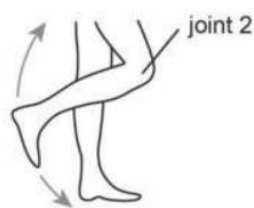
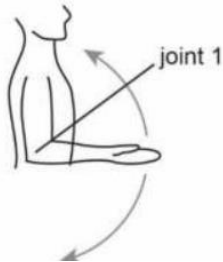




Class: VI	DEPARTMENT: SCIENCE 2023-24	DATE: 24-10-2023
WORKSHEET NO: 10 WITH ANSWERS	TOPIC: BODY MOVEMENTS	NOTE: A4 FILE FORMAT
NAME OF THE STUDENT:	CLASS & SEC:	ROLL NO.

I. OBJECTIVE-TYPE QUESTIONS

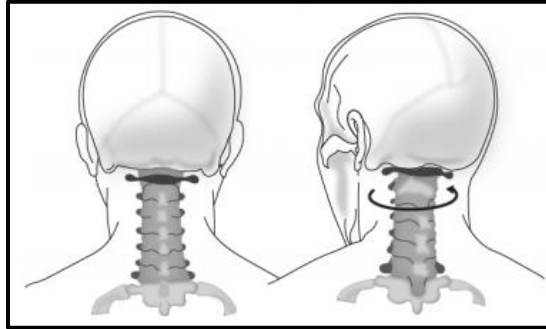
- The lungs and heart are protected by:
a. rib cage
b. pelvic girdle
c. skull
d. vertebral column
- Which of the following structures is made up of vertebrae?
a. cartilage
b. backbone
c. skull
d. chest bone
- Some joints in the body are fixed and bones at those joints cannot move. Which of these are fixed joints?
a. joints in the toe
b. joints in the wrist
c. joint in the neck
d. joints in the skull
- The picture shows three types of joints. The arrows show the movement of the bones in each joint. In which joint can the pair of bones move in all directions?



- joint 1
 - joint 2
 - joint 3
 - joints 1 & 3
- Which of these human body parts is made of cartilage?

- a. nail
- b. hair
- c. nose**
- d. eyelid

6. A student observed a joint in the head of the body.



The student claimed that the joint is a pivotal joint. Is the claim made by the student, correct?

- a. No, as hinge joints are present in the head area.
- b. No, as pivotal joints are present in the jaw portion only.
- c. Yes, as it allows the individual to move their head in all directions.
- d. Yes, as it allows forward and backward bending and right or left turning.**

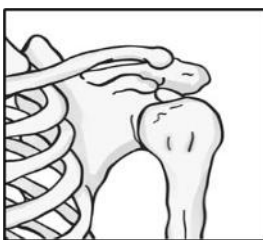
For the following questions, two statements are given- one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (i), (ii), (iii), and (iv) as given below.

- i) Both A and R are true and R is the correct explanation of the assertion.*
- ii) Both A and R are true but R is not the correct explanation of the assertion.*
- iii) A is true but R is false.*
- iv) A is false but R is true*

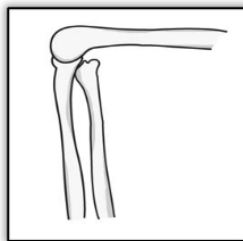
- 7. **Assertion (A):** The elbow joint is a hinge joint.
Reason (R): The Hinge joint allows movement in all directions.
iii) A is true but R is false.
- 8. **Assertion (A):** Cartilage covers the ends of bones.
Reason (R): Cartilage acts as a shock absorber and reduces friction between bones.
i) Both A and R are true and R is the correct explanation of the assertion.
- 9. **Assertion (A):** A combination of bones and cartilage form the skeleton of the body.
Reason (R): The bones are moved by alternate contractions and relaxations of two sets of muscles.
ii) Both A and R are true but R is not the correct explanation of the assertion.
- 10. **Assertion (A):** Snakes do not have a backbone.
Reason (R): Snakes slither on the ground by looping sideways.
iv) A is false but R is true.

II. VERY SHORT QUESTIONS (2M)

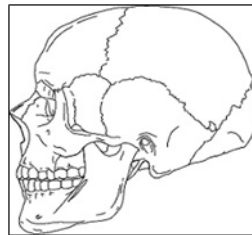
1. What are bristles? How are they useful to an earthworm?
[Hint: Bristles are hair-like structures present on the underside of an earthworm's body. The bristles help to get a good grip on the ground.]
2. What is a cartilage?
[Hint: At the place of the joint, the ends of the two bones are covered with a soft tissue known as cartilage. It is a tough elastic fibrous connective tissue that cushions bones at the joints.]
3. Differentiate movable and immovable joints.
[Hint: Movement is possible in movable joints. There are two types of movable joints: freely movable joints and partially movable joints. E.g., Joints in the shoulder and elbow. The joints where no movement of bones is possible are called immovable or fixed joints. E.g., Upper jaw with the skull]
4. Write the main function of the skull.
[Hint: The skull encloses and protects the brain.]
5. Identify the following joints.



