Light - Reflection and Refraction : Important Questions

Important Questions Notes Previous Years Questions

Light - Reflection and Refraction : Important Questions

1. **What is the focal length of a plane mirror ?**
2. **Draw a ray diagram to show refraction of a light ray in a glass slab.**
3. **A converging lens has a focal length of 15 cm. An object is placed 60 cm from the lens . Find the position, nature & size of the image.**
4. **Refractive index of diamond with respect to glass is 1.6 and absolute refractive index of glass is 1.5. Find the absolute refractive index of diamond.**
5. **It is desired to obtain an erect image of an object using a concave mirror of focal length 20 cm.**
    1. **What should be the range of distance of object from the mirror.**
    2. **Will the image be bigger or smaller than object ?**
    3. **Draw a ray diagram to show the image formation in this case.**
6. **One half of a convex lens of focal length 20 cm is covered with a black paper.**
    1. **Will the lens produce a complete image of the object ?**
    2. **Show the formation of image of an object placed at $2F_1$ of such covered lens with the help of a ray diagram.**
    3. **What will be the intensity of the image formed by half covered lens as compared to non-covered lens.**
7. **If the angle of incidence of a ray of light falling on glass surface is 60^o & the angle of refraction is 30^o. What is the refractive index of glass ?**
8. **Rays from sun converge at a point 15 cm in front of a concave mirror. Where should an object be placed so that size of its image is equal to size of object.**
9. **Size of image of an object by a mirror having a focal length of 20 cm is observed to be reduced to 1/3rd of its size. At what distance the object has been placed from the mirror? What is the nature of image & the mirror?**
10. **A 10 mm long a pin is placed vertically in front of a concave. A 5 mm image of a pin is formed at 30 cm in front of the mirror. What is the focal length of this mirror?**
11. **If a child crawls towards a mirror at a rate of 0.20 m/s, then at what speed will the child & her image come nearby to each other?**
12. **A ray of light is propagating from medium A to B. If the refractive index of medium B with respect to A is 1.5, what will be the refractive index of medium A with respect to B?**
13. **State snell's law with the help of suitable ray diagram.**
14. **Which mirror is used for rear view in vehicles & why?**