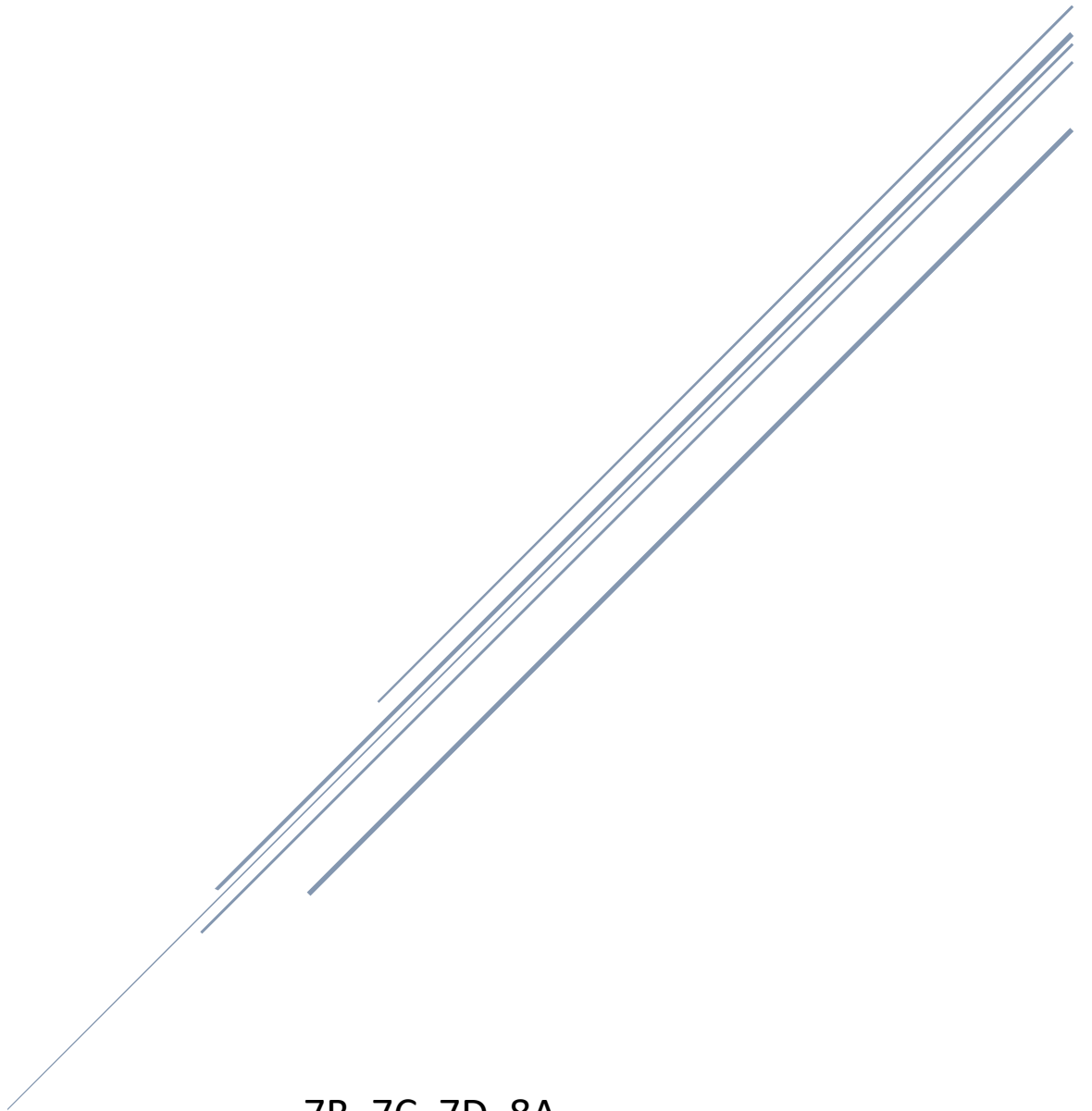


BIOLOGY NOTES

VI



7B, 7C, 7D, 8A

Chapter-7b

Co-ordination

Page-70

Q. What is receptor?

Ans: Receptor cells are grouped together into organs, called sense organs, which receive any information from surroundings.

