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Question 1. What is meant by power Of accommodation Of the eye?
Answer: The power Of accommodation of the eye is the ability of the eye to observe the distinct objects clearly which are situated at a large distance from the eye. The ciliary muscles are responsible to change the focal length Of the eye lens. The value of the power of accommodation Of the normal human eye is (d = 25 cm) = 100/f = 100/d = 100/25 = 4 dioptres. The value of power of accommodation Of human eye is about 4D

Question 2. A person with a myopic eye cannot see objects beyond 1.2 m distinctly. What should be the type of the corrective lens used to restore proper vision?
Answer: The far point for myopic eye is 1.2m.

$\therefore \quad u = -\infty, v = -1.2 \text{ m}, P = ?$

$$\frac{1}{v} - \frac{1}{u} = \frac{1}{f} = P$$

Using lens formula,

We get, $P = -\frac{1}{1.2} - \frac{1}{-\infty} = -0.83 \text{ D}$

So, a concave lens of power – 0.83 D is required to restore proper vision.

Question 3. What is the far point and near point of the human eye with normal vision ?
Answer: For human eye with normal vision, far point is at infinity and near point is at 25 cm from the eye.

Question 4. A student has difficulty reading the blackboard while sitting in the last row. What could be the defect the child is suffering from ? How can it be corrected ?
Answer: As the child has difficulty in reading the blackboard, he is suffering from myopia or short sightedness. To correct this defect, he has to use spectacles with concave lens of suitable focal length.

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Question 1. 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) Human eye can change the focal length of the eye lens to see the objects situated at various distances from the eye. This is possible due to the power of accommodation of the eye lens.

Question 2. The human eye forms the image of an object at its
(a) cornea (b) iris (c) pupil (d) retina
Answer: (d) The human eye forms the image of an object at its retina.

Question 3. The least distance of distinct vision for a young adult with normal vision is about
(a) 25 m
(b) 2.5 cm
(c) 25 cm
(d) 2.5 m
Answer: (c) The least distance of distinct vision is the minimum distance of an object to see clear and distinct image. It is 25 cm for a young adult with normal visions.

Question 4. The change in focal length of an eye lens is caused by the action of the
(a) pupil
(b) retina
(c) ciliary muscles
(d) iris
Answer: (c) The relaxation or contraction of ciliary muscles changes the curvature of the eye lens. The change in curvature of the eye lens changes the focal length of the eyes. Hence, the change in focal length of an eye lens is caused by the action of ciliary muscles.

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