

*Test Bank for Hole's Human Anatomy
and Physiology 2024 Release 1st
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Corret Answers are located at the end of each chapter.

TRUE/FALSE - Write 'T' if the statement is true and 'F' if the statement is false.

- 1) Paired organs that are bilateral, on the left and right side of the body, would be separated by a midsagittal section.
☐ true
☐ false

- 2) The field of medicine arose as early healers abandoned superstitions and ideas about magic and started using natural chemicals and wondering why they were effective at treating illness.
☐ true
☐ false

- 3) Cadaver dissection is against the law in the United States.
☐ true
☐ false

- 4) The anatomy of a body part is closely related to its physiology.
☐ true
☐ false

- 5) We know all there is to know about the structure and function of the human body.
☐ true
☐ false

- 6) Cells with similar functions aggregate into organelles.
☐ true
☐ false

- 7) Macromolecules are built of atoms.
☐ true
☐ false

- 8) Organ systems consist of organs, which consist of tissues.
- ☐ true
 - ☐ false
- 9) A cell is the basic unit of structure and function of an organism.
- ☐ true
 - ☐ false
- 10) Absorption is the ability to exhale carbon dioxide.
- ☐ true
 - ☐ false
- 11) Reproduction is the change in body characteristics over time.
- ☐ true
 - ☐ false
- 12) Temperature is a form of energy, whereas heat is a measurement of the intensity of the temperature.
- ☐ true
 - ☐ false
- 13) Homeostasis is the maintenance of an unstable internal environment.
- ☐ true
 - ☐ false
- 14) The maintenance of a steady body temperature in the face of fluctuating environmental conditions illustrates homeostasis.
- ☐ true
 - ☐ false

- 15) The diaphragm separates the thoracic and the abdominopelvic cavities.
- ☐ true
 - ☐ false
- 16) The parietal pericardium is attached to the surface of the heart.
- ☐ true
 - ☐ false
- 17) The organ systems responsible for integration and coordination are the nervous and endocrine systems.
- ☐ true
 - ☐ false
- 18) Kidneys are part of the lymphatic system.
- ☐ true
 - ☐ false
- 19) The muscular system is responsible for body movements, maintenance of posture, and production of body heat.
- ☐ true
 - ☐ false
- 20) The digestive system filters wastes from the blood.
- ☐ true
 - ☐ false
- 21) Aging begins in the fetus.
- ☐ true
 - ☐ false

22) Chromosomes get longer as a cell ages.

- ☐ true
- ☐ false

23) Ceroid pigments and lipofuscin accumulate with aging, impairing the ability of a cell to withstand the damaging effects of oxygen free radicals.

- ☐ true
- ☐ false

24) The ears are lateral to the eyes.

- ☐ true
- ☐ false

25) The elbow is distal to the wrist.

- ☐ true
- ☐ false

26) A body in the anatomical position is lying down, as a cadaver would be positioned.

- ☐ true
- ☐ false

27) The following list accurately represents levels of organization in the body from smallest to largest: nucleus → chromosome → liver cell → liver epithelial tissue → liver → digestive system

- ☐ true
- ☐ false

28) The head is superior to the neck.

- ☐ true
- ☐ false

- 29) An older adult would be less vulnerable to emerging influenzas and other seasonal viruses due to increased cell efficiency and heightened cell division.
- ☐ true
 - ☐ false
- 30) A researcher has questions about the functions of the greater omentum, a structure found in the abdominal cavity. They begin researching its various functions. This researcher is studying the physiology of the organ.
- ☐ true
 - ☐ false
- 31) A researcher has questions about the structure of the mesentery, a tissue connecting the intestines to the wall of the abdominal cavity. They begin researching its location, components, and its specific structures. This researcher is studying the physiology of the organ.
- ☐ true
 - ☐ false
- 32) The integumentary system is superficial to the skeletal system.
- ☐ true
 - ☐ false

CHECK ALL THE APPLY. Choose all options that best completes the statement or answers the question.

- 33) Which of the following are signs of aging at the cellular level?
- A) Graying hair, waning strength, and wrinkles
 - B) Unrepaired DNA and abnormal proteins
 - C) Impaired cell division and the ability to break down and recycle worn cell parts
 - D) A fatty liver and clogged blood vessels

MULTIPLE CHOICE - Choose the one alternative that best completes the statement or answers the question.

