# Human Eye and Colourful world

1. How do you correct the eye defect Myopia? (AS1)

2. Explain the correction of the eye defect Hypermetropia. (AS1)

3. How do you find experimentally the refractive index of material of a prism? (AS3)

4. Explain the formation of rainbow. (AS1)

5. Explain briefly the reason for the blue colour of the sky. (AS1)

6. Explain two activities for the formation of artificial rainbow. (AS3)

7. Derive an expression for the refractive index of the material of a prism. (AS1)

8. Light of wavelength λ1 enters a medium with refractive index n2 from a medium with refractive index n1. What is the wave lenght of light in second medium? (AS 1)

9. Why does the sky sometimes appear white? (AS 7)

10. A person is viewing an extended object. If a converging lens is placed in front of his eye, will he feel that the size of object has increased? Why? (AS7)

11. Incident ray on one of the face (AB) of a prism and emergent ray from the face AC are given in figure -1. Complete the ray diagram.(AS 5)

12.How do you appreciate the role of molecules in the atmosphere for the blue colour of the sky? (AS6)

13. How do you appreciate the working of Ciliary muscles in the eye? (AS 6)

14. Glass is known to be a transparent material. But ground glass is opaque and white in colour.Why? (AS7)

15. A light ray falls on one of the faces of a prism at an angle 40o so that it suffers angle of minimum deviation of 30o. Find the angle of prism and angle of refraction at the given surface.
(Ans:50o,25o) (AS7)

16. The focal length of a lens suggested to a person with Hypermetropia is 100cm. Find the distance of near point and power of the lens. (Ans: 33.33cm, 1D ) (AS 7)

17. Eye is the only organ to visualize the colourful world around us. This is possible due to accommodation of eye lens. Prepare a six line stanza expressing your wonderful feelings.

1) The size of an object as perceived by an eye depends primarily on [ ]
A)actual size of the object B) distance of the object from the eye
C) aperture of the pupil D) size if the image formed on the retina

2) When objects at different distances are seen by the eye which of the following remain constant?
A) focal length of eye-lens B) object distance from eye-lens [ ]
C) the radii of curvature of eye-lens D) image distance from eye-lens

3) During refraction, _____ will not change. [ ]
A) Wave length B) frequency C) speed of light D) all the above

4) A ray of light falls on one of the lateral surface of an equilateral glass prism placed on the horizontal surface of a table as shown in fig. 2.For minimum deviation of ray, which of the following is true? [ ]
A) PQ is horizontal B) QR is horizontal
C) RS is horizontal D) either PQ or RS is horizontal P

5) Far point of a person is 5m. In order that he has normal vision what kind of spectacles should he use [ ]
A) Concave lense with focal length 5m B) concave lense with focal length 10m
C) Convex lense with focal length 5m D) convex lense with focal length 2.5m

6) The process of re-emission of absorbed light in all directions with different intensities by the atom or molecule is called [ ]
A) Scattering of light B) dispersion of light C) reflection of light D) refraction of light