

Human Eye and Colourful World

Question 1.

Assertion: Blind spot is a small area of the retina which is insensitive to light where the optic nerve leaves the eye.

Reason: There are no rods or cones present at the junction of optic nerve and retina in the eye.

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.
- (e) Both A and R are false.

▼ [Answer](#)

- (a) Both A and R are true and R is the correct explanation of A.
-

Question 2.

The defect of the eye in which the eyeball becomes too long is

- (a) myopia
- (b) hypermetropia
- (c) presbyopia
- (d) cataract

▼ [Answer](#)

- (a) myopia
-

Question 3.

What type of image is formed by the eye lens on the retina?

- (a) Real and erect
- (b) Virtual and inverted
- (c) Real and inverted
- (d) Virtual and erect

▼ [Answer](#)

- (c) Real and inverted
-

Question 4.

The amount of light entering the eye can be controlled by the

- (a) iris
- (b) pupil
- (c) cornea
- (d) ciliary muscles

▼ [Answer](#)

- (b) pupil
-

Question 5.

At noon, the Sun appears white as

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

▼ Answer

(c) light is least scattered

Question 6.

Twinkling of stars is due to

- (a) reflection of light by clouds
- (b) scattering of light by dust particles
- (c) dispersion of light by water drops
- (d) atmospheric refraction of starlight

▼ Answer

(d) atmospheric refraction of starlight

Question 7.

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

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

▼ Answer

(c) dispersion

Question 8.

A person cannot see distinctly objects kept beyond 2 m. This defect can be corrected by using a lens of power

- (a) + 0.5 D
- (b) - 0.5 D
- (c) + 0.2 D
- (d) - 0.2 D

▼ Answer

(b) - 0.5 D

Question 9.

The clear sky appears blue because

- (a) blue light gets absorbed in the atmosphere.
- (b) ultraviolet radiations are absorbed in the atmosphere.
- (c) violet and blue lights get scattered more than lights of all other colours by the atmosphere.
- (d) light of all other colours is scattered more than the violet and blue colour lights by the atmosphere.

▼ Answer

(c) violet and blue lights get scattered more than lights of all other colours by the atmosphere.

Question 10.

One cannot see through the fog, because

- (a) refractive index of the fog is very high
- (b) light suffers total reflection at droplets
- (c) fog absorbs light
- (d) light is scattered by the droplets

▼ Answer

(d) light is scattered by the droplets

Question 11.

Refraction of light by the earth's atmosphere due to variation in air density is called

- (a) atmospheric reflection
- (b) atmospheric dispersion
- (c) atmospheric scattering
- (d) atmospheric refraction

▼ Answer

(d) atmospheric refraction

Question 12.

The deflection of light by minute particles and molecules of the atmosphere in all direction is called of light.

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

▼ Answer

(c) interference

Question 13.

The air layer of atmosphere whose temperature is less than the hot layer behaves as optically

- (a) denser medium
- (b) rarer medium
- (c) inactive medium
- (d) either denser or rarer medium

▼ Answer

(a) denser medium

Question 14.

The focal length of the eye lens increases when eye muscles.

- (a) are relaxed and lens becomes thinner
- (b) contract and lens becomes thicker
- (c) are relaxed and lens becomes thicker
- (d) Contract and lens becomes thinner.

▼ Answer

(a) are relaxed and lens becomes thinner

Question 15.

The colour that is scattered the least by the tiny particles and the atoms/ molecules of the atmosphere is

- (a) Violet
- (b) Green
- (c) yellow
- (d) Red

▼ Answer

(d) Red

Question 16.

The image formed on the retina of the human eye is

- (a) virtual and inverted
- (b) real and inverted
- (c) real and erect
- (d) virtual and erect

▼ Answer

(b) real and inverted

Question 17.

When a person is myopic, he/ she can clearly see

- (a) both nearby and far off objects
- (b) Only nearby objects
- (c) only far off objects
- (d) Neither nearby nor far off objects

▼ Answer

(b) Only nearby objects

Question 18.

The defect of vision in which the person is able to see distant object distinctly but cannot see nearby objects clearly is called

- (a) Long-sightedness
- (b) Far-sightedness
- (c) Hypermetropia
- (d) All of the above

▼ Answer

(d) All of the above

Question 19.

The defect of myopia can be corrected by using

- (a) Concave lens
- (b) Convex lens
- (c) Either concave or convex
- (d) A complicated combination of lenses.

▼ Answer

(a) Concave lens

Question 20.

Which of the following phenomenon 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
- (d) Reflection of light from the earth

▼ Answer

(b) Scattering of light

Question 21.

