Practice Paper

CBSE Class 8 Science (Curiosity) — Chapter 10: Light: Mirrors and Lenses

Time: 1½ hours	**Maximum Marks:** 40	**Session:** 2026–27
Name: _____	Roll No.: _____	Date: _____

General Instructions: (1) All questions are compulsory. (2) Questions marked **[Fig. N]** are figure-based (Fig. 1 to Fig. 7); study the figure carefully. (3) Write answers in the answer sheet; draw neat labelled diagrams wherever needed. (4) Marks for each question are shown in square brackets.

SECTION A — Multiple Choice Questions (1 mark each)

1. The reflecting surface of a convex mirror is curved **[1]**

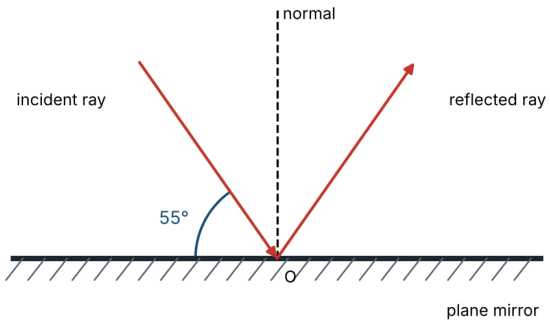
(a) inwards

(b) outwards

(c) in both directions

(d) not at all

2. [Fig. 1] In Fig. 1, a ray of light falls on a plane mirror and makes an angle of 55° with the mirror surface. What is the angle of reflection? **[1]**



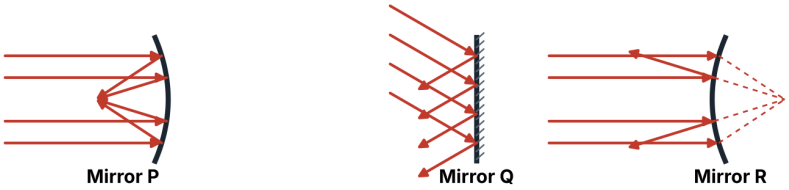
(a) 35°

(b) 55°

(c) 70°

(d) 90°

3. [Fig. 2] Fig. 2 shows a parallel beam of light falling on mirrors P, Q and R. Which mirror makes the reflected beam spread out (diverge)? **[1]**



(a) Mirror P

(b) Mirror Q

(c) Mirror R

(d) Mirrors P and Q

4. Which of the following always forms an erect and diminished image of an object? **[1]**

(a) Convex lens

(b) Concave mirror

(c) Concave lens

(d) Plane mirror

5. A lens that is thicker at its middle than at its edges is **[1]**

(a) a convex lens, which converges light

(b) a convex lens, which diverges light

(c) a concave lens, which converges light

(d) a concave lens, which diverges light

6. A dentist uses a mirror to see an enlarged, erect image of a tooth. The mirror is **[1]**

(a) plane

(b) concave

(c) convex

(d) a thin flat glass plate

Questions 7 and 8 consist of two statements – Assertion (A) and Reason (R). Answer these questions by selecting the appropriate option given below:

7. Assertion (A): Convex mirrors are fitted as side-view mirrors in vehicles.
Reason (R): A convex mirror always forms an erect, diminished image and gives a wider field of view. **[1]**

(A) Both A and R are true, and R is the correct explanation of A.

(B) Both A and R are true, and R is not the correct explanation of A.

(C) A is true but R is false.

(D) A is false but R is true.

8. Assertion (A): A convex lens can be used to burn a piece of paper using sunlight.
Reason (R): A convex lens is thinner at the middle than at the edges. **[1]**

(A) Both A and R are true, and R is the correct explanation of A.

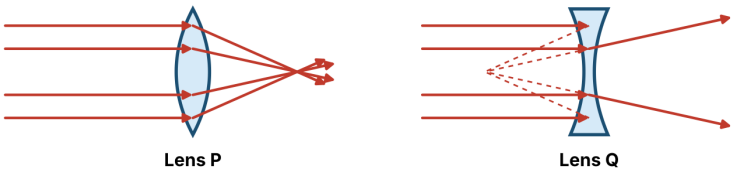
(B) Both A and R are true, and R is not the correct explanation of A.

(C) A is true but R is false.

(D) A is false but R is true.

SECTION B — Short Answer Questions (2 marks each)

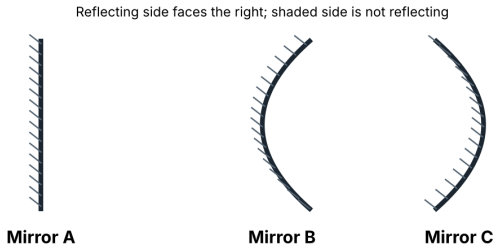
9. [Fig. 3] Fig. 3 shows a parallel beam of light passing through two lenses, P and Q. **[2]**



(a) Name the lens P and the lens Q. [1]

(b) Which of the two can be used as a magnifying glass? [1]

10. [Fig. 4] Fig. 4 shows the side views of three mirrors A, B and C. The reflecting side of each mirror faces the right; the shaded side is not reflecting. **[2]**



