

## **BIOLOGY**

## BOOKS - EVERGREEN BIOLOGY (ENGLISH)

## **SENSE ORGANS**

**Review Qestions** 

**1.** Name the Part that provides and maintains shape of eyeball.



2. Name the Part that darkens the eye from inside.



**3.** Name the Part that helps in dark and light adaptations.



**4.** Name the Part that helps to maintain equilibrium.



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**5.** Name the Part that is affected in astigmatism.



**6.** Name the The photosensitive pigment present in the rod cells of the retina.



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**7.** Name the The internal layer of the eye which prevents reflection of light.



**8.** Name the Eye defect in which cornea becomes uneven.



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**9.** Name the Photosensitive pigment present in the cone cell of retina.



**10.** Name the Fluid present in the anterior part of the eye in front of the eye lens.



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**11.** Name the The internal layer of the eye which prevents reflection of light.



**12.** Name the The ear ossicle which is attached to the tympanum.



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**13.** Name the The layer of the eyeball that forms the transparent cornea.



**14.** Name the The eye defect caused due to the shortening of the eyeball from front to back.



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**15.** Name the The structure that is responsible for protecting the eye from sweat.



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**16.** Myopia is corrected by the use of a



17. which layer of the wall of an eyeball contains abundant blood vessels?



**18.** Which one of the following is the correct difference between rod cells and cone cells of our retina?



**19.** Give one difference between the following pairs on the basis of what is given in brackets:

Myopia and Hypermetropia (Lenses used)



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**20.** Give one difference between the following pairs on the basis of what is given in brackets: Perilymph and Endolymph (Location)



**21.** Give one difference between the following pairs on the basis of what is given in brackets:

Blind spot and Yellow spot (Sensory cells)



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**22.** Give one difference between the following pairs on the basis of what is given in brackets:

Light and Dark adaptation (Diameter of pupil)



23. Give one difference between the following pairs on the basis of what is given in brackets: Myopia and Hypermetropia. (Cause of the defect)



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24. Give one difference between the following pairs on the basis of what is given in brackets: Sclerotic layer or choroid layer (Which one forms the Iris?)



**25.** Give one difference between the following pairs on the basis of what is given in brackets: Choroid and Sclerotic layers of the eye (Function).



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**26.** State the condition when a body is in (i) static, (ii) dynamic equilibrium, Give one

example each of static and dynamic equilibrium.



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27. Give one difference between the following pairs on the basis of what is given in brackets:

Perilymph or endolymph (Which one surrounds the organ of Corti?)



**28.** Give one difference between the following pairs on the basis of what is given in brackets:

Myopia and Hypermetropia. (Cause of the defect)



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**29.** Give one difference between the following pairs on the basis of what is given in brackets:

Rods and Cones (Pigment present)



**30.** Give one difference between the following pairs on the basis of what is given in brackets: Myopia and Hypermetropia. (Cause of the defect)



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**31.** Comment upon the following: A man having presbiopia cannot accommodate the eye.



**32.** Give one difference between the following pairs on the basis of what is given in brackets:

Myopia and Hypermetropia (Lenses used)



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**33.** Comment upon the following: In eye transplantation, cornea is grafted.



**34.** Comment upon the following: A worker at a petrol pump does not smell petrol.



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**35.** Give scientific reasons for the following statements:

We feel blinded for a short while entering a dark room when coming from bright light.



**36.** Comment upon the following: When you enter a darkroom from bright lighted room you are blinded momentarily



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**37.** Glaucoma is due to



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**38.** Define the following term : Presbiopia



39. Define the following term: Myopia



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**40.** The hypermetropia is a



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**41.** Define the following term

Gustatoreceptors



**42.** Define the following term : Cochlea



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43. Define the following term: Cataract



**44.** Define the following term : Stereoscopic vision.



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45. Discuss the functions of human ear.



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**46.** How can you compare various parts of eye with a photographic camera ?



47. Describe cochlea in the ear of man.



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**48.** What is meant by power of accommodation of the eye ? Name the muscles of the eye responsible for the same.



**49.** Name some other defects of eye.



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50. Examine the given diagram and answer:



What is accommodation of eye and how is it achieved?