Assertion: Concave mirrors are used as reflectors in torches, vehicle head-lights and in search lights.

Reason: When an object is placed beyond the centre of curvature of a concave mirror, the image formed is real and inverted.

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.
- (e) Both A and R are false.

▼ Answer

(b) Both A and R are true but R is not the correct explanation of A.

Question 22.

Assertion: The near-point of a hypermetropic eye is more than 25 cm away.

Reason: Hypermetropia is corrected using spectacles containing concave lenses.

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.
- (e) Both A and R are false.

▼ Answer

(c) A is true but R is false.

Question 23.

Which of the following is a natural phenomenon which is caused by the dispersion of sunlight in the sky?

- (a) Twinkling of stars
- (b) Stars seem higher than they actually are
- (c) Advanced sunrise and delayed sunset
- (d) Rainbow

▼ Answer

(d) Rainbow

Question 24.

The medical condition in which the lens of the eye of a person becomes progressively cloudy resulting in blurred vision is called

- (a) myopia
- (b) hypermetropia
- (c) presbyopia
- (d) cataract

▼ Answer

(d) cataract

Question 25.

The least distance of distinct vision for a normal eye is

- (a) infinity
- (b) 25 cm
- (c) 2.5 cm
- (d) 25 m

▼ [Answer](#)

- (b) 25 cm
-

Question 26.

The defect of vision in which a person cannot see the distant objects clearly but can see nearby objects clearly is called

- (a) myopia
- (b) hypermetropia
- (c) presbyopia
- (d) bifocal eye

▼ [Answer](#)

- (a) myopia
-

Question 27.

A person cannot see distinctly objects kept beyond 2 m. This defect can be corrected by using a lens of power

- (a) + 0.5 D
- (b) - 0.5 D
- (c) + 0.2 D
- (d) - 0.2 D

▼ [Answer](#)

- (b) -0.5 D
-

Question 28.

Near and far points of a young person normal eye respectively are

- (a) 0 and infinity
- (b) 0 and 25 cm
- (c) 25 cm and infinity
- (d) 25 cm and 150 cm.

▼ [Answer](#)

- (c) 25 cm and infinity
-

Question 29.

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.

▼ [Answer](#)

- (b) refraction of light by different layers of varying refractive indices
-

Question 30.

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

▼ [Answer](#)

- (b) is scattered the least by smoke or fog
-

Question 31.

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 colours has same velocity in the prism.
- (c) prism material have high density.
- (d) Scattering of light

▼ [Answer](#)

- (a) different refractive index for different wavelength of each colour
-

Question 32.

The change in focal length of an eye lens is caused by the action of the

- (a) Pupil
- (b) Retina
- (c) Cilliary muscles
- (d) Iris

▼ [Answer](#)

- (c) Cilliary muscles
-

Question 33.

The human eye forms the image of an object at its

- (a) Cornea
- (b) Iris
- (c) Pupil
- (d) Retina

▼ [Answer](#)

- (d) Retina
-

Question 34.

The least distance of distinct vision for an eye lens is caused by the action of the

- (a) 25 m
- (b) 2.5 cm
- (c) 25 cm
- (d) 2.5 m

▼ [Answer](#)

- (c) 25 cm
-

Question 35.

The human eye can focus objects at different distances by adjusting the focal length of the eye lens. This is due to

- (a) Presbyopia
- (b) Accommodation
- (c) Near-sightedness
- (d) Far-sightedness

▼ [Answer](#)

- (b) Accommodation
-

Question 36.

Bi-focal lens are required to correct

- (a) astigmatism
- (b) coma
- (c) myopia
- (d) presbyopia

▼ [Answer](#)

- (d) presbyopia
-

Question 37.

The ability of eye lens to adjust its focal length to form a sharp image of the object at varying distances on the retina is called

- (a) Power of observation of the eye
- (b) Power of adjustment of the eye
- (c) Power of accommodation of the eye
- (d) Power of enabling of the eye

▼ [Answer](#)

- (c) Power of accommodation of the eye
-

Question 38.

Myopia and hypermetropia can be corrected by

- (a) Concave and plano-convex lens
- (b) Concave and convex lens
- (c) Convex and concave lens
- (d) Plano-concave lens for both defects.

▼ [Answer](#)

- (b) Concave and convex lens
-

Question 39.

The muscular diaphragm that controls the size of the pupil is

- (a) cornea
- (b) ciliary muscles
- (c) iris
- (d) retina

▼ [Answer](#)

- (c) iris
-

Question 40.

The black opening between the aqueous humour and the lens is called

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

▼ [Answer](#)

(d) pupil
