30+ Questions from the "Light" chapter of Class 10 Science that appeared in the CBSE and JKBOSE exams in 2024.

- **Define the principal focus of a concave mirror.** *(CBSE 2024)*
- **The radius of curvature of a spherical mirror is 20 cm. What is its focal length?** *(JKBOSE 2024)*
- **Name the mirror that can give an erect and enlarged image of an object.** *(CBSE 2024)*
- **Why do we prefer a convex mirror as a rear-view mirror in vehicles?** *(JKBOSE 2024)*
- **Find the focal length of a convex mirror whose radius of curvature is 32 cm.** *(CBSE 2024)*
- **A concave mirror produces a three-time magnified (enlarged) real image of an object placed 10 cm in front of it. Where is the image located?** *(CBSE 2024)*
- **A ray of light traveling in air enters obliquely into water. Does the light ray bend towards or away from the normal? Why?** *(JKBOSE 2024)*
- **Light enters from air into glass having a refractive index of 1.50. What is the speed of light in glass? The speed of light in a vacuum is 3×10^8 m/s.** *(CBSE 2024)*
- **An object 5 cm in size is placed at a distance of 20 cm in front of a convex mirror of a radius of curvature of 30 cm. Find the position, nature, and size of the image.** *(CBSE 2024)*
- **An object of size 7.0 cm is placed 27 cm in front of a concave mirror of focal length 18 cm. At what distance from the mirror should a screen be placed so that a sharply focused image can be obtained? Find the size and nature of the image.** *(JKBOSE 2024)*
- **Define 1 dioptre of power of a lens.** *(CBSE 2024)*
- **A convex lens forms a real and inverted image of a needle at a distance of 50 cm from it. Where is the needle placed in front of the convex lens if the image is equal to the size of the object? Also, find the power of the lens.** *(JKBOSE 2024)*
- **Where should an object be placed in front of a convex lens to get a real image of the same size as the object?** *(CBSE 2024)*
- **One-half of a convex lens is covered with black paper. Will this lens produce a complete image of the object? Verify your answer experimentally. Explain your observations.** *(JKBOSE 2024)*
- **A concave lens of focal length 15 cm forms an image 10 cm from the lens. How far is the object placed from the lens? Draw the ray diagram.** *(CBSE 2024)*
- **An object is placed at a distance of 10 cm from a convex mirror of focal length 15 cm. Find the position and nature of the image.** *(CBSE 2024)*
- **An object 5 cm in size is placed at a distance of 20 cm in front of a convex mirror of a radius of curvature of 30 cm. Find the position, nature, and size of the image.** *(JKBOSE 2024)*
- **Find the focal length of a lens of power -2.0 D. What type of lens is this?** *(CBSE 2024)*
- **A person with a myopic eye cannot see objects beyond 1.2 m distinctly. What should be the corrective lens used to restore proper vision?** *(JKBOSE 2024)*
- ***Explain the scattering of light.*** *(CBSE 2024)*
- ***A person uses a lens of power -5.5 D for distant vision and +1.5 D for near vision. Calculate the focal lengths of the lenses used for correcting his vision.*** *(CBSE 2024)*

- ***What is presbyopia? How is it corrected?*** *(CBSE 2024)*
- ***Explain why the sky appears blue during the day and reddish at sunrise and sunset.*** *(CBSE 2024)*
- ***Describe an experiment to show that white light is composed of seven colors.*** *(CBSE 2024)*
- ***What is the refractive index of a medium? How does it relate to the speed of light in different media?*** *(JKBOSE 2024)*
- ***State Snell's law of refraction.*** *(JKBOSE 2024)*
- ***Draw a ray diagram to show the formation of a real, inverted, and diminished image by a concave mirror.*** *(JKBOSE 2024)*
