

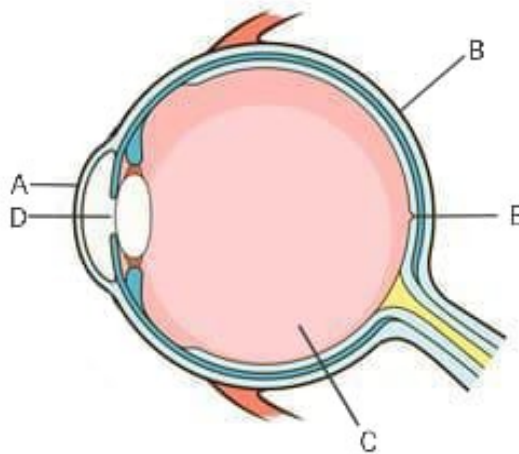
THIRUVANANTHAPURAM EDUCATIONAL DISTRICT

WS2BY10 2(E)

STANDARD X BIOLOGY UNIT – 2



1.Redraw the figure and identify the parts. Complete the table according to the examples given.



parts	peculiarities	function
A.cornea	projected transparent anterior part of the sclera	refracts light rays to focus on the retina

2. Select the right pairs from the following. Pair the others suitably.

- a.Eye Socket - depressions in the skull
- b.Tears - Secrete mucus which protect the anterior portion of the eye ball from being dry.
- c.Conjunctiva - Prevent dust ,water etc from entering into the eye
- d.External eye muscles - Fix the eye balls in the orbit
- e.Eyebrow - Clean and lubricate the anterior part of the eye ball.

3.

AUG 25 - SEP 8
EYE DONATION FORTNIGHT

- a) Prepare a poster to make people aware on the importance of Eye - donation.
- b) What are the things to be taken care of, to ensure the health of the eyes?

4. Listen to the Conversation between Suneesh and Aneesh

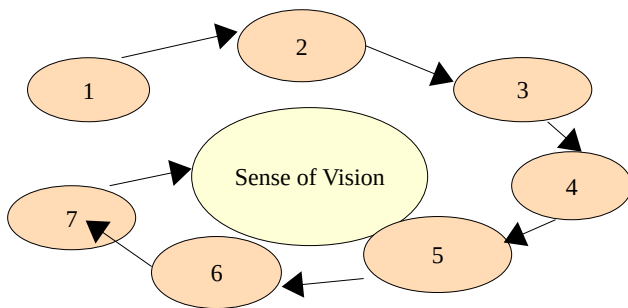


Our eyes help us to see near and far objects by adjusting the focal length by the action of ciliary muscles and ligaments.

a) Complete the table showing the adjustment of our eyes according to the distance from the object.

INDICATORS	While viewing nearby objects	While viewing distant objects
Ciliary muscles	contract	A
Ligaments	B	stretch
Curvature of lens	C	D
Focal length	E	F

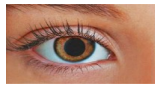

5. Parts related to the sense of sight are given in the box. Arrange them suitably and complete the flowchart.



retina, pupil,
photoreceptor,
cornea, lens,
cerebrum,
optic nerve

6. Two conditions of our eye in bright light and dim light are shown below. Complete the table using the hints given in the box.

