Name: _____

The Intestines

They are divided into the small intestine and the large intestine.

- **Small intestine:** absorbs most nutrients and vitamins.
- **Large intestine:** absorbs water and forms stool.
- They contain helpful bacteria that support digestion and the immune system.

The Kidneys

Two bean-shaped organs in the lower back.

- They filter the blood to remove waste through urine.
- They regulate the balance of fluids and salts in the body.
- They help control blood pressure.
- They produce hormones that help form red blood cells.

The Liver

The largest internal organ in the body.

- It cleans the blood from toxins and harmful substances.
- It produces bile, which helps digest fats.
- It stores glucose as glycogen to use as an energy source.
- It helps make some important proteins needed for blood clotting.

Liver damage can happen if the liver stops producing bile or produces too little. When this happens, fats become hard to digest, which may lead to:

- Fatty diarrhea
- Lack of fat-soluble vitamins
- Feeling bloated or having indigestion after eating fatty meals

The Lungs

Two spongy organs located inside the rib cage.

- They carry out gas exchange inside the air sacs.
- They move oxygen into the blood so it can reach the cells.
- They remove carbon dioxide from the body.
- They work together with the diaphragm to regulate breathing in and out.

The Stomach

A flexible muscular organ in the digestive system.

- It releases acids and enzymes to digest food.
- It turns food into a semi-liquid substance called "chyme."
- It slowly pushes food into the small intestine.

The Heart

A strong muscle about the size of a fist.

- It has four chambers (two atria and two ventricles).
- It pumps oxygen-rich blood to the body through the arteries.
- It sends oxygen-poor blood back to the lungs.
- It keeps blood circulation going regularly.

The Brain

It is the control center of the body. It is made up of several main parts: the cerebrum, the cerebellum, and the brain stem.

- It controls thinking, memory, feelings, and decision-making.
- It organizes movement, balance, and muscle coordination.
- It controls automatic vital functions such as breathing and heartbeat.
- It receives sensory signals (sight, hearing, touch...) and interprets them.

1. **If the part of the brain responsible for interpreting sensory signals has a functional problem, which of the following is the most likely result?**

   a) Receiving sensory signals without being able to connect them to the correct meaning
   b) Losing sensory signals before they reach the brain to be analyzed and interpreted
   c) Stopping the centers responsible for regulating heartbeat and breathing
   d) Loss of body balance without affecting sensory awareness

2. **While driving a car, the driver quickly responded to a red traffic light. He saw it with his eyes, understood its meaning, decided to stop, and pressed the breaks while keeping his balance.**

   Which explanation quickly shows how the brain worked together in this situation?

   a) Sensory perception > Movement control > Thinking > Decision-making
   b) Decision-making > Thinking > Movement control > Sensory perception
   c) Sensory perception > Thinking > Decision-making > Movement control
   d) Thinking > Decision-making > Sensory perception > Movement control

3. **The following statement was mentioned in a scientific discussion: "Since the brain controls all body functions, any small damage to it must completely stop all vital functions."**

   Which option is the most accurate scientific criticism of this statement?

   a) The statement is correct because the brain is the control center for all body functions.
   b) The statement ignores that brain functions are divided into different areas, and damage may affect one function but not others.
   c) The statement is incorrect because some body functions are not related to the brain at all.
   d) The statement is correct is the areas responsible for balance are damaged affecting all functions.

4. **A doctor noticed that the patient has low oxygen levels in the blood even though the rib cage is moving normally during breathing.**

   Which conclusion is most accurate based on the function of the lungs?

   a) The problem is related to gas exchange inside the air sacs.
   b) The problem is caused by weak rib cage muscles.
   c) The cause is mainly a problem in regulating the heartbeat.
   d) The decrease is normal and does not show a specific functional problem.

5. **Which statement best explains the relationship between the air sacs and oxygen reaching body cells?**

   a) The air sacs change oxygen into energy before it is distributed in the body.
   b) The air sacs pump oxygen directly to the body tissues.
   c) The air sacs store oxygen and release it when muscles need it.
   d) The air sacs allow oxygen to move into the blood, which then carries it to the cells.

6. **During intense physical activity, breathing rate increases noticeably. Which explanation most accurately shows the scientific reason for this?**

   a) The air sacs stay filled with air longer without extra gas exchange.
   b) The cells need more oxygen and must remove more carbon dioxide.
   c) The diaphragm becomes less active, reducing breathing efficiency.
   d) Gas movement inside the lungs temporarily stops to compensate for effort.

7. **Which statement accurately explains the function of the heart in blood circulation?**

   a) The heart pumps oxygen-rich blood to the body and returns oxygen-poor blood to the lungs.
   b) The heart temporarily stores blood in the atria and ventricles before sending it to the body.
   c) The heart regulates digestion and carries nutrients through circulation.
   d) The heart mixes oxygen-rich and oxygen-poor blood to balance circulation.

8. **If one ventricle is injured, what is the most likely effect on blood circulation?**

   a) Increased blood flow in the body to fully compensate for the injured ventricle
   b) Blood stops reaching the brain without affecting the rest of the body
   c) Disrupted blood flow to the body or the lungs depending on which ventricle is injured
   d) The lungs completely stop working because of their direct connection to the ventricle

9. **Which statement correctly describes the role of the liver?**

   a) Regulating heartbeat and stimulating breathing through the blood
   b) Producing bile to digest fats and storing glucose
   c) Removing waste and toxins from the body through urine
   d) Distributing oxygen quickly to the body's cells and organs

10. **Feeling bloated or having indigestion after eating fatty meals often indicates:**

    a) A problem in the intestines
    b) Weakness in the stomach
    c) Liver damage
    d) Stopped blood circulation

11. **How do the kidneys help control blood pressure?**

    a) By regulating the number of fluids and salts and releasing hormones that affect blood volume
    b) By pumping blood directly into arteries and veins regularly
    c) By producing oxygen for the blood and removing carbon dioxide
    d) By absorbing nutrients from food and sending them to the blood

12. **If urine production is low despite drinking enough fluids, what is the most likely reason?**

    a) A problem in the kidneys' hormone secretion
    b) Weakness in the kidneys' regulation of fluid balance
    c) A problem in the kidneys' ability to filter the blood
    d) A disorder in the kidneys' control of blood pressure

13. **What is the main function of the stomach in digestion?**

    a) Regulating blood movement in the stomach
    b) Absorbing all nutrients directly
    c) Filtering waste from the blood right after digestion
    d) Releasing acids and enzymes to turn food into a semi-liquid substance

14. **Why is the small intestine necessary for good health?**

    a) It stores oxygen to complete digestion.
    b) It absorbs nutrients and vitamins from food.
    c) It regulates the removal of waste from the body.
    d) It moves waste and toxins directly from the blood.

15. **The body can completely do without the large intestine because it does not absorb nutrients? What is the most accurate scientific criticism of this statement?**

    a) The statement is inaccurate because the large intestine absorbs water, forms stool, and contains helpful bacteria important for the immune system.
    b) The statement is completely correct because all nutrients are absorbed in the small intestine, so the large intestine is not needed.
    c) The statement is correct if a person does not eat solid food or food that needs complex digestion.
    d) The statement is incorrect and the large intestine can only be removed if there is a disease in the stomach or its functions.