### **General Science**

Chapter 4: The Skeletal and Muscular systems



# **CLASS NOTES-ANSWERS**

- I. Fill in the blanks.
- 1. The number of bones in our body is ------.

Answer: 206

2. The ribcage has ----- pair of ribs.

Answer: 12

3. ----- is the longest bone in our body.

Answer: Thigh bone or Femur

4. The ----- joint helps in the movement of the shoulders.

Answer: ball and socket

- 5. The muscles of the hand are ----- muscles. Answer: voluntary
- II. Look at the picture. The boy is picking up a sheet of paper. Tick the bones, joints and muscles that will be involved in doing the activity.

NEN

- 1. vertebral column 💌
- 2. thigh muscles 🛛 💌
- 3. muscles of the upper arm  $\ \boldsymbol{\boxtimes}$
- 4. skull bones
- 5. elbow joint 🗹
- 6. calf muscles
- 7. finger joints 🛛 💌
- 8. wrist joints 🛛 🗹
- III. Identify these.

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1. I am the soft, spongy tissue present in the long bones. ------

Answer: bone marrow

2. I begin with the letter 's' and am also called the backbone. ------

Answer: spine

3. I am the area where bones of the upper arm and lower arm meet. -----

Answer: elbow

4. I allow your neck to move. -----

Answer: pivot joint

- IV. Answer the following questions.
- 1. List the functions of the skeleton. EN

Answer: The main functions of the skeletal system are:

- It supports the body.
- It gives shape to the body.
- It protects the internal organs of the body.
- o It helps the body in movement.
- 2. Define movable joints and list their different types.

Answer: Joints that allow easy movements are called movable joints.

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Ball and socket joint, hinge joint, gliding joint and pivot joint are different types of movable joints.

3. Differentiate between tendons and ligaments.

Answer: Tendons join muscle to bone, whereas ligaments join bone to bone.

4. How can you make your bones strong?

Answer: We can make our bones strong by eating food items rich in





vitamins and minerals especially calcium. Good sources of calcium include dairy products, almonds, broccoli and green leafy vegetables. We should expose ourselves to sunlight, which helps to make the essential vitamin D.

5. Write the location and function of the cardiac muscles.

Answer: The cardiac muscles are located in our heart. They help the heart contract and relax tirelessly and send blood to all the parts of the body.

6. Compare and contrast between involuntary and voluntary muscles.

Answers: Muscles that are not under our control are called involuntary muscles. Muscles that are under our control are called voluntary muscles.

Higher Order Thinking Skills. Think and answer.

1. A caterpillar cannot stand erect like us. Justify the statement.

Answer: A caterpillar does not have a backbone like us. So, it cannot stand erect.

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2. What would have happened if the muscles of the heart were voluntary

in

#### function?

Answer: If cardiac muscles were under voluntary control, then they would stop working at a person's will. The heart needs to work continuously without stopping for a person to survive. Hence, cardiac

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muscles should not be involuntary.

