### Chapter 8 - Body Movements - 1

##### **Q1. Fill in the blanks.**

                         i.        We are able to bend or rotate our body in places where two parts of our body seem to be joined together. These places are called joints.

                        ii.        We are able to bend or rotate our body only at joints.

                       iii.        Bones and cartilage forms skeleton of human body.

                       iv.        Skeleton gives frame and shape to our body and helps in movement.

                        v.        In a pivotal joint a cylindrical bone rotates in a ring.

                       vi.        X-ray images are used to find out about any possible injuries that might have happened to the bones.

         vii.        Skull protects brain.

         viii.        Our skeleton is made up of many bones, joints and cartilage.

                       ix.        The rounded structure snail carries on its back is called shell.

                        x.        Fins on the body of fish mainly help to keep the balance of their body.

                       xi.        Snakes have a long backbone.

         xii.        Snails move with the help of a muscular foot.

##### **Q2. True/False**

                         i.        Bones cannot be bent. True

                        ii.        Hinge Joint allows movement in all directions. False

                       iii.        Elbow has fixed joint. False

                       iv.        Bone in our arm is joined to our shoulder by ball and socket joint. True

                        v.        The joint between the upper jaw and rest of head is moveable. False

                       vi.        Bones in our body forms framework to give shape to our body. This framework is known as skeleton. True

         vii.        Ribs join the chest bone and back bone together to form box called skeleton. False

         viii.        The skull is made of many bones joined together. True

                        ix.        Cartilage is also found in the joints of the body. True

                         x.        Cockroaches have three pair of wings attached to breast. False

                        xi.        The snake moves forward very fast and not in a straight line. True

##### **Q3. Write name of two animals which can move without bones.**

Ans. Snail and Earthworm

##### **Q4. Write three animals that have streamlined body.**

Ans. Fish, Whale and Birds

##### **Q5. Name one animal which can walk and climb as well as fly in the air.**

Ans. Cockroaches

##### **Q6. Name two birds which can swim in water.**

Ans. Ducks and Swans

##### **Q7. Name an aquatic animal whose skeleton is made entirely of cartilages?**

Ans. Shark

##### **Q8. Where is cartilage found?**

Ans. Cartilage is found in joints and ear.

##### **Q9. What is cavity in bones?**

Ans. Cavity is the hollow space in the bones.

##### **Q10. Which organs are protected by the rib cage?**

Ans. Heart and lungs are protected by the rib cage.

##### **Q11. What are ribs?**

Ans. The ribs are thin, flat, curved bones that form the rib cage.

##### **Q12. What is skull?**

Ans. The skull is made up of many bones joined together.

##### **Q13. Name the organ which help cockroach in walking.**

Ans. Cockroaches have three pairs of legs. These help in walking.

### Body Movements

##### **Q14. What is a bone?**

Ans. Bone is the hard structure that forms the framework of our body.

##### **Q15. Is it possible for us to bend our body at every point?**

Ans. No, we can bend or move our body only at those points where bones meet.

##### **Q16. If our body has no joints then will it be possible for us to move?**

Ans. No, it will not be possible for us to move.

##### **Q17. What would have happened if our body was made of single bone?**

Ans. We would not able to move if our body was made of single bone.

##### **Q18. Which type of joint is used when a cricket bowler balls the ball?**

Ans. Ball and socket joint is used when a cricket bowler balls the ball.

##### **Q19. What type of joint is used while lifting weights?**

Ans.  Hinge joint is used while lifting weights.

##### **Q20. How many bones are present in our skull?**

Ans. The human skull is generally considered to consist of twenty-two bones.

##### **Q21. How many bones are present in our backbone?**

Ans. An adult human backbone has 24 vertebral bones.

##### **Q22. How many muscles are present in our body?**

Ans. There are over 600 skeletal muscles within the typical human body.

##### **Q23. What type of substance is secreted by earthworm?**

Ans. The body of earthworm secretes a slimy substance to help the movement.

##### **Q24. Why can't we move our upper jaw?**

Ans. We can't move our upper jaw because there is a joint between the upper jaw and the rest of the head which is a fixed joint.

##### **Q25. What are pelvic bones?**

Ans. The bones that enclose the portion of the body below stomach are called pelvic bones.

##### **Q26. What are joints?**

Ans. The places in our body where two parts our body seem to be joined together are called joints.

##### **Q27. What skeleton comprises of?**

Ans. The skeleton comprises the skull, the back bone, ribs and the breast bone, shoulder and hipbones, and the bones of hands and legs.

##### **Q28. What happens when muscles contracts?**

Ans. When contracted, the muscle becomes shorter, stiffer and thicker. It pulls the bone.

##### **Q29. Define a skeleton?**

Ans. The bones in our body form a framework to give a shape to our body. This framework is called the skeleton.

##### **Q30. Which type of joint allows us to bend our head forward and backward and turn the head to our right or left?**

Ans. Pivotal joint allows us to bend our head forward and backward and turn the head to our right or left.

##### **Q31. What are cartilages?**

Ans. There are some additional parts of the skeleton that are not as hard as the bones and which can be bent. These are called cartilages.

##### **Q32. What are the key components of the skeletal system?**

Ans. Key components of the skeletal system are bones, ligaments and Joints, tendons and cartilage.

##### **Q33. How do snakes move?**

Ans. Snakes slither on the ground by looping sideways. A large number of bones and associated muscles push the body forward.

### Body Movements

##### **Q34. What does the skull do in the human body?**

Ans. Function of skull

                           i.        It encloses and protects a very important part of the body, the brain.

                          ii.        It supports the structures of the face.

