

CBSE Class 10 Science MCQ Chapter 11 The Human Eye and the Colourful World

Q1) A person went for a medical check-up and found that the curvature of his eye lens is increasing. Which defects he is likely to suffer from?

- (a) myopia
- (b) cataract

- (c) presbyopia
- (d) hypermetropia

Correct Answer: Option (a)

Q2) A person gets out in the sunlight from a dark room. How does his pupil regulate and control the light entering in the eye?

- (a) the size of pupil will decrease, and less light will enter the eye
- (b) the size of pupil will decrease, and more light will enter the eye
- (c) the size of pupil will remain same, but more light will enter the eye
- (d) the size of pupil will remain same, but less light will enter the eye

Correct Answer: Option (a)

Q3) When light rays enter the eye, most of the refraction occurs at the

- (a) crystalline lens
- (b) outer surface of the cornea
- (c) iris
- (d) pupil

Correct Answer: Option (b)

Q4) In which part of the human eye the image of an object is formed?

- (a) iris
- (b) pupil
- (c) retina
- (d) cornea

Correct Answer: Option (c)

Q5) The danger signals installed at the top of tall buildings are red in colour. These can be easily seen from a distance because among all other colours, the red light

- (a) is scattered the most by smoke or fog
- (b) is scattered the least by smoke or fog
- (c) is absorbed the most by smoke or fog
- (d) moves fastest in air

Correct Answer: Option (b)

Q6) Which of the following phenomena of light are involved in the formation of a rainbow?

- (a) Reflection, refraction and dispersion
- (b) Refraction, dispersion and total internal reflection
- (c) Refraction, dispersion and internal reflection

(d) Dispersion, scattering and total internal reflection

Correct Answer: Option (b)

Q7) A person is seeing an object closer to his eyes. What changes in his eyes will take place?

- (a) the pupil size will expand
- (b) the ciliary muscles will contract
- (c) the focal length of eye lens will increase
- (d) the light entering in the eye will be more

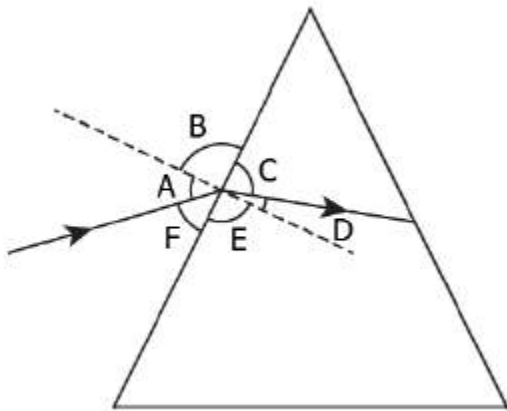
Correct Answer: Option (b)

Q8) The splitting of white light into different colours on passing through a prism is called

- (a) reflection
- (b) refraction
- (c) dispersion
- (d) deviation

Correct Answer: Option (c)

Q9) The image shows a light ray incident on a glass prism.



The various angles are labeled in the image. Which angle shows the angle of incidence and angle of refraction, respectively?

- (a) A and C
- (b) B and E
- (c) C and F
- (d) D and F

Correct Answer: Option (a)

Q10) The deflection of light by minute particles and molecules of the atmosphere in all directions is called _____ of light.

- (a) dispersion
- (b) scattering
- (c) interference
- (d) tyndall effect

Correct Answer: Option (b)

Q11) Which of the following phenomena contributes significantly to the reddish appearance of the sun at sunrise or sunset?

- (a) Dispersion of light
- (b) Scattering of light
- (c) Total internal reflection of light
- (d) Reflection of light from the earth

Correct Answer: Option (b)

Q12) Why do stars appear to twinkle at night?

