Short Answer Questions

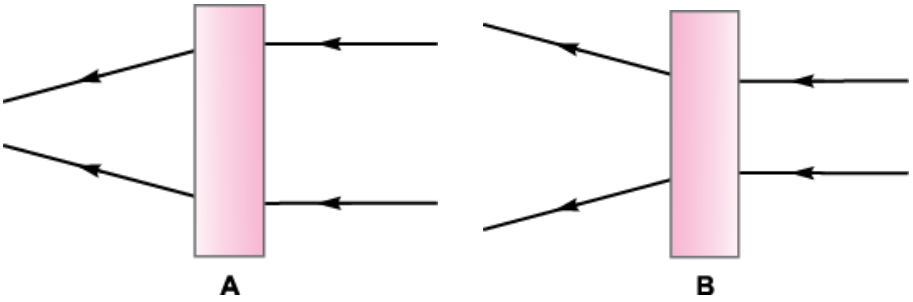
Q.1. What type of mirror is used as a side mirror in a scooter? Why is this type of mirror chosen?

[NCERT Exemplar]

Ans. Convex mirror. Convex mirrors can form images of objects spread over a large area. So, these help the drivers to see the traffic of a large area behind them.

Q.2. Observe the figures given below carefully.

Ans.



The given figures show the path of light through lenses of two different types, represented by rectangular boxes A and B. What is the nature of lenses A and B?

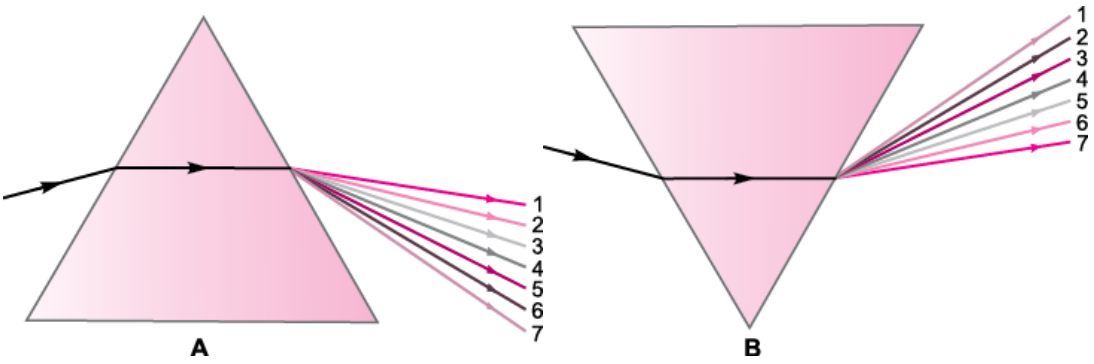
Ans. A – convex lens; B – concave lens.

Q.3. Boojho made light from a laser torch to fall on a prism. Will he be able to observe a band of seven colours? Explain with a reason.

[NCERT Exemplar]

Ans. No, laser torch gives out light of only one colour.

Q.4. State the correct sequence (1-7) of colours in the spectrum formed by the prisms A and B, shown in figure.



Ans.

Q.5. An erect and enlarged image of an object is formed on a screen. Explain how this could be possible.

[NCERT Exemplar]

Ans. The image formed on the screen could be enlarged and erect if the object is placed upside down between F and 2F of the lens.

Q.6. Two different type of lenses are placed on a sheet of newspaper. How will you identify them without touching?

[NCERT Exemplar]

Ans. If the letters appear bigger/magnified, then the lens is a convex lens. If the letters appear smaller, then the lens will be concave lens.

Q.7. A shopkeeper wanted to fix a mirror which will give a maximum view of his shop. What type of mirror should he use? Give reason.

[NCERT Exemplar]

Ans. He will fix a convex mirror because it can form images of objects spread over a large area.

Q.8. It was observed that when the distance between an object and a lens decreases, the size of the image increases. What is the nature of this lens? If you keep on decreasing the distance between the object and the lens, will you still able to obtain the image on the screen? Explain.

[NCERT Exemplar]

Ans. It is a convex lens.

No, when the object is placed close to a convex lens then the image formed is virtual which cannot be obtained on screen.

Q.9. Suppose we wish to obtain the real image of a distant tree. Explain two possible ways in which we can do it.

[NCERT Exemplar]

Ans. (a) By using a concave mirror and a screen.

(b) By using a convex lens and a screen.

Q.10. What is regular and irregular reflection?

Ans. Regular reflection: It is the reflection from a smooth surface such that the light rays are evenly parallel to each other and an image is formed. For example, reflection from the smooth surface of calm lake can produce an image in water.

Irregular reflection: It is the diffused reflection from uneven surface such that the light rays are not parallel to each other and do not form an image. For example, reflection of light from the surface of a flowing stream does not form an image.