

INTRODUCTION TO ANATOMY AND PHYSIOLOGY WORKSHEETS - KEY

Anatomy

- 1 Define anatomy. Anatomy is the study of structure and structural relationships of the body and / or its parts.
- 2 Define cellular anatomy. Cellular anatomy is the study of the structure of the cell.
- 3 Define cytology. Cytology is the study of the structure, function, pathology, life cycles, and life history of cells.
- 4 Define developmental anatomy (embryology). Developmental anatomy is the study of the structural development of the embryo.
- 5 Define gross anatomy. Gross anatomy is the study of structures which can be seen with the unaided eye.
- 6 Define histological anatomy. Histological anatomy is the study of the structure of tissues.
- 7 Define histology. Histology is the study of the structure, as seen microscopically, and function of tissues.
- 8 Define microscopic anatomy. Microscopic anatomy is the study of structures with the aid of a microscope.
- 9 Define regional anatomy. Regional anatomy is the study of specific portions of the body (regions).
- 10 Define systemic anatomy. Systemic anatomy is the study of the structure of the body's systems.
- 11 Define surface anatomy. Surface anatomy is the study of the structure of the body's surface.

Physiology

- 12 Define physiology. Physiology is the study function of the living body and/or its parts.
- 13 Define cell physiology. Cell physiology is the study of the function of cells (a branch of cytology).
- 14 Define pathology. Pathology is the study of disordered functions or disease.
- 15 Define systemic physiology. Systemic physiology is the study of the function of the body's systems.
- 16 Define special (organ) physiology. Special (organ) physiology is the study of specific organs of the body.

Complementarity

- 17 What does complementarity of anatomy and physiology refer to? Complementarity refers to the interrelationship of structure (anatomy) and function (physiology).

Organizational Levels

- 18 List in sequence (lowest first) the six hierarchical levels of anatomy and physiology.
 - (1) Chemical level
 - (2) Cellular level
 - (3) Tissue level
 - (4) Organ level
 - (5) Organ system level
 - (6) Organism level
- 19 How does the chemical level (atoms, molecules, and their interactions) relate to cells? Chemical interactions play an essential role in the structural and functional aspects of the cell.
- 20 Cells are built on the chemical level and are organized into the tissue level.

- 21 What are the three components of the cell theory?
 - (1) all living things are made of cells
 - (2) cells are the basic units of life
 - (3) cells come only from preexisting cells

- 22 Tissues are built on the cellular level and are organized into the organ level.

- 23 What are the four fundamental groups of tissues?
 - (1) epithelial tissue
 - (2) connective tissue
 - (3) muscular tissue
 - (4) neural tissue

- 24 Organs are built on the tissue level and are organized into the organ system level.

- 25 Organ systems are built on the organ level and are organized into the organism level.

- 26 Match the following systems with their components:

| | |
|----------------------------|--------------------|
| Cardiovascular system | Muscular system |
| Digestive system | Nervous system |
| Endocrine system | Respiratory system |
| Female reproductive system | Skeletal system |
| Integumentary system | Urinary system |
| Lymphatic system | |
| Male reproductive system | |

Nervous system Brain, spinal cord, nerves, and receptors
Cardiovascular Heart, blood vessels, and blood
Urinary system Kidneys, ureters, urinary bladder, and urethra

Lymphatic system Lymph nodes, lymphatic vessels and their fluid called lymph, tonsils, spleen, and thymus

Digestive system Mouth, esophagus, stomach, small intestine, large intestine, anus, and accessory

Respiratory system Nasal cavity, voice box (larynx), windpipe (trachea), and lungs

Digestive system Organs such as salivary gland, pancreas, liver and gallbladder

Endocrine system Organs which produce hormones (chemical messengers) which include pituitary, testes, ovaries, thymus, thyroid

Female reproductive Ovaries, fallopian tubes, uterus, and vagina

Muscular system Skeletal muscles

Skeletal system Skeleton

Integumentary system Skin, hair, nails, sweat glands and oil glands

Male reproductive Testes, ductus (vas) deferens, prostate, seminal vesicles, and penis