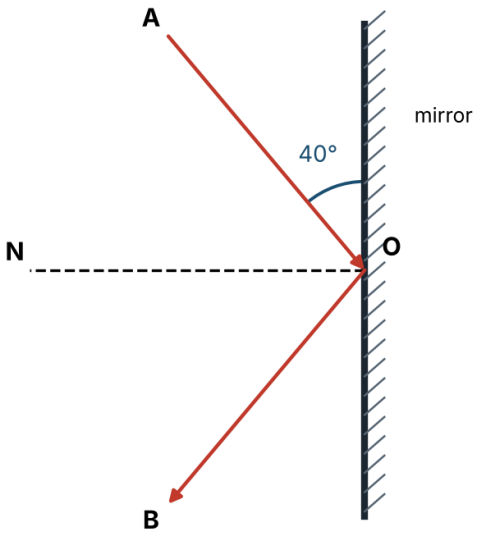
(a) Name the mirrors A, B and C. [1]

(b) Which of these mirrors is suitable as the reflector of a torch? [1]

11. (a) State the law of reflection that relates the angle of incidence and the angle of reflection. [1]
(b) What is the angle of reflection when a ray of light falls on a mirror along the normal? [1] **[2]**

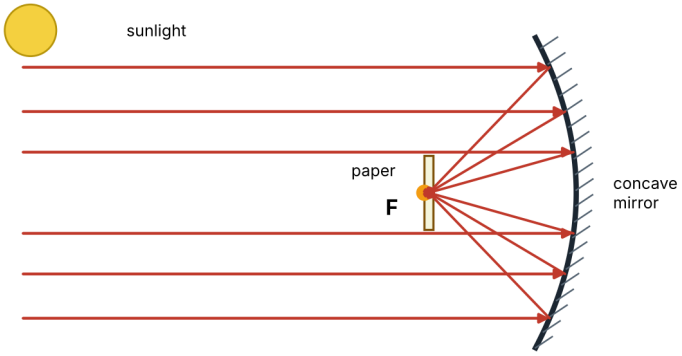
SECTION C — Long Answer Questions (4 marks each)

12. [Fig. 5] In Fig. 5, a ray AO falls on a plane mirror at O and is reflected along OB. ON is the normal to the mirror at O, and AO makes an angle of 40° with the mirror. **[4]**



(i) Find the angle of incidence. [1]
(ii) Find the angle of reflection. [1]
(iii) Find the angle AOB between the incident and the reflected ray. [1]
(iv) What angle does the reflected ray OB make with the mirror? [1]

13. [Fig. 6] Fig. 6 shows a parallel beam of sunlight falling on a mirror. A piece of paper is held at the point F where the reflected rays meet. After a while, the paper starts burning. **[4]**



(i) Name the type of mirror shown. [1]
(ii) Why does the paper catch fire at F? [1]
(iii) Name a lens that could be used in place of the mirror to burn the paper. [1]
(iv) What would happen to the reflected beam if a convex mirror were used instead? [1]

14. Describe the image formed by (i) a concave mirror when the object is held close to it, [1] (ii) a concave mirror when the object is far from it, [1] (iii) a convex mirror, [1] and (iv) name one use each of a concave mirror and a convex mirror. [1] **[4]**

15. Give scientific reasons: **[4]**

(i) Convex mirrors are used as side-view mirrors in vehicles. [1]

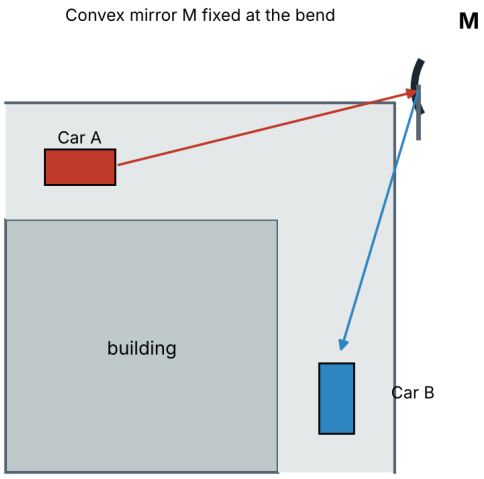
(ii) A concave mirror is used as the reflector in a torch or a vehicle headlight. [1]

(iii) A drop of water placed on a newspaper makes the letters look bigger. [1]

(iv) The word AMBULANCE is written laterally inverted on the front of an ambulance. [1]

SECTION D — Case-Based / Practical Questions (5 marks each)

16. [Fig. 7] Case: At a sharp bend in a hill road, a mirror M is fixed on a pole so that the drivers of the two cars A and B, who cannot see each other directly because of the building, can see each other, as shown in Fig. 7. **[5]**



(i) Name the type of mirror M. [1]

(ii) Give one reason why this type of mirror is chosen. [1]

(iii) Describe the image of car A seen by the driver of car B in this mirror. [1]

(iv) Would a plane mirror serve this purpose equally well? Give a reason. [1]

(v) Name one other place where such a mirror is used. [1]

17. Case: Nisha holds a shiny steel spoon in front of her face. On the inner (hollow) side she sees her face upside down when the spoon is held far away, but upright and larger when it is held very close. On the outer (bulging) side she always sees a small upright face. She also holds a convex lens over a line of print and sees larger letters. **[5]**

(i) Which side of the spoon acts as a concave mirror? [1]

(ii) Name the type of mirror formed by the outer side of the spoon. [1]

(iii) Why does the face on the inner side appear upside down at a distance? [1]

(iv) Describe the image in the convex lens when it is held close to the print. [1]

(v) Why can a concave lens not be used to focus sunlight onto a point? [1]

— End of Question Paper —