NEW ERA PUBLIC SCHOOL, RAJBAGH

SUBJECT :- SCIENCE SESSION :- '2021-22'

CLASS :- 5th

Solved Assignment of Unit-IInd

Topic :- HUMAN SKELETON AND CIRCULATION

Lesson no. :- 04

Answer The Following Questions In Short.

Q1 Where are the red blood cells manufactured in the body?

Ans The red blood cells are manufactured in the bone marrow of our body?

Q2 What is the speciality of the cardiac muscles?

Ans Cardic muscles construct the walls of the heart and works throughout our lifetime without getting tired.

Q3 What are the components of the circulatory system?

Ans Heart, Blood and blood vessels are the components of the circulatory system.

Q4 What is the purpose of valves

in the heart?

Ans The purpose of valves in the heart is to prevent the back flow of blood.

Q5 What is plasma?

Ans Plasma is a clear fluid which is slightly yellow in colour and is the medium in which all the components of blood remain.

Q6 How is heartbeat generated?

Ans Heartbeat is generated by the heart during blood circulation when the valves between auricles and ventricles close.

Answer The Following Questions In Detail.

Q1 What are the Functions of skeletal system in the body?

Ans The following are the functions of skeletal system in the body.

1. It gives the body its shape and strength.
2. It helps in the movement of body parts.
3. It also protects the internal organs from shock, jerk and injuries.

Q2 Explain the structure of -
(i) Skull (ii) Backbone (iii) Ribcage

Ans (i) **Skull**:- The bones of our head make up the skull. It is made up of 22 bones and can be divided into two parts, namely cranial and facial bones. The upper part of the skull is made of 8 bones and the face is made of 14 bones. The lower jawbone is the only moving bone in the skull.

(ii) **Backbone**:- The backbone has 33 small bones called vertebrae, which are joined together to form the backbone. Each vertebrae has a hole in it through which the delicate spinal cord passes. The vertebral column or backbone thus protects the spinal cord.

(iii) **Ribcage**:- There are 12 pairs of ribs. They are attached to the backbone at the back. The first 10 pairs of ribs are attached to the sternum in front and the other two pairs are not attached to the sternum and are thus called floating ribs.

Q3 Differentiate between

Ans (i) Skeletal muscles and smooth muscles.

Skeletal muscles perform voluntary functions and help in the movement of the body parts whereas smooth muscles perform involuntary actions and are involved in carrying out the various body functions.

(ii) **Arteries and Veins**

Arteries carry oxygenated blood from the heart to different parts of the body whereas veins carry deoxygenated blood from the body to the heart for oxygenation.

(iii) **Tendons and ligaments**

Tendons are strong and non-flexible and connects muscles to bones. Whilear ligaments are flexible and elastic and connects bones to other bones.

Q4 **Describe the structure of the heart.**

Ans The heart is divided into four chambers namely two auricles and two ventricles and is about the size of a human fist. The auricles receive blood while the ventricle send out blood, mixed with oxygen, to all parts of the body. Valves are present between auricle and ventricle

to prevent the backflow of blood.

Q5 Explain the three types of blood cells found in the human body?

Ans The three types of blood cells found in the human body are given below:-

1. Red blood cells (RBCs)
They are involved in transportation of oxygen, food and other nutrients to all parts of the body.

