



STEPPING STONE  
SCHOOL (HIGH)

**CLASS :7**

**Subject: Biology**

**Topic: Answers to worksheets 7, 8 and 9**

**Dated: 1/06/2020, 3/06/2020, 5/06/2020**

***Answers to Worksheet No.:7***

***Date: 1/06/2020***

**Ans 1.** **Sarcoplasm**

**Ans 2.** **Sarcolemma**

**Ans 3.** Skeletal muscles are also called voluntary muscles because they work under the control of our will. Since these muscles are attached to bones, they are also known as skeletal muscles.

**Ans 4.** These muscles are not under the control of our will. Therefore, they are known as **involuntary** muscles. These muscles are spindle shaped and have only one centrally located nucleus. These have smooth structures without any striations. Therefore, they are also known as **smooth** or **unstriated** muscles. These are present in the wall of internal organs **like stomach and intestine.**

**Ans 5.** Cardiac muscles are present in the heart. Like involuntary muscles they are uninucleate and do not work under the control of our will, and like voluntary muscles they have striations.

*The special feature of cardiac muscles is that these muscles keep on contracting and relaxing throughout our life and never get tired. This rhythmic contractions and relaxation help in circulating blood throughout the body.*

**Ans 6.** We can make our cardiac muscles work harder by doing a lot of exercise. Prolong exercise makes the heart muscles work harder to meet the oxygen requirement of the body.

**Ans 7.** The muscular tissues form the muscles of the body. The main function of muscular tissue is contraction and relaxation which help the body to carry out different type of movements. Two organs which are formed from muscular tissues are:-

**Heart, stomach**

**Ans 8.** A neuron is the basic structural unit of the nervous system. Neuron or the nerve cells carry forward the messages from the body to the brain and vice versa.

The components of neuron are:-

- Cyton
- Dendrons
- Dendrites
- Axon

## *Answers to Worksheet No.:8*

**Date:** 3/06/2020

**Q1. Select the correct option:-**

- a. Skeletal system
- b. Involuntary muscle
- c. Muscle to bone
- d. Lacunae
- e. Striated

**Q2. State if the following statements are true or false. Correct the false statement.**

1. TRUE
2. FALSE(*The fluid part of the blood is called plasma*)
3. FALSE(*Tendons connect muscles to bones*)
4. TRUE
5. TRUE
6. TRUE
7. TRUE
8. TRUE

**Q3. Choose the odd one out and give scientific reasons.**

1. **Plasma is the odd one out** because it is liquid part of blood and others are parts of neuron.
2. **Epithelium is the odd one out** because it is a protective tissue whereas others are parts of skeletal tissue.
3. **Plasma is the odd one out** because it is the liquid part of the blood whereas others are solid components of blood.
4. **Platelet is the odd one out** because it is a component of blood whereas others are parts of skeletal tissue.
5. **Cartilage is the odd one out** because it is a skeletal tissue whereas, others are muscular tissue.

**Q4. Match the following:-**

Column A

1. Muscles of the stomach
2. Longest cell of the human body

Column B

*Involuntary*  
*Neuron*

3. Blood
4. Tendon
5. Ligament

*Fluid connective tissue  
connects muscles to bones  
connects bone to bone*

**Q5. Answer the following questions:-**

a)

Voluntary muscles	Involuntary muscles	Cardiac muscles
1. Striation of light and dark bands is present	1. No striation	1. Striation of light and dark bands is present
2. They are under the control of individual's will	2. They are not under the control of individual's will	2. They are not under the control of individual's will
3. They are multinucleate	3. They are uninucleate	3. They are uninucleate
4. Present in hands and legs	4. Present in the wall of internal organs like stomach and intestine	4. Present only in the wall of heart
5. Help in the movement of bones and get tired when over-worked	5. Help in the functioning of internal organs, e.g. food moves very easily due to the involuntary muscles in the stomach	5. Work continuously throughout the life and never get tired

b)

Blood	Lymph
<ul style="list-style-type: none"> <li>• It is red in colour.</li> </ul>	<ul style="list-style-type: none"> <li>• It is colourless.</li> </ul>
<ul style="list-style-type: none"> <li>• It transports nutrients and oxygen to different parts of the body.</li> </ul>	<ul style="list-style-type: none"> <li>• It picks up fat, bacteria and other unwanted substances from blood and helps to filter it.</li> </ul>

c) Two functions of bones are:-

- *Bones form the framework of the body.*
- *They protect some vital organs such as heart, brain and spinal cord.*

d) Define the following:-

- **Haversian canal** - It is a central canal around which the matrix is arranged in a layer of concentric rings. These canals surround blood vessels and nerves throughout and facilitate communication between bone cells.
- **Epithelial tissue** - It is a thin protective layer of cells which covers the external surface of the body as well as inner linings of all the internal organs.
- **Neuron** - A *neuron* is the basic structural unit of the nervous system. Neurons or the nerve cells carry forward the messages from the body to the brain and vice versa.
- **Tendon** - They are the cord-like strong inelastic structures that connect muscles to the bone. These tissues have great strength but limited flexibility.
- **Smooth muscles** - These muscles are not under the control of our will. Therefore, they are known as *involuntary* muscles. These muscles are spindle shaped and have only one centrally located nucleus. These have smooth structures without any striations. Therefore, they are also known as

*smooth* or *unstriated* muscles. These are present in the wall of internal organs like stomach and intestine.

## ***Answers to Worksheet No.:9***

***Date: 5/06/2020***

### ***Q1) Fill in the blanks:-***

1. *Non-communicable disease*
2. *Allergen*
3. *Allergic*
4. *Allergy*
5. *Age, gender or socio-economic status*

### ***Q2) Answer the following questions:-***

Ans 1) It is a body reaction that occurs in an individual who is hypersensitive to certain substances that may be fairly harmless for the body in general. Allergies can affect anyone regardless of age, gender or socioeconomic status.

Ans 2) Allergies are caused by allergens such as stress, smoke, certain medicines, perfumes or environmental irritants such as pollen grains, house dust.

Ans 3) The four routes through which allergens can enter are:-

- *Through the nose and mouth*
- *Through the digestive tract*
- *Through the skin*
- *Through the circulatory system*

Ans 4) ***Steps of an allergic reaction***

1. The foreign substance or antigen or allergen enters the body.
2. B cells of the body produce antibodies.
3. These antibodies act on the allergen.
4. This releases histamine to battle with the allergen and so produces an allergic reaction.
5. Depending upon how much histamine is released, the allergy may be mild or severe.

Ans 5) Symptoms of some common allergic reactions include:-

- ***Skin rashes***
- ***Difficulty in breathing***
- ***Hives (allergic reactions marked by the red, raised areas on the skin.)***
- ***Stomach upset***