

PRACTICE WORKSHEET 1: NERVOUS SYSTEM | CLASS 5 SCIENCE

A. Multiple Choice Questions (5)

1. What is the largest part of the brain?
 - a. Cerebellum
 - b. Medulla
 - c. Cerebrum
 - d. Spinal cord
2. Which part of the brain controls balance and coordination?
 - a. Medulla
 - b. Cerebellum
 - c. Cerebrum
 - d. Sensory nerves
3. The spinal cord is protected by:
 - a. Ribcage
 - b. Vertebrae
 - c. Skull
 - d. Cartilage
4. What kind of nerves carry messages from the brain to muscles?
 - a. Sensory nerves
 - b. Mixed nerves
 - c. Motor nerves
 - d. Reflex nerves
5. Reflex actions are controlled by:
 - a. Brain
 - b. Spinal cord
 - c. Cerebellum
 - d. Heart

B. Fill in the Blanks (5)

1. The _____ is the control center of the body.
2. _____ nerves carry messages from sense organs to the brain.
3. The _____ connects the brain to the spinal cord.
4. _____ is the part of the brain responsible for emotions and thinking.
5. Reflex actions are immediate responses controlled by the _____.

C. True or False Questions (5)

1. The brain has three main parts: the cerebrum, cerebellum, and medulla.
2. The spinal cord runs through the ribcage.
3. The cerebellum controls voluntary muscles.
4. Sensory nerves send signals to the brain.
5. Reflex actions involve the cerebrum.

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D. Short Answer Questions (5)

1. What is the function of the nervous system?
2. Explain the role of the cerebrum.
3. What are sensory and motor nerves?
4. Why are reflex actions important?
5. How does the spinal cord protect the body?

E. Long Answer Questions (3)

1. Describe the parts and functions of the brain.
2. Explain how the nervous system detects, processes, and responds to changes in the environment.
3. How can we take care of our nervous system?

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A. Multiple Choice Questions

- 1. What is the smallest bone in the human body?**
 - **Answer: c) Stapes**
Explanation: The stapes, located in the middle ear, is the smallest bone in the human body, measuring about 2.8 mm in length.
 - 2. Which joint allows movement in one direction, like opening and closing a door?**
 - **Answer: b) Hinge Joint**
Explanation: Hinge joints, such as those in the elbows and knees, permit movement only in one direction.
 - 3. What is the function of the medulla?**
 - **Answer: b) Controls involuntary actions like breathing**
Explanation: The medulla is part of the brainstem and controls involuntary processes such as breathing and heartbeat.
 - 4. Which muscle type works without conscious control?**
 - **Answer: a) Involuntary muscles**
Explanation: Involuntary muscles work automatically, without requiring a person to think about moving them (e.g., muscles in the stomach).
 - 5. Which nutrient is essential for strong bones?**
 - **Answer: c) Calcium**
Explanation: Calcium helps build and maintain strong bones and teeth.
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B. Fill in the Blanks

- The brain is protected by the **skull**.
Explanation: The skull acts as a hard, protective case for the brain.
 - Cartilage** prevents wear and tear in joints.
Explanation: Cartilage is a smooth, elastic tissue that reduces friction between bones at joints.
 - The spinal cord is protected by the **vertebrae**.
Explanation: Vertebrae are the bones of the spine that encase and safeguard the spinal cord.
 - Tendons** connect muscles to bones.
Explanation: Tendons are fibrous tissues that attach muscles to bones, enabling movement.
 - The femur, or **thigh bone**, is the longest bone in the body.
Explanation: The femur is the largest and strongest bone in the human body.
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C. True or False

- The cerebrum controls voluntary muscles.**
 - **Answer: True**
Explanation: The cerebrum is responsible for voluntary muscle movements and higher cognitive functions like thinking and learning.
- The ribcage protects the brain.**
 - **Answer: False**
Explanation: The ribcage protects the heart and lungs, while the skull protects the brain.

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3. **The backbone is made up of 33 small bones called vertebrae.**
 - **Answer: True**
Explanation: The human backbone consists of 33 vertebrae, which form the spine.
 4. **Voluntary muscles work automatically.**
 - **Answer: False**
Explanation: Voluntary muscles move only when a person consciously decides to move them.
 5. **The cerebellum helps maintain balance and posture.**
 - **Answer: True**
Explanation: The cerebellum is responsible for balance, posture, and coordination of muscle movements.
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D. Short Answer Questions

1. **What is the function of the skeletal system?**
Answer: The skeletal system provides structure and support to the body, protects vital organs, and works with muscles to enable movement. It also produces blood cells in the bone marrow and stores minerals like calcium.
 2. **What is a joint? Name any two types of movable joints.**
Answer: A joint is a point where two or more bones meet, allowing movement. Two types of movable joints are:
 - **Hinge joint** (e.g., elbows and knees)
 - **Ball and socket joint** (e.g., shoulders and hips).
 3. **What are sensory nerves? Give an example of their function.**
Answer: Sensory nerves carry messages from sense organs to the brain or spinal cord. For example, they help you feel heat when you touch a warm surface.
 4. **What is cartilage? What is its role in joints?**
Answer: Cartilage is a smooth, flexible tissue that covers the ends of bones at joints. It reduces friction and prevents bones from rubbing against each other.
 5. **Name the three types of muscles in the human body and give one example of each.**
Answer:
 - **Voluntary muscles:** Example - Biceps in the arms.
 - **Involuntary muscles:** Example - Muscles in the stomach.
 - **Cardiac muscles:** Example - Heart muscles.
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E. Long Answer Questions

1. **Explain the different types of joints in the human body with examples.**
Answer:
Joints are places where two or more bones meet. They allow different types of movement and are categorized into:
 - **Fixed joints:** Do not allow movement (e.g., joints in the skull).
 - **Hinge joints:** Allow movement in one direction (e.g., elbows and knees).
 - **Ball and socket joints:** Permit movement in all directions (e.g., shoulders and hips).

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- **Pivot joints:** Allow rotational movement (e.g., between the skull and backbone).
 - **Gliding joints:** Enable bones to slide over each other (e.g., wrists and ankles).
2. **How do the brain, spinal cord, and nerves work together in the nervous system?**

Answer:

The brain, spinal cord, and nerves form the nervous system. The brain acts as the control center, sending and receiving messages. The spinal cord serves as a highway, transmitting signals between the brain and the body. Nerves carry sensory messages to the brain and motor messages from the brain to muscles and organs, enabling us to sense, think, and act.

3. **Describe how muscles and bones work together to help us move.**

Answer:

Muscles and bones work in coordination to create movement. Muscles are attached to bones by tendons. When a muscle contracts, it pulls on the bone, causing it to move. For example, when you bend your arm, your biceps contract while your triceps relax. This push-pull mechanism allows a wide range of motions, such as running, jumping, or lifting objects.