is formed on the _____ of the human eye.
10. The quantum number that describes the orientation of an orbital in space is _____.

* * *