



परमाणु ऊर्जा शिक्षण संस्था
Atomic Energy Education Society
उत्तर कुंजी / Answer Key (2025-26)

कक्षा /Class: VIII विषय/Subject: Science माह/Month: July 2025 अंक/Marks: 40
दिया गया पाठ्यक्रम/Portion covered: Chapter- 10 : Light : Mirrors and Lenses

Section A

Multiple choice questions: (1 mark each)

- 1 c) Convex mirror always forms virtual, erect, and diminished images.
- 2 b) Virtual and upright Plane mirrors form virtual, laterally inverted images.
- 3 c) Beyond centre of curvature Forms real, inverted image.
- 4 b) Convex lens Used in magnifying glasses.
- 5 d) All of the above All factors affect focal length.
- 6 c) Concave mirror Used by dentists for magnified view.
- 7 b) Converging lenses convex lenses converge light rays.
- 8 c) Convex mirror Used in vehicles for wider field of view.
- 9 b) Concave mirror (real image) Real images can be projected.
- 10 b) Concave lens Thinner at centre, diverges rays.

Section B

Assertion & Reasoning Answers (1 mark each)

11. c) A is true, R is false Real images are formed in front of concave mirrors, not behind.
12. b) Both A and R are true, but R is not the correct explanation of A Convex lenses converge rays, not diverge.
13. a) Both A and R are true, and R is the correct explanation of A Virtual images can't be projected.
14. c) A is true, R is false Concave lenses diverge rays, not converge.

Section C (1 mark each)

15. Concave mirror
16. Convergence of light rays
17. Convex lens
18. It converges light rays to a point

Section D

Short answer type questions: (2marks each)

19. Focal length is the distance between the pole and the focus of a mirror or lens.
Unit: Centimetre (cm) or meter (m).
20. Real image: Formed on screen, inverted (e.g., concave mirror).
Virtual image: Cannot be projected, upright (e.g., plane mirror).
21. Convex mirrors give a wider field of view and always form diminished images—ideal for safety.
22. A concave mirror focuses sunlight at its focal point. If dry leaves are placed there, they catch fire due to concentrated heat.
23. As the object moves closer to a convex lens, the image becomes larger and moves away from the lens.

Section E

Long answer type questions: (3marks each)

24. Ray Diagram:

- Object beyond C → Image between F and C
- Image: Real, inverted, smaller

(Diagram recommended for full marks)

25. A microscope uses two convex lenses:

- Objective lens forms magnified real image
- Eyepiece magnifies it further to form virtual image

26. Concave lens: Always forms virtual, erect, diminished image.

Convex lens: Can form real or virtual images depending on object position.

27. Activity:

- Take a torch and cardboard with a small hole.
- Shine light through the hole in a dark room.
- Light travels in a straight line—visible beam confirms it.