Q. What is a nervous system?

Ans. The human nervous system made up of brain, spinal cord and millions of nerve cells.

Q. What is central nervous system?

A. Central nervous system (CNS) made up of brain and spinal cord.

Q. How does the brain analyses the information?

A. The **receptors** send the information to the central nervous system **or brain**. Brain analyses the information and sends out instructions to muscles or glands. Then parts of the body carry out the **responses**.

Q. What is the function of brain?

A. The brain and spinal cord co-ordinate all of our body's activities. It makes sure, all the different parts work together in an organised way.

Q. Why it is important when we are asleep?

A. When we are asleep, swallowing, breathing, heart-beat rate all must be co-ordinated to keep us alive.

Q. Write the features of a nerve cell?

A. They have a cell membrane, cytoplasm, and a nucleus.

But the difference is in their shape. The cytoplasm of nerve cell have a long, thin thread is called nerve fibre.

Q. What is neurone? And What is nerve impulse?

A. A nerve cell is called neurone. The information or message is carried along neurones in the form of electrical signals.

Q. Describe the two types of neurones?

A. 1. Sensory neurone: it carries information from the receptors to the brain or central nervous system.

2. Motor neurone: it carries information from the central nervous system the muscles or glands.

Book Q.c) Why do nerve cells need to be long and thin?

A. As nerve cells carry information in long distance from head to toes.

- **H.W.** Copy the above questions and answers into your lab.copy.
- Read the chapter thoroughly.
- **Do Q.1.Copy and complete and 2,3,4** Write answer yourself.
- Draw a labelled diagram of the human nervous system from page-70 and two neurones-(sensory and motor). (pg-71)

Chapter-7c

Reflexes

Page-72

Q. What is reflex?

Ans. Reflexes actions are usually very rapid, automatic and they are designed to prevent injury.

Q. Name some human responses that are automatic and explain how they protect us?

Ans. * Coughing is a good example of a reflex. It is designed to remove objects from our windpipe. When food goes down the wrong way vigorous coughing often removes it.

* Blinking is something we do not think about. Combined with liquid it makes up tears. Blinking keeps the eyeball clear of dust and dirt.

Q. What is the difference between voluntary and involuntary action?

Ans. Voluntary action **reflex or involuntary action**

1. Actions that often we think about are called voluntary action.	1. Actions that we do not think about are called involuntary or reflex action.
2. For example: picking up a ball, reading a book.	2. For example: chocking, blinking.

Q. Why are fast responses important for sprinters?

Ans. Sprinters have to reach the target very quickly.

Q. What other sports need fast reactions?

Ans. Hockey, volleyball, tennis.

Q. How do we explain the speed of reflexes?

Ans. Reflexes involve most parts of the nervous system except the thinking bit of the brain. So these reflexes protect the body from injury.

Q. What is reflex arc?

Ans. The route taken by nerve impulses is called reflex arc.

Q. Explain the reflex arc of hand withdrawal? (with diagram)

Ans. 1.Receptors in the fingers detects the heat (of hot pan)

2. Impulses travel along a sensory nerve

3. Connecting the nerve in the spinal cord

4. Impulses travel along a motor nerve

5. Finger muscles relax and we drop the pan.

Draw diagram from page **73**.

- **H.W.** Copy the above questions and answers into your lab.copy.
- Read the chapter thoroughly **Do Q.1,2. Copy and complete.** Write answer yourself.

Chapter-7d

The eye

Page-74

Q. Explain what information eye received?

Ans. The eye is an example of a receptor. It receives information about:

- The brightness of light.
- The colour of light.
- The shape of objects.
- The brightness of objects.