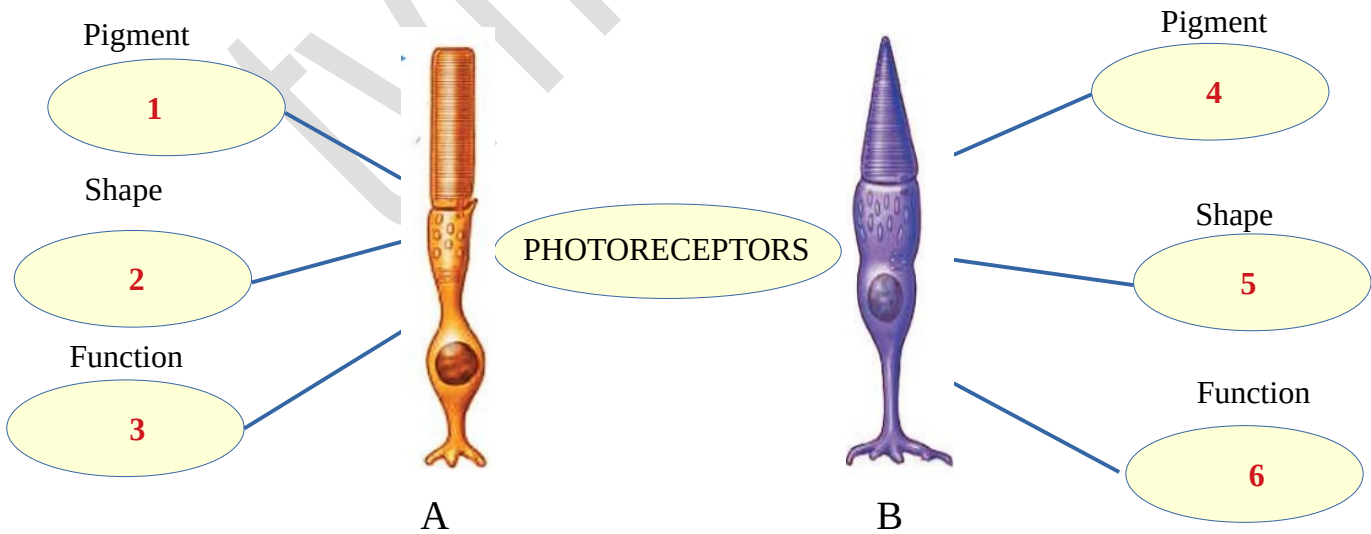
Radial muscles contract, size of pupil decrease, Radial muscles relax size of the pupil increases, circular muscles contracts, Circular muscles relax

Under dim light 	Indicators	Under bright light 
A	Radial muscles	B
C	Circular muscles	D
E	Size of the pupil	F

7. Photoreceptors in the retina are stimulated in the presence of light and impulses are generated.

a) Identify the photoreceptors A&B and complete the illustration.

photopsin, rhodopsin, rod shape, cone shape, provide us with colour vision, see objects in dim light



b) Chemical changes that occur in the photoreceptors in the presence of light is given below. Complete the following illustration and answer the question.

Rhodopsin ← Light → ...A.....+.....B.....

.....C..... ← Light → **Retinal + Opsin**

i) How is an impulse generated in photo receptors in the presence of light?

8. Listen to the conversation.



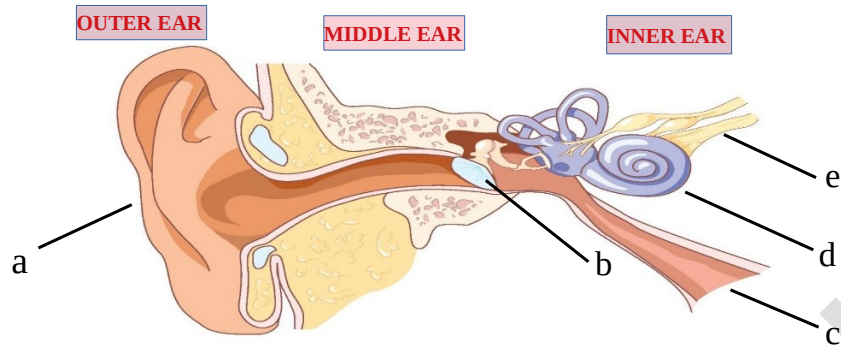
i) Name the disease mentioned by Raju and write its cause.

ii) Persons with some eye defect are not recruited for military or for jobs like pilot, driver etc. Identify the defect and write its cause.

9. Some eye defects are given below. Rearrange column B & C according to A.

Eye defect A	Reason B	Remedy C
1.Xerophthalmia	Deficiency of vitamin A	Laser treatment
2.Glaucoma	Lens of the eye becomes opaque	Consuming food with vitamin A.
3.Cataract	Prolonged deficiency of Vitamin A	Consume food containing vitamin A.
4.Night blindness	Reabsorption of aqueous humor does not occur which causes an increase in the pressure inside the eyes.	Replace eye lens with an artificial lens.