**51.** What will be the effect of blocked eustachian tubes?



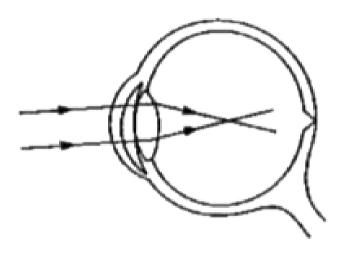
**52.** How ear helps in hearing?



**53.** How ear helps in balancing?



**54.** Given below is a diagram depicting a defect of the human eye, study the same and then answer the questions that follow:



- (i) Name the defect shown in the diagram.
- (ii) What are the two possible reasons that cause this defect?

(iii) Name the type of lens used to correct this defect.

(iv) With the help of a diagram show how the defect shown above is rectified using a suitable lens.



**55.** Give two possible reasons for defect of the eye in human beings.



**56.** Given below is a diagram depicting a defect of the human eye. Study the same and then answer the questions that follow:



Name the parts labelled 1 to 4.



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**57.** Name the type of lens used to correct eye defect.



**58.** Draw a labelled diagram of inner ear. Name the part of the inner ear that is responsible for static balance in human beings.



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**59.** Give the exact location and one function of Pinna.



**60.** Give the exact location and one function of Lacrimal gland.



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**61.** Give the exact location and one function of Malleus.



**62.** Give the exact location and one function of Tears.



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**63.** Rewrite and complete the second part:

Eye: Optic nerve:: Ear:



64. Rewrite and complete the second part:

Iris of eye: .....



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**65.** Comment upon the following: When you enter a darkroom from bright lighted room you are blinded momentarily



**66.** Rewrite in a correct logical sequence :

Pupil, eye lens, vitreous humour, fovea, optic nerve.



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67. Rewrite in a correct logical sequence:

Pupil, yellow spot, cornea, lens, aqueous humour (Path of entry of light into the eye from an object).



**68.** Rewrite in a correct logical sequence :

Oval window. Tympanum, Cochlea, Auditory canal, Ear ossicles (path through which a vibration of sound is transferred in the human ear).



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69. Rewrite in a correct logical sequence:

Pinna, cochlea, tympanum, ear ossicles,

auditory canal (route through which vibrations of sound enters the ear).



**70.** Give the biological term for Malleus, Incus and Stapes.



**71.** Complete on the basis of functional activity:

Iris of the eye and .....

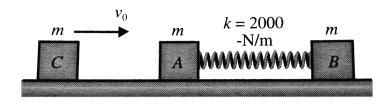


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**72.** Complete on the basis of functional activity:

Eustachian tube and .....





**73.** 

Two identical blocks A and B, each of mass m=3kq, are connected with the help of an ideal spring and placed on a smooth horizontal surface as shown in Fig. Another identical blocks C moving velocity  $v_0=0.6rac{m}{-}$ collides with A and sticks to it, as a result, the motion of system takes place in some way on this information answer Based

following questions:

Q. Oscillation energy of the system i.e., part of the energy which is oscillation (changing) between potention and kinetic forms is



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**74.** Give technical term to the following:

The structure that carries visual stimuli from retina to the brain.



**75.** Which of the following phenomena leads to variation in DNA?



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**76.** Give technical term to the following:

A thin membrane covering the entire front part of the eye.



77. Draw a diagram of the human eye as seen in a vertical section and label the parts which suits the following functions/descriptions:

The layer which prevents reflection of light.



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**78.** Draw a diagram of the human eye as seen in a vertical section and label the parts which suits the following functions/descriptions:

The structure that alters the focal length of the lens.



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**79.** Draw a diagram of the human eye as seen in a vertical section and label the parts which suits the following functions/descriptions:

The region of distinct vision.



80. Draw a diagram of the human eye as seen in a vertical section and label the parts which suits the following functions/descriptions:

The part which transmits the impulse to the brain.



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**81.** Draw a diagram of the human eye as seen in a vertical section and label the parts which suits the following functions/descriptions:

The outermost transparent layer in front of the eye lens.



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**82.** Draw a diagram of the human eye as seen in a vertical section and label the parts which suits the following functions/descriptions:

The fluid present in the anterior part of the eye in front of the eye lens.