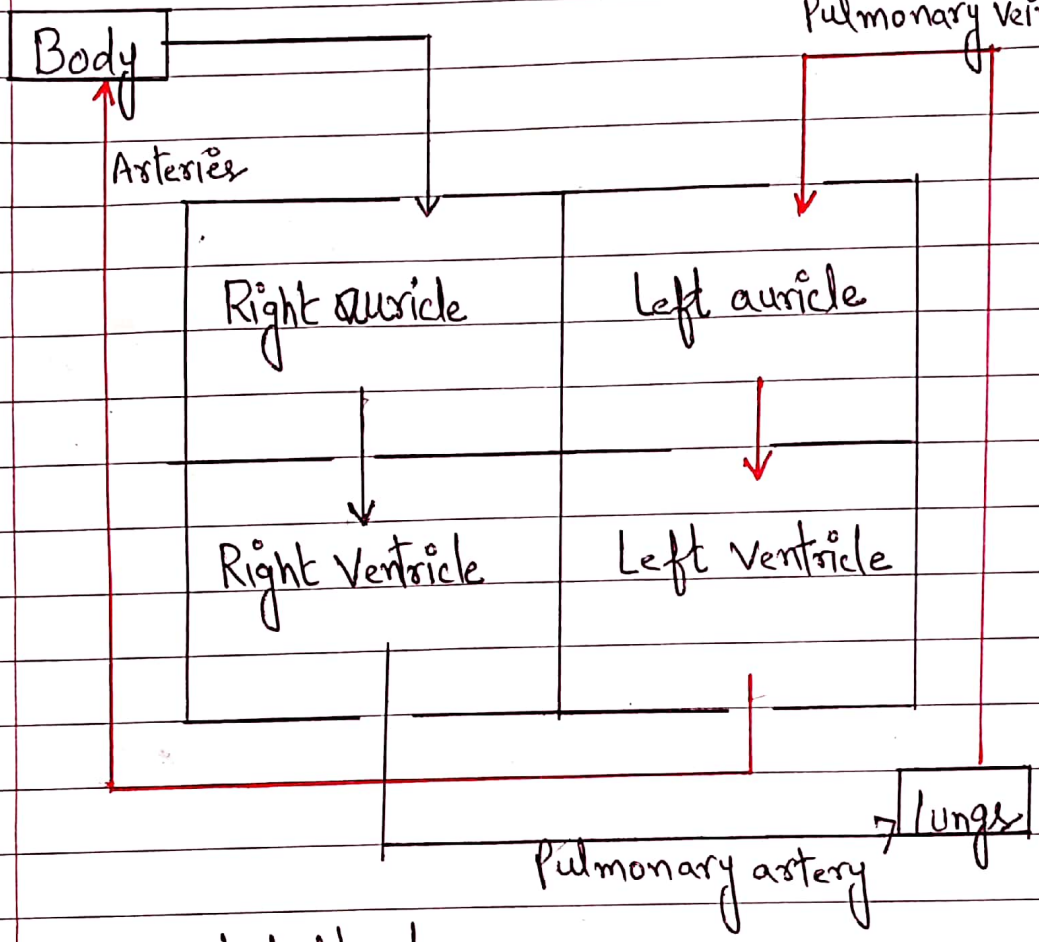
2. White blood cells (WBCs)
They are a part of the immune system and fight against the foreign materials or microbes entering the body.

3. Platelets
They are the colourless tiny blood cells that help in the process of clotting of blood.

Q6 Elaborate on the mechanism of blood circulation with the help of a flowchart.

Ans Blood comes into the right atrium from the body and moves into the right ventricle and is pushed into the pulmonary arteries in the lungs. After picking up oxygen, the blood travels back to the heart through the pulmonary veins into the left atrium, to the left

Ventricle. Finally, it is distributed to all parts of the body with the help of arteries.
The flowchart showing the pathway of blood circulation is given below.



■ oxygenated blood
■ Deoxygenated blood

Define The Following Terms

1. **Ligaments** :- A strong band of tissues that hold our bones together at our joints.
2. **Red blood cells** :- The blood cells

that carry oxygen.

3. **Pulse:-** The rate at which the heart beats.

4. **Joints:-** The point of function of two boners is called a joint.

Book Exercise

(A) Write 'T' for true and 'F' for false statements

Answers

1. T 2. T 3. F 4. F 5. T 6. F

7. F

(B) Fill In The Blanks.

Answers

1. Stethoscope 2. 600 3. Ball and Socket

4. Lower jaw bone 5. bone marrow

6. exercise 7. framework 8. Fist

(C) Match The Following.

Answers

1. b. 14
2. c. Brain
3. e. S-shaped
4. d. Boners to muscles

5. a. Sternum

Topic :- NERVOUS SYSTEM
Lesson no. :- 05

Answer The following Questions in Short.

Q1 What is the nervous system made up of?

Ans The nervous system is made up of the brain, spinal cord and nerves.

Q2 What is the major function of the spinal cord?

Ans Spinal cord serves as a connecting link between the brain and the rest of the nerves in the body.

Q3 Give one example of reflex action.

Ans Pulling away our hand as soon as we touch something hot is one of the example of reflex action.

Q4 How is the inhaled air purified inside the nasal tract?

Ans The inhaled air gets purified inside the nasal tract with the help of fine mucus hair on

our nose

Q5 What are the functions of tongue?

Ans Tongue helps to taste, to speak and in swallowing food.

Q6 What sensation does skin perceive?

Ans The skin perceive the sensation of pain, touch, pressure, heat and cold.

Answer The Following Questions In Detail.

Q1 Write the location and function of the three parts of the brain.

Ans

Three parts of brain	Location	Function
1. Cerebrum	It is located within the bony cranium.	It controls our memory, thoughts, intelligence, learning and speech.
2. Cerebellum	It is located at the back of our head below the cerebrum.	It controls the movement of our muscles and helps to keep our balance.

3. Medulla	It is situated beneath the cerebrum, in front of the cerebellum	It controls involuntary actions such as swallowing, breathing and circulation.

Q2 What are nerves? Explain the different types of nerves.

Ans Nerves are a bundle of fibres made up of nerve cells. Nerves are of three types:-

1. **Sensory nerves:-** They carry message from the sense organs to our spinal cord and brain.
2. **Motor nerves:-** They carry orders from the brain and spinal cord to the rest of the body.
3. **Mixed nerves:-** They carry signals in both ways and are present in the brain and spinal cord.

