

Q.1] Give Reasons:

- ① A person suffering from myopia uses spectacles of concave lenses.
- ② A person suffering from myopia uses spectacles of convex lenses.
- ③ In old age, a bifocal lens is necessary for some persons.
- ④ When a burning stick of incense is moved fast in a circle, a circle of red light is seen.

Q.2] Answer the following:-

- ① state the Cartesian Sign Convention for refraction of light by a lens.
- ② what is lens formula? State it.
- ③ State ~~the~~ rules used for drawing ray diagrams for the formation of an image by a convex lens.
- ④ Write short note on persistence of vision.
- ⑤ Write difference between concave lens and convex lens.
- ⑥ simple microscope and compound microscope.
- ⑦ Doo

- ⑦ Draw neat and well labelled ray diagrams for image formation by a convex lens when an object is
 - ① at infinity
 - ② beyond $2f$,
 - ③ at $2f$,
 - ④ between F_1 and $2f$,
 - ⑤ at Focus F_1 ,
 - ⑥ between focus F_1 and optical center O .
- ⑧ Draw a scientifically correct labelled diagram of the human eye and answer the following questions:
 - (i) name the types of lens in human eye.
 - (ii) state the nature of the image formed of the object on the screen inside the eye.
- ⑨ Explain the function of the iris and the muscles connected to the lens in the human eye.
- ⑩ what is colour-blindness.
- ⑪ explain the perception of colour in the human eye.
- ⑫ what is myopia? what are the possible reasons of myopia? How is myopia corrected?
- ⑬ Explain the working of an astronomical telescope using refraction of light.
- ⑭