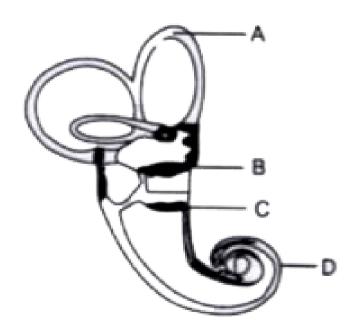


**83.** Given below is an incomplete table showing some parts belonging to some sense organs and their functions. Complete the table by filling in the blanks 1 to 5.

Part	Function
Eustachian tube	1
2	Helps to change the
	focal length of the eye lens
Organ of Corti	3
4	Transfers impulse from
	inner ear to brain
Oval window	5
6	Protects delicate cornea
Ciliary processes	7
8	Regulate diameter of the
	pupil



**84.** The diagram below represents the structure found in the inner ear. Study the same and then answer the questions which follow:



Name the parts labelled A, B, C and D.



**85.** Name the part of the ear responsible for transmitting impulses to the brain.



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**86.** The diagram below represents the structure found in the inner ear.

Study the same and then answer the questions that follow:



Name the part labelled above which is responsible for:

- (1) Static equilibrium.
- (2) Dynamic equilibrium.
- (3) Hearing.



**87.** Name the audio receptor cells which pick up vibrations.



88. Name the fluid present in the inner ear.



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89. Give the exact location of organ of corti.



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90. In the following set one word is odd one.

Write down the category of the group having identified the odd one as shown in the

example.

Example : Cell wall, vacuole, centrosome, plastids, mitochondria.



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**91.** With reference to the functioning of the eye, answer the questions that follow:

What is meant by power of accommodation of the eye?



**92.** With reference to the functioning of the eye, answer the questions that follow:

What is the shape of the lens during:

(a) near vision (b) distant vision?



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**93.** With reference to the functioning of the eye, answer the questions that follow:

Name the two structures in the eye responsible for bringing about the change in the shape of the lens.

**94.** With reference to the functioning of the eye, answer the questions that follow:

Name the cells of the retina and their respective pigments which get activated:

(a) in the dark (b) in light.



**95.** With reference to the human ear, answer the questions that follow:

Give the technical term for the structure found in the inner ear.



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**96.** With reference to the human ear, answer the questions that follow:

Name the three small bones present in the

middle ear. What is the biological term for them collectively?



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**97.** With reference to the human ear, answer the questions that follow:

Name the part of the ear associated with

(a) static balance (6) hearing (c) dynamic balance.



**98.** With reference to the human ear, answer the questions that follow:

Name the nerve, which transmits messages from the ear to the brain.



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**99.** Identify the odd one in each set and name the category to which the remaining three belong:

Semicircular canals, Cochlea, Tympanum, Utriculus.



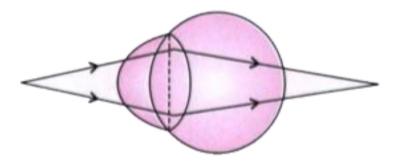
**100.** Identify the odd one in each set and name the category to which the remaining three belong:

Aqueous humour, Vitreous humour, Iris,

Central canal



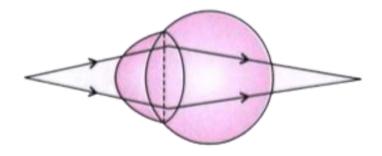
**101.** Study the following diagram carefully and then answer the questions that follow. The diagram is depicting a defect of the human eye:



Identify the defect shown in the diagram.



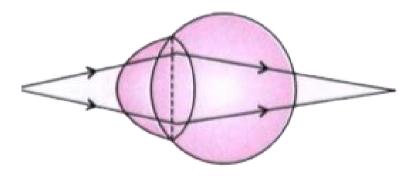
**102.** Study the following diagram carefully and then answer the questions that follow. The diagram is depicting a defect of the human eye:



Give two possible reasons for the above defect.



**103.** Study the following diagram carefully and then answer the questions that follow. The diagram is depicting a defect of the human eye:



Draw a neat labelled diagram to show how the above defect can be rectified.



104. Give biological reason for the following:

Throat infections could lead to ear infections.



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105. Give biological reason for the following:

We cannot distinguish colour in moonlight.

Give scientific reasons.



106. Give biological reason for the following:

We should not put sharp objects into our ears.



