

Very Short Answer Questions

Q.1. Name the type of joint of your hand which helps you to grasp a badminton racquet.

[NCERT Exemplar]

Ans. Hinge joint

Q.2. What would have happened if our backbone was made of one single bone?

[NCERT Exemplar]

Ans. We would not have been able to bend from our waist.

Q.3. When you are writing in your notebook which part of the body are you moving?

Ans. Hand

Q.4. What is exoskeleton?

Ans. A hard outer structure that provides protection and support to the organism is called exoskeleton.

Q.5. What is X-ray?

Ans. X-rays are photographs of bones taken by the X-ray machine.

Q.6. What are 'floating ribs'?

Ans. The two lowermost pair of ribs that remain free are called floating ribs.

Q.7. Which of the skull bones are movable?

Ans. Only the lower jaw in skull bones are movable.

Q.8. What are bones made up of?

Ans. Bones are made up of calcium, phosphorous and other minerals.

Q.9. Name the longest and smallest bone in the human body.

Ans. The longest bone is femur and smallest bone is stirrup.

Short Answer Questions

Q.1. Given below is a list of different types of movements in animals. Write the types of movements seen in each animal.

[NCERT

Exemplar]

(i) Duck

Ans. Duck – flying, walking, swimming

(ii) Horse

Ans. Horse – running, walking

(iii) Kangaroo

Ans. Kangaroo – jumping, walking

(iv) Snail

Ans. Snail – creeping

(v) Snake

Ans. Snake – slithering

(vi) Fish

Ans. Fish – swimming

(vii) Human being

Ans. Human being – walking

(viii) Cockroach

Ans. Cockroach – walking, flying

Q.2. Boojho fell off a tree and hurt his ankle. On examination the doctor confirmed that the ankle was fractured. How was it detected?

[NCERT Exemplar]

Ans. The doctor must have observed a swelling and taken an X-ray of the ankle. X-ray images confirm injuries/fractures in bones.

Q.3. Earthworms are known as ‘farmer’s friends’. Why? [NCERT Exemplar]

Ans. An earthworm eats its way through the soil. Its body excretes the undigested materials that make the soil fertile.

Q.4. Bones are hard structures and cannot be bent. But, we can still bend our elbow, knee, etc. How is this possible?

[NCERT Exemplar]

Ans. Elbow and knee are not made up of a single bone, but two or more bones which are joined to each other by a joint (Hinge joint). This joint along with the muscles helps us to bend the elbow and knee.

Q.5. Which type of movement would have been possible if [NCERT Exemplar]

(i) our elbow had a fixed joint?

Ans. We would not have been able to bend/fold our arms.

(ii) we were to have a ball and socket joint between our neck and head?

Ans. We would have been able to rotate our head 360°.

Q.6. Write the type of joint which is used for each of the following movements:

(i) A cricket bowler bowls the ball.

Ans. Ball and socket joint

(ii) A girl moves her head in right and left direction.

Ans. Pivotal joint

(iii) A person lifts weights to build up his biceps. [NCERT Exemplar]

Ans. Hinge joint

Q.7. Write three functions of the skeleton.

Ans.

(i) Protects internal organs,

(ii) Allows movement,

(iii) Gives shape and support to the body.

Q.8. Write two features of a fish's body that enables it to move in water.

Ans.

(i) Streamlined shape of the body.

(ii) Powerful body muscles to move its tail and fins

Q.9. Write the special features that help a bird to fly.

Ans. The body is streamlined, bones are light and spongy, bones of forelimbs are modified into wings.

Q.10. Why are at least two muscles needed to move a bone at a joint in one direction?

Ans. Because one muscle would contract and the other would extend at the joint for movement.

Q.11. Why are the bones in the foot normally set in an arch?

Ans. The arched feet gives good support. The smaller toe bones help in walking and running.

Q.12. Distinguish between bone and cartilage.

Ans.

Bone	Cartilage
Bone is hard and inflexible.	Cartilage is soft and flexible.

Long Answer Questions

Q.1. How is the skeleton of a bird well suited for flying? [NCERT Exemplar]

Ans. Skeleton of a bird has following features: -

- (i) Bones are hollow and light.
- (ii) Bones of hindlimbs are for walking and perching.
- (iii) Bones of forelimbs are modified as wings.
- (iv) Shoulder bones are strong.
- (v) Breast bones hold flight muscles and are used to move the wings up and down.