Q3 Differentiate between voluntary and involuntary actions.

Ans The actions we perform at our own will are called voluntary actions. For example clapping and running whereas the actions we perform without our own will are called involuntary actions. For example sneezing and

heartbeat.

Q4 Explain the structure and functions of

Ans (i) **Eyes:→** Our eyes give us the sense of sight. It is located in the sockets of the skull and are protected by flap-like eyelids. The eyelids prevent the entry of dust particles into the eyes. The iris is the coloured part of the eye that surrounds pupil. The pupil receives the light rays and transmits the signals to the brain. Cornea is the transparent protective membrane covering the exposed part of the eye.

(ii) **EARS:→** Ears are the organs which perceive sound and create the sensation of hearing. An ear is divided into outer ear, middle ear and inner ear. Middle ear has the eardrum which vibrates on receiving the sound. The vibrations are changed into signals in the inner ear and passed to the brain through nerves

(iii) **Tongue:→** It is a muscular organ present in the mouth. It helps us to taste. It has taste buds on the surface to identify four

different types of tastes i.e bitter, salty sweet and sour. It also helps in speech and swallowing.

Define The Following Terms.

1. **Stimulus:** → Any external disturbance which induces a body response.

2. **Involuntary actions:** → Body actions we perform without our will.

3. **Cornea:** → It is a thin membrane which covers the eyeball.

'Book Exercise'

(A) **Write 'T' for True and 'F' for the False statements.**

Answers

1. T 2. F 3. F 4. T 5. F

(B) **Fill In The Blanks.**

1. intelligence 2. Medulla 3. Vertebral column 4. nerve cells 5. 85%

(C) **Match The Following.**

1. b. Body balance
2. d. Involuntary actions
3. a. Reflex actions
4. c. To and fro signals.

Topic :→ Safety And First Aid
Lesson no. :- 06

Answer The Following Questions In Short.

Q1 What should you do in case of a gas leak?

Ans In case of gas leak, we should not light fire or turn any switch on or off in the area filled with the gas fumes.

Q2 How can you save a person from burning?

Ans We can save a person from burning by wrapping him up in a blanket and make him roll on the ground until the flames subside.

Q3 What is the importance of first aid?

Ans First aid helps to save lives and prevents the situation from getting

Worse.

Q4 How can you identify a fractured bone?

Ans Fractured bone can be identified by the bruising and inflammation at the site of injury or severe pain in movement of the area.

Answer The Following Questions In Detail

Q1 Write down six safety measures you can follow at home?

Ans The following are the six safety measures we can follow at home.

1. Do not keep our toys and books thrown across the household.
2. Do not play around with sharp objects and tools like knife, blade, screw driver etc.
3. Do not run around on the terrace or in the balcony.
4. Avoid walking on wet floor.
5. Medicines should be kept out of reach of small children.
6. Do not touch electrical appliances with wet hands or when we are barefoot.

Q2 In what ways can you prevent accidental fire?

Ans Accidental fire can be prevented by following certain safety measures.

1. Keep matches and lighters out of the reach of children.
2. Turn off electrical appliances when not in use.
3. Keep inflammable items, like Kerosene away from gas cylinders in kitchen and fireplace.

Q3 Which safety measures you should follow on roads?

Ans We should follow the following safety measures on roads.

1. Never run around or play on busy roads and streets.
2. Use a footpath when walking on the road.
3. Follow the traffic light signals and always cross the road at Zebra crossing.

Q4 How can you treat a nosebleed?

Ans To stop a nosebleed, sit down and firmly pinch the soft part of our nose, just above our nostrils, for at least 10-15

minutes. Lean forward and breathe through the mouth. This is done to allow a blood clot to form and stop the nose from bleeding.

Define The Following Terms.

1. **Inflammable objects** :→ objects which can easily catch fire.
2. **Tourniquet** :→ A strip of bandage used to constrict blood vessels and stop bleeding.
3. **Ventilation** :→ An opening that lets air in.

'Book Exercise'

(A) Write 'T' for true and 'F' for false statements.

Answers

1. F 2. T 3. T 4. F 5. T

(B) Fill In The Blanks.

Answers

1. Nosebleed 2. Fracture 3. cool
4. First aid 5. slippery

(C) Match The Following.

Answers

1. c. Footpath
2. a. Fire
3. e. Aloe vera
4. b. Rabies
5. d. Tetanus

PRACTICE THE CHAPTER WISE DIAGRAM OF THE FOLLOWING

1. Parts of skeleton → Page no. 36, 37
2. Types of Joints → Page no. 38
3. Structure of heart → Page no. 39
4. Parts of Brain → Page no. 46
5. Parts of eye → Page no. 48
6. Structure of the ear → Page no. 49
7. Taste Zones on tongue → Page no. 49
8. Traffic lights → Page no. 55
9. First aid Box → Page no. 56