Q. Write the function of different parts of human eye.

A.1.Socket: The eyes sit in two holes in the skull. These holes are called sockets. **2.**

Eye muscles: The eyes are moved by three pair muscles. These allow eyes to swivel in their sockets. **3.**

Conjunctiva: Protective layer of eye that keeps away dust, dirt and germs.

4. Cornea: Transparent to let light through the pupil.

5.Sclera:Tough,white,protective layer that protection against mechanical injury.

6.Black layer (choroid): Pigmented black to prevent internal reflection of light. **7.**

Retina: Light sensitive cells where image falls on.

(cone cells for colour vision in bright light and rods concerned with dim light.)

8. Iris: Controls the amount of light entering the eye through the pupil.

9. Pupil: Allows light to enter the eyes.

10.Lens: Can change its shape to focus light rays into the retina.

11. Ciliary muscle: Changes the thickness of the lens when focusing.

(control curvature)

12.Suspensory ligament: Hold the lens in place.

13. Blind spot: Where the optic nerve attached to the eyes-no light sensitive cells here. So no vision when image falls on it.

14.Optic nerve: Carries nerve impulses from the eye to the brain.

Q. How do we see? OR, How image is formed on the retina?

A. 1.Light rays from an object enter through the pupil of the eye and bent by the cornea and the lens. 2.

Then light rays are focused on retina where contains thousands of light sensitive cells. 3. The light

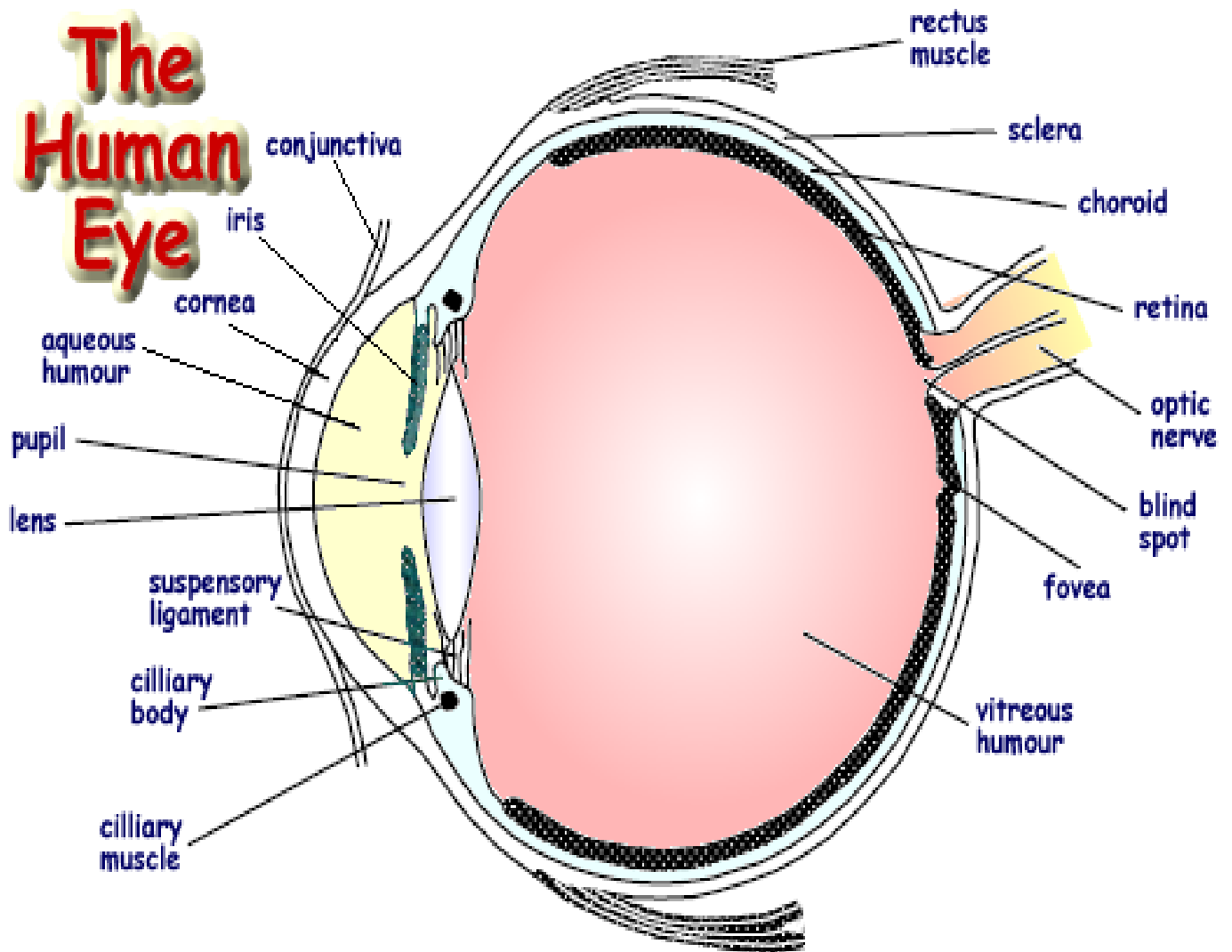
rays form a small, upside-down image on the surface of the retina. 4. The light sensitive cells send this image to the brain, along the optic nerve. 5. The brain turns the image right way up and allows to see objects as they really are.