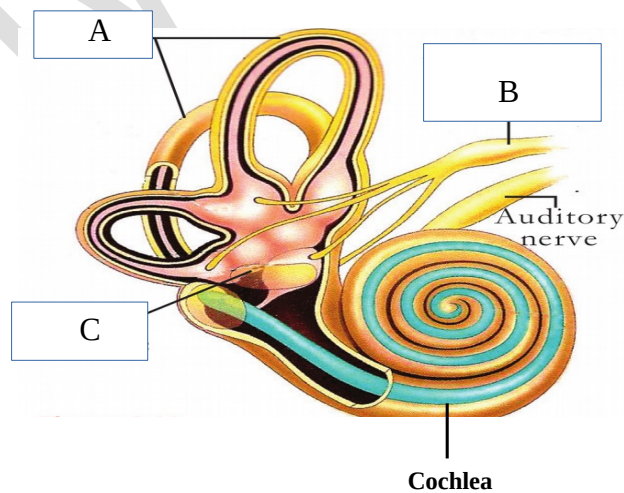
10. Observe the diagram given below. Identify and label the parts.



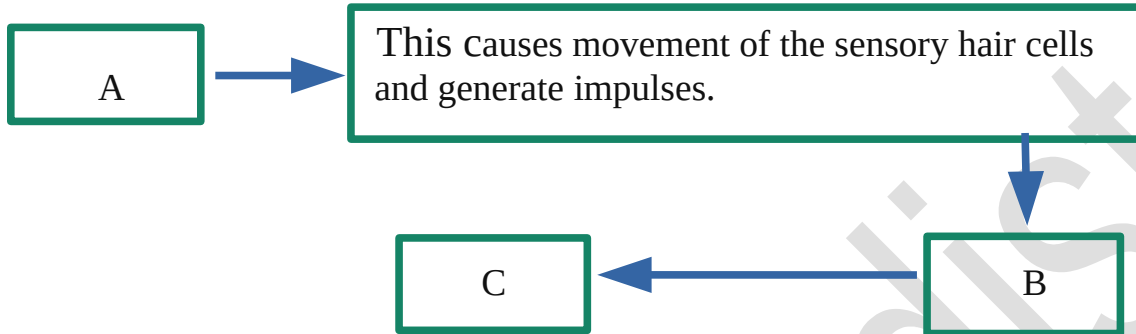
a) Rearrange column B in accordance with column A

A	B
Tympanum	Carries sound waves to the auditory canal.
Eustachian tube	It vibrates in resonance with sound waves
Auditory nerve	Helps in maintaining balance of pressure on either side of the tympanum.
Cochlea	Carry impulses to the cerebrum.
pinna	Helps in hearing

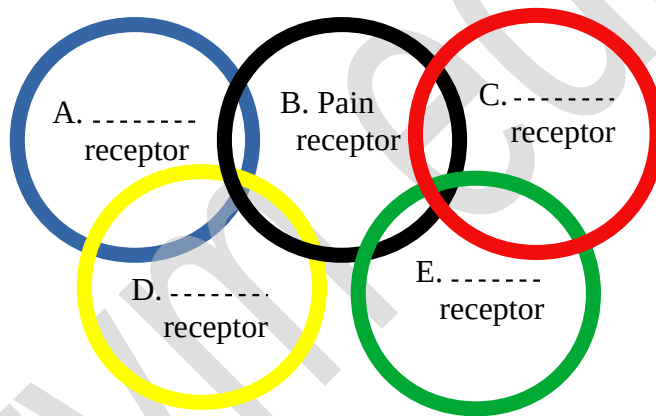
11. a) Analyse the diagram and identify the parts labelled as A, B & C.



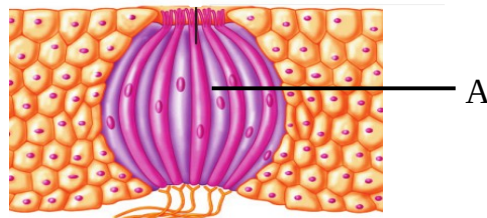
b) Complete the flow chart related to the maintenance of body balance.



12. Complete the illustration related to the different types of receptors seen in the skin.



13. Identify the diagram and answer the questions given below.



- a) Name the part labelled as A
- b) Where is A seen?
- c) What is the function of A

14. This is a flowchart related to the sense of smell from Neeraj's science diary.

- * Impulses reach cerebrum through the vestibular nerve.
- * Aromatic particles diffuse in the air and enter the nostrils.
- * Impulses are formed.
- * The sense of smell

This is incomplete and there are some mistakes also. Make necessary corrections and rearrange the flowchart in a sequential order.

15. Organisms recognize the changes in their surroundings with the help of the receptors present in the sense organs.

a) Complete the illustration given below showing different organisms and their receptors.

