	INDIAN SCHOOL AL WADI AL KABIR	
CLASS: X	**DEPARTMENT: SCIENCE 2026 – 2027** **SUBJECT:** **SKILL EDUCATION – HEALTHCARE**	**DATE:** **08.11.2026**
WORKSHEET **With Answers**	**TOPIC: UNIT 5: HUMAN BODY: STRUCTURES, FUNCTIONS & NUTRITION**	**NOTE: A4 FILE FORMAT**
NAME OF THE STUDENT:	**CLASS & SEC:**	**ROLL NO.**

Section A – Multiple Choice Questions

Choose the correct option.

1. The branch of science that deals with the structure of the human body is called:

a) Physiology
b) Anatomy
c) Pathology
d) Cytology

2. Which of the following is known as the basic structural unit of the human body?

a) Tissue
b) Organ
c) Cell
d) Organ system

3. The study of bones is known as:

a) Histology
b) Myology
c) Osteology
d) Arthrology

4. Which type of tissue is responsible for communication in the human body?

a) Epithelial tissue
b) Connective tissue
c) Muscular tissue
d) Nervous tissue

5. Which of the following blood vessels carries blood away from the heart?

a) Veins
b) Arteries

c) Capillaries
d) Venules

6. The exchange of oxygen and carbon dioxide in the lungs takes place in the:

a) Bronchi
b) Trachea
c) Alveoli
d) Diaphragm

7. The functional unit of the kidney is:

a) Neuron
b) Nephron
c) Alveolus
d) Neurilemma

8. Which vitamin deficiency causes beriberi?

a) Vitamin A
b) Vitamin B1
c) Vitamin C
d) Vitamin D

9. Which of the following is a fat-soluble vitamin?

a) Vitamin B1
b) Vitamin B12
c) Vitamin C
d) Vitamin K

10. Which of the following nutrients is primarily required for growth and repair of body tissues?

a) Proteins
b) Carbohydrates
c) Fats
d) Water

Section B – Short Answer Questions

(Answer the following questions briefly.)

1. Differentiate between anatomy and physiology.

2. What is the difference between gross anatomy and microscopic anatomy?

3. State any two important functions of a cell.

4. Mention any two functions of connective tissue.

5. Differentiate between flexion and extension.

6. State any two functions of the cardiovascular system.

7. Name the four main types of bones on the basis of their shape. Give one example of each.

8. What are the functions of the urinary bladder and ureters?

9. Differentiate between macronutrients and micronutrients.

10. State any two functions of vitamins in the human body.

Section C – Long Answer Questions

(Answer the following questions in detail.)

1. Explain the four major types of tissues found in the human body and mention one function of each.

2. Describe the structure and functions of the human heart. Mention its four chambers.

3. Explain the functions of the respiratory system and describe the process of inhalation and exhalation.

4. Explain the different types of joints in the human body with suitable examples.

5. What is a balanced diet? Explain the importance of carbohydrates, proteins, fats and minerals in maintaining good health.

ANSWERS

	Section A – MCQ Answers
Q. No.	**Correct Answer**
1.	b) Anatomy
2.	c) Cell
3.	c) Osteology
4.	d) Nervous tissue
5.	b) Arteries
6.	c) Alveoli
7.	b) Nephron
8.	b) Vitamin B1
9.	d) Vitamin K
10.	a) Proteins
	Section B – Short Answer Questions
1.	1. Anatomy is the science dealing with the structure of the body and the relationship between its parts. 2. Physiology is the science dealing with the normal functions of the body and how its organs and systems work.
2.	• Gross anatomy deals with body structures that can be seen with the naked eye. • Microscopic anatomy deals with structures that can be studied only with a microscope, including cells and tissues.

3.	• Respiration: Cells break down nutrients during cellular respiration to release energy. Growth and repair: Cells produce new cytoplasm to support growth and repair worn-out parts.
4.	1. It joins different tissues of the body together and provides support. 2. It protects underlying organs and structures.
5.	• Flexion is a movement that decreases the angle between two body parts. • Extension is a movement that increases the angle between two body parts.
6.	• It transports oxygen and nutrients to different cells of the body. • It transports carbon dioxide and waste materials away from the cells.
7.	I. Long bones – Femur. II. Short bones – Bones of the hands and feet. III. Flat bones – Ribs. IV. Irregular bones – Vertebral column.
8.	• Urinary bladder: It stores urine temporarily before it is expelled from the body. • Ureters: They transport urine from the kidneys to the urinary bladder.
9.	• Macronutrients are nutrients required by the body in relatively large quantities. • Micronutrients are nutrients required by the body in relatively small quantities.
10.	i. Vitamins help maintain normal body functions and support growth and development. ii. They help prevent deficiency diseases and disorders.
	Section C – Long Answer Solutions
1.	The four major types of tissues are: 1. Epithelial tissue: Covers body surfaces and lines body cavities. Its functions include protection, absorption and secretion. 2. Connective tissue: Joins different tissues, provides support and protects underlying organs. Bone is an example. 3. Muscular tissue: Consists of cells specialised for contraction and helps in the movement of the body and internal organs. 4. Nervous tissue: Forms the brain, spinal cord and nerves. It receives stimuli and transmits nerve impulses from one part of the body to another.
2.	The human heart is a hollow, muscular organ responsible for pumping blood throughout the body. • It is located in the thorax (chest), between the lungs and behind the sternum. • It is approximately the size of an individual's fist. • It has four chambers: 1. Right auricle (right atrium). 2. Left auricle (left atrium). 3. Right ventricle. 4. Left ventricle. • The heart pumps blood throughout the body, supplying oxygen and nutrients to different organs and tissues.

3.	The respiratory system is responsible for the exchange of oxygen and carbon dioxide between the body and the environment. • The main organs include the trachea, bronchi, bronchioles, lungs and diaphragm. • Inhalation: It is the process of taking air containing oxygen into the lungs. • Exhalation: It is the process of expelling air containing carbon dioxide from the lungs. • The exchange of oxygen and carbon dioxide takes place in the alveoli (air sacs) of the lungs through diffusion.
4.	A joint is an area where two or more bones come into contact with each other. Joints allow movement of bones and attached organs. The three main categories are: 1. Fibrous or immovable joints: These joints do not allow movement. Example: Joints of the skull. 2. Cartilaginous or slightly movable joints: These joints allow limited movement. Example: Joints between vertebrae. 3. Synovial or freely movable joints: These joints allow free movement and include: o Ball and socket joint – Hip and shoulder. o Hinge joint – Elbow. o Gliding joint – Carpals of the wrist. o Pivot joint – Between radius and ulna.
5.	A balanced diet is a diet that provides all the essential nutrients in appropriate quantities to meet the body's nutritional requirements. Importance of nutrients: 1. Carbohydrates: They are the main source of energy for the body. 2. Proteins: They are essential for the growth and repair of body tissues. 3. Fats: They provide energy and are an important part of the diet. 4. Minerals: They help in maintaining normal body functions. For example, calcium helps build bones and supports muscle and heart health, while iron is an important component of haemoglobin.

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