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**107.** Complete the following table by filling the blanks 1 to 8 with appropriate terms.

S.No.	Gland	Secretion	Function/Effect on body
1.	Thyroid	1	2
2.	3	Vasopressin	4
3.	5	6	Promotes glucose utilization by the body cells.
4.	Adrenal medulla	7	8



108. Eustachian tube helps to



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**109.** State the main function Suspensory ligament of the eye.



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**110.** Name the parts of the ear ossicles are attached to



**111.** Mention the exact location of the following structures : Thylakoids.



112. Give the exact location of organ of corti.



**113.** Mention the exact location of the following structures: Lenticels.



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**114.** Mention the exact location of the Bicuspid Valve structures :



**115.** Mention the exact location of the following structures: Loop of Henle.



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**116.** The ciliary body



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**117.** Mention the exact location of the following structures : Yellow spot.



**118.** Mention the exact location of the following structures: Semi-circular canals.



**119.** Eustachian tube is a passage connecting the



**120.** Draw a well labelled diagram of the membranous labyrinth found in the inner ear.



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**121.** Based on the diagram drawn above in membranous labyrinth give a suitable term for each of the following descriptions: (1) The sensory cells that helps in hearing. (2) The part that is responsible for static balance of the body. (3) The membrane covered opening that connects the middle ear to the inner ear. (4)

The fluid present in the middle chamber of cochlea. (5) The structure that maintains dynamic equilibrium of the body.



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122. The statement given below is incorrect.

Rewrite the correct statement by changing the underlined words of the statement.

Deafness is caused due to the rupturing of the Pinna.



**123.** The statement given below is incorrect.

Rewrite the correct statement by changing the underlined words of the statement.

The part of the eye which can be donated from a clinically dead person is the Retina.



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**124.** Which part of the ear functions to maintain body balance.



**125.** Following is a bar graph giving the approximate heights of five mountain peaks.

Read the graph and answer the following questions.

Which is the highest peak and what is its height?





1. Fovea, choroid, cornea, and iris.



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2. Cochlea, basilar membrane, utriculus,

Reissner's membrane and organs of corti.



**3.** Myopia, thickening of lens, thickening of cornea, formation of image behind the retina and elongation of eyeball.



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**4.** Iris, ciliary muscles, suspensory ligaments and elasticity of lens.



**5.** Cornea, sclerotic, aqueous humour, lens, and vitreous humour.



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**6.** odd one out:Malleus, Iris, Stapes, Incus.



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**7.** Haemoglobin, Glucagon, Iodopsin, Rhodopsin.



# **Review Qestions Fill In The Blanks**

1. Seed coat is not thin, membranous in :



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2. What is the function of iris?



3. ..... cells are sensory cells in the retina of eye.



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4. Lens is held in position by .......



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5. ..... pigment is formed in the

...... cells and helps in dim or diffused

light. **Watch Video Solution 6.** ..... and ..... pigments of cone cells help in the

differentiation of colours.



7. ..... present in the cochlea are the sense organs of hearing.



**8.** A condition in which light rays are formed behind the retina is called ......



**9.** ..... and ..... are sensory spots in the internal ear that help to maintain balance.





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**11.** For the myopia defect in eye, it can be removed by



**12.** A fluid that occupies the larger cavity of the eye ball behind the lens is ......



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**Review Qestions True Or False** 

**1.** Cones are photoreceptor cells that sensitive to dim light.(true/false)



Rods are responsible for vision in the dark.(true/false)



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**Review Qestions Choose The Correct Answer** 

**1.** The photoreceptor cells of retina sensitive to colours are

A. Cones

B. Rods

C. Organs of Corti

D. None

#### **Answer:**



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**2.** Which of the following is not a natural reflex?

A. Knee-jerk

B. Blinking of eyes due to strong light

- C. Salivation at the sight of food
- D. Sneezing when any irritant enters the nose.

## **Answer:**



- **3.** Aqueous humour is present between the :
  - A. Lens and Retina
  - B. Iris and Lens

C. Cornea and Iris

D. Cornea and Lens

#### **Answer:**



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**4.** Which one of the following is the correct difference between rod cells and cone cells of our retina?

A. Retina

- B. Cornea
- C. Choroid
- D. Sclera

## **Answer:**