A



B



C



D

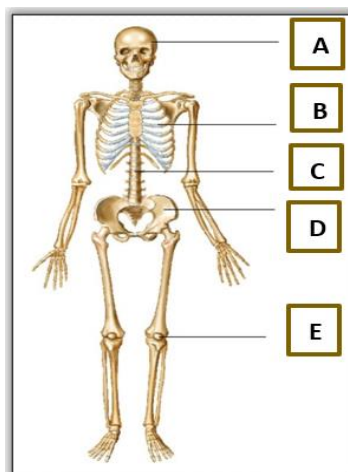
[Hint: A - Shoulder bones- Ball and socket joint

B – Knee-Hinge joint

C – Skull-fixed joint / lower jaw with the skull- Hinge joint

D - Neck- Pivotal joint]

6. Label the given parts of the skeleton.



[Hint: A- skull B- ribcage C- backbone D- pelvis E-knee]

III. SHORT ANSWER TYPE QUESTIONS: (3M)

1. Differentiate between hinge joint and pivotal joint
[Hint: Hinge joint- The joint which allows movement only in one plane. E.g., Fingers, knees. Pivotal joint- This type of joint allows movement in all planes, i.e., up and down and side to side. E.g., Joint between the head and neck.]
2. Write a short note on the fixed joint.
[Hint: The bones in our head that protect our brain are joined together by fixed joints. The bones cannot move at these joints. The joint between the upper jaw and the rest of the head is also fixed.]
3. Explain the movement of a cockroach.
[Hint: Cockroaches walk and climb as well as fly in the air. They have muscles near the legs which help them to walk. The breast muscles move the wings when they fly. They walk moving three legs at a time. They have a pair of sensitive antennae on the head which enables them to sense and smell the surroundings.]
4. How does the snake move?
[Hint: Snakes have a long backbone and many thin muscles which help in the movement. The snake's body curves into many loops. Each loop of the snake gives it a forward push by pressing against the ground]
5. How does a snail move?
[Hint: The rounded structure on the back of the snail is called a shell. It is the outer skeleton of a snail. When it starts moving a thick structure and the head of the snail may come out of an opening in the shell. The thick structure is called a foot, which is made up of strong muscles, which help it to move.]

IV. LONG ANSWER TYPE QUESTIONS. (5M)

1. How is a bird's body adapted for flying?
[Hint: (i) Bones are hollow and light.
(ii) Forelimbs are modified into wings.
(iii) The body is streamlined.
(iv) The shoulder bones are strong.
(v) The breast bones are modified to hold muscles of flight which are used to move the wings up and down.]
2. How do muscles work? Explain with an example.
[Hint: The muscles work in pairs. When one of them contracts, the bone is pulled in that direction, and then the other muscle of the pair relaxes. To move the bone in the opposite direction, the relaxed muscle contracts to pull the bone towards its original position, while the first one relaxes. A muscle can only pull. It cannot push. For example, when we bend our arm, the muscles on the upper side (biceps) contract to pull the bone up. At the same time, the muscles on the lower side (triceps) relax. When the arm is made straight, the upper muscle relaxes while the lower one contracts.]

3. Mention the various types of joints found in the body and their type of movement.

JOINT	WHERE FOUND INSIDE THE BODY	TYPE OF MOVEMENT
Ball and socket	Hip and shoulder	In all directions
Hinge	Elbow, knee, fingers and toes	In one direction or only one plane - like the hinges of a door
Pivotal	Neck	In many planes - up and down and side to side.
Fixed	Skull and pelvis	No movement

4. What is meant by a fractured bone? What precautions should be taken when one gets a fracture?

[Hint: A fracture is a break in the bone. The break may be of a hairline crack or a serious break in one or more points. Fracture also causes pain and swelling. In all these cases, the patient should soon be taken to a doctor or hospital.

The following precautions should be taken when one gets a fracture -

- a) Never try to reset the bones on your own.**
- b) Place the injured part in a comfortable position.**
- c) Care should be taken to avoid jerking or movement of the injured part.]**

V. SOURCE-BASED/ CASE STUDY-BASED QUESTIONS

1. The animals **A, B, C** and **D**, all move without legs. Animal **A** moves by the alternate contractions and relaxations of the muscles of its disc-shaped foot. The animal **B** lives in water and swims by moving its tail from side to side. Animal **C** lives in soil and moves by lengthening and shortening its body segments alternately. The animal **D** moves forward by moving its body sideways in the form of many loops. What are **A, B, C** and **D**?
[Hint: A – Snail, B – Fish, C – Earthworm, D – Snake]
2. Rahul pressed his finger against the top of his head, hands, and legs and he felt something hard pressing against his finger. But when he pressed the upper part of the ear he felt that it was not hard. What do you understand from this?
 - a. Upper part of the ear is made of bones
 - b. The hardness he felt while pressing his fingers against the top of his head was due to the presence of muscles
 - c. The hardness he felt while pressing his fingers against the top of his head was due to the presence of ball and socket joint
 - d. The upper part of the ear is made of cartilage**
3. **Read the passage given below and answer the following questions:**
The body of the fish is streamlined. The shape is such that water can flow around it easily and allow the fish to move in water. The skeleton of the fish is covered with strong muscles. During swimming, muscles make the front part of the body curve to one side and the tail part swings towards the opposite side. The fish forms a curve. Then, quickly, the body and

tail curve to the other side. This makes a jerk and pushes the body forward. A series of such jerks make the fish swim ahead. This is helped by the fins of the tail. Fish also have other fins on their body which mainly help to keep the balance of the body and to keep direction, while swimming.

i) How does the streamlined body of fish help in its movement?

[Hint: The water can flow around the streamlined body easily and allow the fish to move in the water.]

ii) Mention the role of fins in the movement of a fish.

[Hint: Fins mainly help the fish to swim ahead, keep the balance of the body and keep direction, while swimming.]

iii) Underwater divers wear fin-like flippers on their feet to:

- a. **Swim easily in water**
- b. Look like a fish
- c. Float on water surface
- d. Walk on the seabed

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