Q. Why two eyes are better than one? A.

Judging distance is vital for safe driving. Two eyes can measure straight, real, 3D view correctly. But only one eye is very difficult to judge distances.

- **H.W.** Copy the above questions and answers into your lab.copy.
- **Do Q.1.Copy and complete and Q. 2.** Write answer yourself.

- Draw a labelled diagram of a human eye from page-74 and diagram of image formation page-75.



Chapter-8a
Drying out
Page-78

1.Q. What is water so important?

Ans. Around 70% of the human body made up of water.

All the chemical reactions in cells take place in a watery solution. We cannot live without water.

2.Q. Kidneys excrete waste product out of our body. Mention the function of kidneys.

Ans. i) Kidneys remove poisonous substances made by the cells. ie(clean the blood.)

ii) Kidneys control the amount of water in the body.

3.Q. Kidneys at times stop working properly and other means of helping the kidney is used called dialysis machine. Why is dialysis machine needed?

Ans. If the kidneys stop working, their jobs have to be carried out by a dialysis machine.

If the kidneys do not start working again, a kidney transplant may be necessary.

4.Q. Mention the function of different parts of the kidney?

Ans. *Renal artery- brings 'waste/dirty' to the kidneys in the blood.

***Renal vein-** takes 'cleaned' blood away from the kidneys.

***Ureters-** carry urine down to the bladder.

***Bladder-**stores urine.

***Ring of muscle-**that relax to let urine out of the bladder.

***Urethra-**carries urine out of the body.

5.Q. What is urea? Where is urea made?

Ans. The poisonous substances that the kidneys remove is called urea.

Urea is made in the liver when excess amino acids are broken down.

6.Q. Describe the process filtering?

Ans. Urea and excess ions(salt) are dissolved in water to make urine. These urea and excess ions(salt) are removed from the blood by a process of filtering.

7.Q. Why on a hot summer day you produce less urine?

Ans. If we are dehydrated (short of water), brain will instruct the kidney to remove less water. So, hot day we produce less and stronger urine.

8.Q. Why do we lose water?

Ans. We lose water by 3 ways--

- i) From our lungs when we breathe out.
- ii) From our skin when we sweat.
- iii) From our kidneys when we excrete.

9.Q. How many ways water gains in our body?

Ans. i) by drinking ii) by taking food iii) by respiration.

10.Q. How many ways water is lost from our body?

Ans. i) by urination ii) by sweating iii) by breathing out iv) faeces.