##### **Q35. Write two function of skeleton.**

Ans. Function of skeleton

                          i.        It helps in the movement of the body.

                          ii.        It provides shape to our body.

##### **Q36. List two functions of backbone.**

Ans. Functions of backbone

                          i.        It protects the spinal cord.

                         ii.        It helps us to stand straight.

##### **Q37. What type of skeleton do snails have? Is the movement of a snail fast or slow as compared to an earthworm?**

Ans. Snails have a hard shell on their back which serves as the skeleton. Movement of snail is slower than earthworm.

##### **Q38. How does streamlined body help fish to swim in water?**

Ans. Due to streamlined body water can flow around it easily and allow the fish to move in water.

##### **Q39. What is a fixed joint? Give one example of fixed joint.**

Ans. Joint that does not allow any movement is called fixed joint.

Example: Joint between the upper jaw and the rest of the head is a fixed joint.

##### **Q40. How does a snail move?**

Ans. A thick structure and the head of the snail may come out of an opening in the shell. The thick structure is its foot, made of strong muscles. It helps the snail to move.

##### **Q41. Why are earthworms known as farmer’s best friend?**

Ans. The earthworm, actually, eats its way through the soil. Its body then throws away the undigested part of the material that it eats. This activity of an earthworm makes the soil more useful for plants.

##### **Q42. How do we know the shapes of the different bones in our body?**

Ans. We can have some idea about the shape and number of bones in some parts of our body by feeling them. One way we could know this shape better would be to look at X-ray images of the human body.

##### **Q43. What is hinge joint? Give one example of hinge joint.**

Ans. Hinge joint is a joint in the bones that allows bone movement in only one direction.

Example: The elbow has a hinge joint that allows only a back and forth movement.

##### **Q44. What is ball and socket joint? Give 2 examples of ball and socket joints.**

Ans. The ball and socket joint is type of joint in which the rounded end of one bone fits into the cavity (hollow space) of the other bone. Such a joint allows movements in all directions.

Examples: Joint of arm and shoulder

                Joint of thigh and hip

##### **Q45. Bones are hard structures and cannot be bent. But, we still bend our elbow, knee, etc. How is this possible?**

Ans. Elbow and knee are made up of two or more bones which are joined together. Our bones, muscles, and joints — along with tendons, ligaments, and cartilage enable us to bend our elbow, knee, etc.

##### **Q46. What is pivotal joint? Give one example of pivotal joint.**

Ans. In a pivotal joint a cylindrical bone rotates in a ring. It allows bending forward and backward and turns to right or left.

Example: The joint where our neck joins the head is a pivotal joint.

##### **Q47. What are the four different types of joints?**

Ans. Types of joints

                          i.        Ball and socket joints

                        ii.        Pivotal Joint

                       iii.        Hinge joints

                       iv.        Fixed joints

##### **Q48. How does movement occur in the human body?**

Ans. Muscles plays very important role in movement. They are the masses of tough, elastic tissue that pull our bones when we move. Together, our bones, muscles, and joints — along with tendons, ligaments, and cartilage enable us to do every day physical activities.

##### **Q49. Differentiate between bone and cartilage.**

Ans.

|  |  |
| --- | --- |
| **Bone** | **Cartilage** |
| 1. It is hard, inelastic and tough. | 1. It is soft, elastic and flexible. |
| 2. It cannot be bent. | 2. It can be bent. |
| 3. Blood vessels are present. | 3. Blood vessels are absent. |
| 4. It forms skeleton. | 4. It is found in nose, ear, trachea and larynx. |

##### **Q50. What do you mean by ‘streamlined’ shape?**

Ans. Streamlined body shape is a shape where head and tail are smaller than the middle portion of the body. Such body when travel through a fluid or gaseous medium overcome the friction caused by air and water.

Example - Body of fish is streamlined to move easily through water.

##### **Q51. What makes snakes to move fast on the ground?**

Ans. The snake’s body curves into many loops. Each loop of the snake gives it a forward push by pressing against the ground. Since its long body makes many loops and each loop gives it this push, the snake moves forward very fast and not in a straight line.

##### **Q52. What is rib cage? What is the role of rib cage in our body?**

Ans. The enclosing structure formed by the ribs and the bones to which they are attached is called ribcage.

Role of rib cage in our body

                       i.        Rib cage encloses and protects the heart and lungs.

                      ii.        It provides a strong framework onto which the muscles of the shoulder girdle, chest, upper abdomen and back can attach.

##### **Q53. Why muscles work in pairs to move a bone?**

Ans. Muscles work in pairs. When one of them contracts, the bone is pulled in that direction. 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 relaxes. A muscle can only pull. It cannot push. Thus, two muscles have to work together to move a bone.

##### **Q54. How does earthworm move through the soil?**

Ans. Earthworm does not have bones. It has muscles which help to extend and shorten the body. During movement, the earthworm first extends the front part of the body, keeping the rear portion fixed to the ground. Then it fixes the front end and releases the rear end. It then shortens the body and pulls the rear end forward. This makes it move forward by a small distance. Repeating such muscle expansions and contractions, the earthworm can move through soil.

##### **Q55. What modifications in the body of the birds help them to fly?**

Ans.  The following modifications in the body of the birds help them to fly:

                             i.        Their bones are hollow and light.

                            ii.        The bones of the hind limbs are typical for walking and perching.

                           iii.        Bony parts of the forelimbs are modified as wings.

 iv.        The shoulder bones are strong.

                            v.        The breastbones are modified to hold muscles of flight which are used to move the wings up and down.

##### **Q56. How does fish move in water?**

Ans. The streamlined shape of the fish allows water to flow around it easily and help 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.