In the given figure, there are two snakes of the same size slithering on sand. Can you identify which of them would move faster and why?

A



B



[NCERT Exemplar]

Ans. A snake forms loops in its body while slithering. Each loop of the snake gives it a forward push by pressing against the ground. The snake with a large number of loops moves much faster than the snake with less number of loops. Thus snake 'A' will move faster than snake 'B'.

Q.2. Provide one-word answers to the statements given below. [NCERT Exemplar]

(i) Joint which allows movement in all directions.

Ans. Ball and socket joint

(ii) Hard structure that forms the skeleton.

Ans. Bones

(iii) Part of the body with a fixed joint.

Ans. Upper jaw with skull

(iv) Help in the movement of body by contraction and relaxation.

Ans. Muscles

(v) Bones that join with chest bone at one end and to the backbone at the other end.

Ans. Ribs

(vi) Framework of bones which gives shape to our body.

Ans. Skeleton

(vii) Bones which enclose the organs of our body that lie below the abdomen.

Ans. Pelvic bones

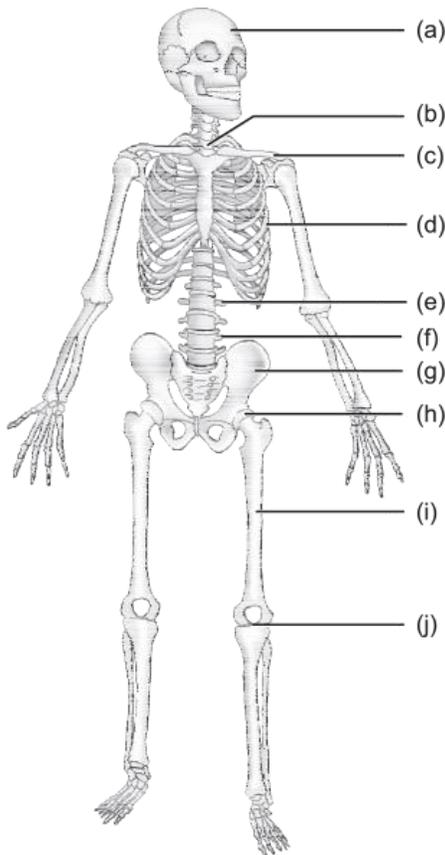
(viii) Joint where our neck joins the head.

Ans. Pivotal

(ix) Part of the skeleton that forms the earlobe.

Ans. Cartilage

Given below is the picture of the skeleton. Label the parts marked as (a), (b), (c), (d), (e), (f), (g), (h), (i), (j).



Ans.

- (a) Skull
- (b) Pivot joint
- (c) Shoulder blade
- (d) Rib cage
- (e) Gliding joint

- (f) Vertebrae
- (g) Pelvic girdle
- (h) Ball and socket joint
- (i) Femur
- (j) Knee

Q.5. Distinguish between the following.

(i) Movement and Locomotion

Ans.

S. No.	Movement	Locomotion
(i)	A change in position and not particularly location.	Movement of organisms from place to place.
(ii)	Occurs in all living organisms.	Does not occur in plants.

(ii) Tendons and Ligaments

Ans.

Tendons	Ligaments
A tough strand that joins a muscle to a bone is known as a tendon.	A muscle strand that holds bones together is known as a ligament.

(iii) Movable joint and Immovable joint

Ans.

S. No.	Movable joint	Immovable joint
(i)	These joints allow movement between bones and have cartilage between them.	These joints do not allow movement between bones.
(ii)	For example, wrist joints.	For example, upper jaw joint.

(iv) Ball and socket joint and Hinge joint

Ans.

S. No.	Ball and socket joint	Hinge joint
--------	-----------------------	-------------

(i)	This joint permits a circular movement.	This joint allows movement only in one plane.
(ii)	For example, shoulder joint.	For example, elbow joint.

HOTS (Higher Order Thinking Skills)

Q.1. Why does an earthworm find it difficult to move on a glass?

Ans. For movement, earthworm fixes its front end and releases the rear end. On a glass, it loses its grip and thus finds it difficult to move.

Q.2. Why is the upper part of the human ear not soft as the lower part or the earlobe?

Ans. The upper part of the ear is made up of cartilage whereas the earlobe contains only muscles.