Class 10 Science – Light: Reflection and Refraction – Topic: Reflection of Light and Spherical Mirrors (Worksheet)

ALPHA CLASSES DEOBAND | Session 2026–27 | CBSE Board Pattern

Name: _____ **Roll No.:** _____ **Date:** _____

Level 1 – Basic (Build Confidence)

Q1. Define reflection of light.

Q2. State the two laws of reflection of light.

Q3. What is the difference between a concave mirror and a convex mirror?

Q4. Define the following terms for a spherical mirror: (a) Pole (P) (b) Centre of curvature (C) (c) Principal focus (F)

Q5. Write the relationship between the focal length (f) and the radius of curvature (R) of a spherical mirror.

Q6. A concave mirror has a radius of curvature of 24 cm. Find its focal length.

Q7. Name the type of mirror that always forms a virtual, erect, and diminished image regardless of the position of the object.

Q8. What is meant by the aperture of a spherical mirror?

Level 2 – Standard / Exam-Oriented

Q9. State the four ray rules used for drawing ray diagrams in spherical mirrors. For each rule, briefly mention how the reflected ray behaves differently in a concave mirror compared to a convex mirror.

Q10. Distinguish between regular reflection and diffuse (irregular) reflection. Which type of reflection allows us to see non-luminous objects around us?

Q11. A spherical mirror has a focal length of 15 cm. Find its radius of curvature. If the focus of this mirror lies in front of the reflecting surface, state whether it is concave or convex.

Q12. Explain why concave mirrors are used in: (a) headlights of cars (b) shaving / makeup mirrors In each case, state where the object (bulb or face) is placed relative to P, F, and C.

Q13. A ray of light travelling parallel to the principal axis strikes a concave mirror. Describe the path of the reflected ray and state the ray rule used. What would happen if the same parallel ray struck a convex mirror instead?

Q14. Explain the New Cartesian Sign Convention used for spherical mirrors. Why is the focal length of a concave mirror taken as negative while that of a convex mirror is positive?

Q15. A student says: “A convex mirror can never form a real image under any circumstances.” Is this statement correct? Justify your answer.

Q16. Prepare a comparison table with at least four points of difference among a plane mirror, a concave mirror, and a convex mirror. State one practical use of each type of mirror.

Do not write solutions on this sheet. Use a separate notebook for working.
