

General Science assignment

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Question: Write a note on shortsightedness

Definition: Short-sightedness is a very common eye condition where you cannot see objects far away clearly due to refractive error.

Symptoms: Below are the common symptoms

1. Blurred distant vision
2. Eyestrain in an attempt to focus objects
3. Headaches occurring frequently
4. Squinting to see properly
5. Rubbing of the eyes frequently by patient

Where does the image form in this defect?

Causes: The causative factors are described below

1. It has strong genetic predisposition and tends to run in families
2. Long term focusing on nearby objects such as television and computer screens.
3. Excessive eye strain caused by watching a bright screen e.g. mobile phone and computers.
4. Cornea is steep and eye ball is too long causing light rays to focus inaccurately on retina.
5. A lack of time outdoors in natural light also increases the chance of developing this error.

Draw image

Instead of numbering, give subheadings.

Treatment: Short sightedness can be corrected with

1. Glasses for children. Which type of lens?
2. Contact lenses for adults
3. Laser surgery to reshape front of eye
4. lens surgery to replace lens with artificial lens.

Question: write a note on long-sightedness

Definition: Long-sightedness is the common refractive error where light rays are focused behind retina causing distant objects appear clearly but near objects appear blurred.

Symptoms: Symptoms of the condition include:

1. length of eyeball short showing as difficulty in near vision.
2. Tiring of the eyes.
3. Headaches and uncomfortable vision after doing close tasks such as reading.
4. A need to squint eyes to see clearly.

Causes: Below are the causative factors

1. Eye ball is too short and cornea is abnormally flat causing rays to focus behind retina.
2. Genetics also play a role in development of the disease.
3. Aging is also one of the cause of farsightedness in adults.

Treatment: Long-sightedness can be corrected by:

1. use of glasses and contact lens especially the use of Convex lenses
2. Refractive surgery including laser procedures and Intra-ocular lens implantation.

Date _____

Question: Write a note on Color Blindness

Definition: Color blindness is an inability to see colors in a normal way. It is also known as color deficiency causing the person unable to distinguish between certain colors especially green and reds and occasionally blues.

Symptoms: The symptoms include:

1. Trouble seeing brightness of colors in usual way
2. Inability to tell the difference between shades of same or similar colors.
3. Sensitivity to light.

Causes: Causes of the condition include

1. Most people are born with it, this is called a congenital condition. So genetics play a great role
2. Defects in the photoreceptor cells of the retina called "cones" which are responsible for color vision.
3. partial or complete lack of cones in retina
4. People developing the condition later in life are said to acquire the condition due to
 - a) Disease such as Diabetes and Glaucoma
 - b) Trauma to eye e.g Retinal detachment
 - c) Toxic effects from drugs e.g Alcoholism
 - d) Exposure to certain chemicals e.g Carbon disulfide

Treatment: There is no treatment of Inherited disorder.

The use of color blindness glasses and treatment of underlying cause can help in acquired cases.

Date _____

Question: write a note on Night blindness

Definition: Night blindness is an inability to see well at night or in poor light. It is often associated with an inability to adapt quickly from a well illuminated to a poorly illuminated environment.

Symptoms: Night blindness is not a disease itself rather a symptom of an underlying eye condition.

Some of its features include:

1. Difficulty seeing in the dark e.g frequent stumbling around the house in dim light
2. Difficulty in driving at night
3. Inability to recognize faces
4. Difficult adaptation to a bright room after being in dark and vice versa.
5. Headaches, eye strain and cloudy vision.

Causes: Some of the important causes are

1. Vitamin A deficiency
2. Myopia (Near sightedness)
3. Glaucoma medications that work by constricting the pupil.
4. Cataracts
5. Retinitis pigmentosa which is a genetic condition

Treatment: The treatment depends on prevention and correction of underlying cause.

1. Vitamin A supplementation
2. Correction of cataracts by cataract surgery
3. Treatment of Glaucoma through laser or surgery
4. Correction of nearsightedness by glasses or contact lenses