

Topic	Key Concepts	Important Questions	Multiple Choice Questions	Short Answer Questions	Long Answer Questions
Structure of the human eye	<p>The human eye is a complex organ that allows us to see. It consists of several parts: the cornea, iris, pupil, lens, ciliary muscles, retina, and optic nerve.</p> <p>The cornea is the outermost part of the eye. The iris is the colored part of the eye. The pupil is the opening in the center of the iris. The lens is a biconvex structure that focuses light on the retina. The ciliary muscles are attached to the lens and help in accommodation. The retina is the light-sensitive part of the eye. The optic nerve carries the visual information from the retina to the brain.</p>	<p>1. What is the function of the cornea?</p> <p>2. How does the iris control the amount of light entering the eye?</p> <p>3. What is the function of the lens?</p> <p>4. How do the ciliary muscles help in accommodation?</p> <p>5. What is the function of the retina?</p> <p>6. How does the optic nerve carry visual information?</p>	<p>1. The human eye is a complex organ that allows us to see. It consists of several parts: the cornea, iris, pupil, lens, ciliary muscles, retina, and optic nerve.</p> <p>2. The cornea is the outermost part of the eye. The iris is the colored part of the eye. The pupil is the opening in the center of the iris. The lens is a biconvex structure that focuses light on the retina. The ciliary muscles are attached to the lens and help in accommodation. The retina is the light-sensitive part of the eye. The optic nerve carries the visual information from the retina to the brain.</p>	<p>1. The human eye is a complex organ that allows us to see. It consists of several parts: the cornea, iris, pupil, lens, ciliary muscles, retina, and optic nerve.</p> <p>2. The cornea is the outermost part of the eye. The iris is the colored part of the eye. The pupil is the opening in the center of the iris. The lens is a biconvex structure that focuses light on the retina. The ciliary muscles are attached to the lens and help in accommodation. The retina is the light-sensitive part of the eye. The optic nerve carries the visual information from the retina to the brain.</p>	<p>1. The human eye is a complex organ that allows us to see. It consists of several parts: the cornea, iris, pupil, lens, ciliary muscles, retina, and optic nerve.</p> <p>2. The cornea is the outermost part of the eye. The iris is the colored part of the eye. The pupil is the opening in the center of the iris. The lens is a biconvex structure that focuses light on the retina. The ciliary muscles are attached to the lens and help in accommodation. The retina is the light-sensitive part of the eye. The optic nerve carries the visual information from the retina to the brain.</p>
Refraction of light	<p>Refraction is the bending of light as it passes from one medium to another. The amount of bending depends on the refractive indices of the two media.</p> <p>The refractive index of a medium is defined as the ratio of the speed of light in vacuum to the speed of light in the medium.</p> <p>The refractive index of air is 1.0003, of water is 1.33, of glass is 1.5, and of diamond is 2.42.</p>	<p>1. What is refraction of light?</p> <p>2. How does the refractive index of a medium affect the bending of light?</p> <p>3. What is the refractive index of air, water, glass, and diamond?</p>	<p>1. Refraction is the bending of light as it passes from one medium to another. The amount of bending depends on the refractive indices of the two media.</p> <p>2. The refractive index of a medium is defined as the ratio of the speed of light in vacuum to the speed of light in the medium.</p> <p>3. The refractive index of air is 1.0003, of water is 1.33, of glass is 1.5, and of diamond is 2.42.</p>	<p>1. Refraction is the bending of light as it passes from one medium to another. The amount of bending depends on the refractive indices of the two media.</p> <p>2. The refractive index of a medium is defined as the ratio of the speed of light in vacuum to the speed of light in the medium.</p> <p>3. The refractive index of air is 1.0003, of water is 1.33, of glass is 1.5, and of diamond is 2.42.</p>	<p>1. Refraction is the bending of light as it passes from one medium to another. The amount of bending depends on the refractive indices of the two media.</p> <p>2. The refractive index of a medium is defined as the ratio of the speed of light in vacuum to the speed of light in the medium.</p> <p>3. The refractive index of air is 1.0003, of water is 1.33, of glass is 1.5, and of diamond is 2.42.</p>
Dispersion of white light	<p>Dispersion is the splitting of white light into its constituent colors. This occurs because different colors of light have different refractive indices.</p> <p>When white light passes through a prism, it is dispersed into a spectrum of colors: violet, indigo, blue, green, yellow, orange, and red.</p>	<p>1. What is dispersion of white light?</p> <p>2. Why does white light get dispersed into its constituent colors?</p> <p>3. What are the colors of the visible spectrum?</p>	<p>1. Dispersion is the splitting of white light into its constituent colors. This occurs because different colors of light have different refractive indices.</p> <p>2. When white light passes through a prism, it is dispersed into a spectrum of colors: violet, indigo, blue, green, yellow, orange, and red.</p>	<p>1. Dispersion is the splitting of white light into its constituent colors. This occurs because different colors of light have different refractive indices.</p> <p>2. When white light passes through a prism, it is dispersed into a spectrum of colors: violet, indigo, blue, green, yellow, orange, and red.</p>	<p>1. Dispersion is the splitting of white light into its constituent colors. This occurs because different colors of light have different refractive indices.</p> <p>2. When white light passes through a prism, it is dispersed into a spectrum of colors: violet, indigo, blue, green, yellow, orange, and red.</p>
Defects of vision	<p>There are several defects of vision that can be corrected using lenses:</p> <ul style="list-style-type: none"> Myopia (Near-sightedness): Caused by an elongated eyeball or a convex lens that is too powerful. Corrected by a concave lens. Hypermetropia (Far-sightedness): Caused by a shortened eyeball or a concave lens that is too weak. Corrected by a convex lens. Presbyopia: Caused by the hardening of the lens with age. Corrected by a convex lens. Astigmatism: Caused by an irregularly shaped cornea. Corrected by a cylindrical lens. 	<p>1. What are the defects of vision?</p> <p>2. How are these defects corrected using lenses?</p>	<p>1. Myopia (Near-sightedness): Caused by an elongated eyeball or a convex lens that is too powerful. Corrected by a concave lens.</p> <p>2. Hypermetropia (Far-sightedness): Caused by a shortened eyeball or a concave lens that is too weak. Corrected by a convex lens.</p> <p>3. Presbyopia: Caused by the hardening of the lens with age. Corrected by a convex lens.</p> <p>4. Astigmatism: Caused by an irregularly shaped cornea. Corrected by a cylindrical lens.</p>	<p>1. Myopia (Near-sightedness): Caused by an elongated eyeball or a convex lens that is too powerful. Corrected by a concave lens.</p> <p>2. Hypermetropia (Far-sightedness): Caused by a shortened eyeball or a concave lens that is too weak. Corrected by a convex lens.</p> <p>3. Presbyopia: Caused by the hardening of the lens with age. Corrected by a convex lens.</p> <p>4. Astigmatism: Caused by an irregularly shaped cornea. Corrected by a cylindrical lens.</p>	<p>1. Myopia (Near-sightedness): Caused by an elongated eyeball or a convex lens that is too powerful. Corrected by a concave lens.</p> <p>2. Hypermetropia (Far-sightedness): Caused by a shortened eyeball or a concave lens that is too weak. Corrected by a convex lens.</p> <p>3. Presbyopia: Caused by the hardening of the lens with age. Corrected by a convex lens.</p> <p>4. Astigmatism: Caused by an irregularly shaped cornea. Corrected by a cylindrical lens.</p>

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		<p>1. 1990-1995 2. 1996-2000 3. 2001-2005 4. 2006-2010 5. 2011-2015 6. 2016-2020 7. 2021-2025</p>			