- (a) because the light of stars travels in different medium
- (b) because the distance of star varies when earth rotates
- (c) because the star changes its position relative to earth
- (d) because the atmosphere reflects the light at different angles

Correct Answer: Option (a)

Q13) When white light enters a prism, it gets split into its constituent colours. This is due to

- (a) different refractive index for different wavelength of each colour
- (b) each colour has the same velocity in the prism.
- (c) prism material has high density.
- (d) Scattering of light

Correct Answer: Option (a)

Q14) When white light enters a glass prism from air, the angle of deviation is least for

- (a) blue light
- (b) yellow light
- (c) violet light
- (d) red light

Correct Answer: Option (d)

Q15) Which option justifies that the Sun appears red at sunrise and sunset?

- (a) red scatters highest by the atmosphere
- (b) the distance between the sun and earth reduces
- (c) red has high wavelength, so it travels longer distance

(d) the white light disperses into seven colours, only red enters the atmosphere

Correct Answer: Option (c)

Q16) At noon the sun appears white as

- (a) light is least scattered
- (b) all the colours of the white light are scattered away
- (c) blue colour is scattered the most
- (d) red colour is scattered the most

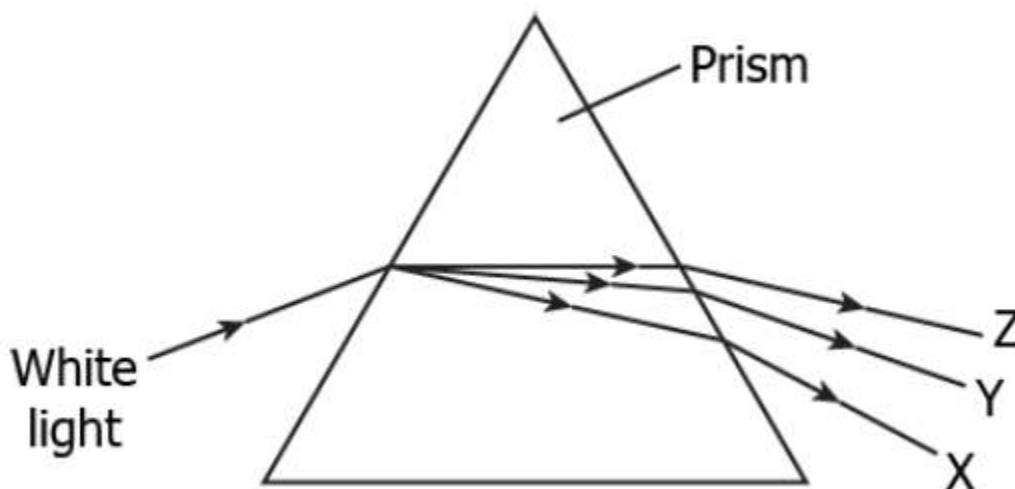
Correct Answer: Option (a)

Q17) Twinkling of stars is due to atmospheric

- (a) dispersion of light by water droplets
- (b) refraction of light by different layers of varying refractive indices
- (c) scattering of light by dust particles
- (d) internal reflection of light by clouds.

Correct Answer: Option (b)

Q18) The image shows the dispersion of the white light in the prism.



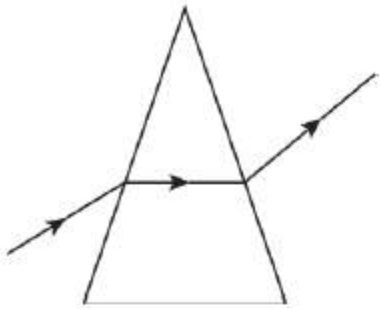
What will be the colours of the X, Y and Z?

- (a) X: red; Y: green; Z: violet
- (b) X: violet; Y: green; Z: red
- (c) X: green; Y: violet; Z: red
- (d) X: red; Y: violet; Z: green

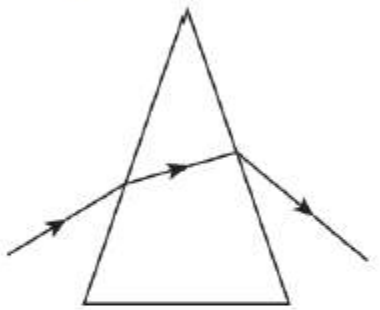
Correct Answer: Option (b)

Q19) Which image shows the deviation of light in a prism?

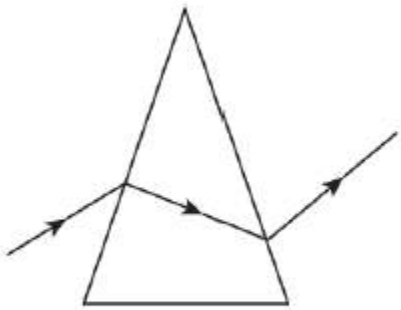
(a)



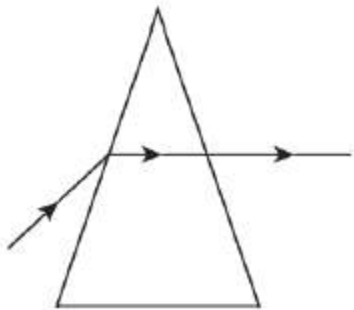
(b)



(c)

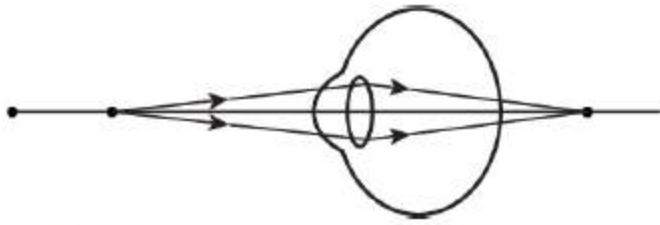


(d)



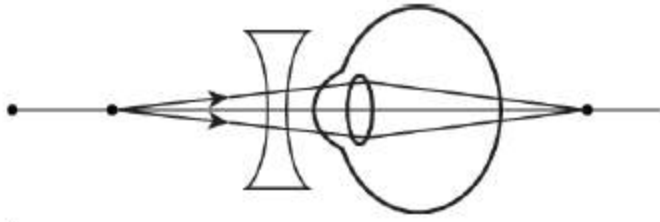
Correct Answer: Option (b)

Q20) The image shows the ray diagram of a defected eye.

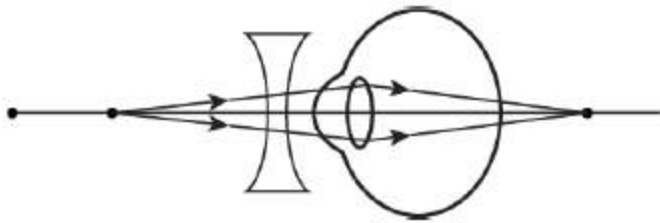


Which option shows the correction of the defect of the eye?

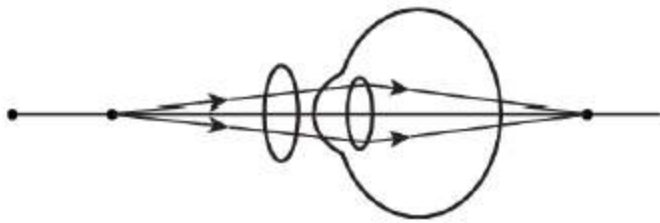
(a)



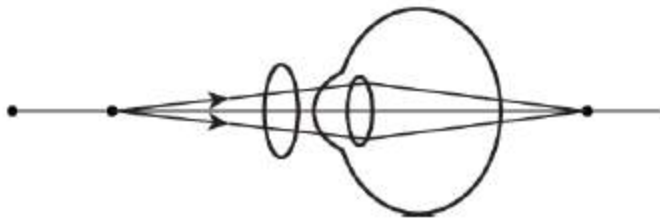
(b)



(c)



(d)



Correct Answer: Option (d)

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