- 34) What type of investigator conducts an experiment to determine how temperature changes affect the rate at which the heart beats?
- A) Anatomist
 - B) Physiologist
 - C) Pathologist
 - D) Biochemist
- 35) Why are the topics of anatomy and physiology difficult to separate?
- A) Physiological functions depend on anatomy of structures.
 - B) Physiological functions in an organism are ongoing.
 - C) The body parts take up space.
 - D) Our understanding of physiology is changing more than our understanding of anatomy.
- 36) The activities of an anatomist consist of _____, whereas those of a physiologist consist of _____.
- A) observing body parts; studying functions of body parts
 - B) conducting experiments; making microscopic examinations
 - C) studying molecules; observing forms of the body parts
 - D) sketching; dissecting
- 37) What is the origin of the term "anatomy"?
- A) From the Greek word for "function".
 - B) Named after the first anatomist.
 - C) From the Greek word for "cutting up".
 - D) For the function of internal organs.
- 38) What is the term "physiology" is related to?
- A) The Latin word for "physical shape".
 - B) The structure of internal organs.
 - C) The Greek word for "cutting up".
 - D) The Greek word for "relationship to nature".

- 39) What is illustrated by the recent discovery of taste receptors in the small intestine that detect sweetness?
- A) Chemical responses occur in only one part of the body.
 - B) New discoveries about anatomy and physiology are still being made.
 - C) Everything there is to know about anatomy and physiology has been discovered.
 - D) The molecular and cellular levels are of little interest in anatomy and physiology.
- 40) Which of the following is **not** true of organelles?
- A) They carry on specific activities.
 - B) They are only in cells of humans.
 - C) They are composed of aggregates of large molecules.
 - D) They are found in many types of cells.
- 41) Which of the following lists best illustrates increasing levels of complexity?
- A) Cells, tissues, organelles, organs, organ systems
 - B) Tissues, cells, organs, organelles, organ systems
 - C) Organs, organelles, organ systems, cells, tissues
 - D) Organelles, cells, tissues, organs, organ systems
- 42) In all organisms, what is the basic unit of structure and function?
- A) The atom
 - B) The organelle
 - C) The macromolecule
 - D) The cell
- 43) Specialized cell types organized in a way that provides a specific function form_____.
- A) tissues
 - B) organs
 - C) organ systems
 - D) organelles

- 44) Simple squamous epithelium is an example of which organizational level?
- A) Organ system
 - B) Organ
 - C) Tissue
 - D) Molecule
- 45) What is assimilation?
- A) The changing of absorbed substances into different chemical forms.
 - B) The breaking down of foods into nutrients that the body can absorb.
 - C) The elimination of waste from the body.
 - D) The increase in body size without a change in overall shape.
- 46) The ability of an organism to sense and react to changes in its body is an example of _____.
- A) circulation
 - B) respiration
 - C) responsiveness
 - D) absorption
- 47) What process is defined as the removal of wastes?
- A) Metabolism
 - B) Absorption
 - C) Assimilation
 - D) Excretion
- 48) Which of the following characteristics of life and their descriptions is correct?
- A) Responsiveness: obtaining and using oxygen to release energy from food.
 - B) Assimilation: sensing changes inside or outside the body and reacting to them.
 - C) Respiration: changing absorbed substances into forms that are chemically different from those that entered the body fluids.
 - D) Circulation: the movement of substances in body fluids.

- 49) What is the definition of metabolism?
- A) The removal of wastes produced by chemical reactions.
 - B) The breakdown of substances into simpler forms.
 - C) The taking in of nutrients.
 - D) The chemical reactions occurring in an organism that support life.
- 50) Which of the following processes does **not** help to maintain the life of an individual organism?
- A) Responsiveness
 - B) Movement
 - C) Reproduction
 - D) Respiration
- 51) Which of the following processes is most important to the continuation of the human species?
- A) Responsiveness
 - B) Movement
 - C) Reproduction
 - D) Respiration
- 52) What is the definition of homeostasis?
- A) The changing external conditions.
 - B) The maintenance of stable external conditions.
 - C) The changing internal conditions.
 - D) The maintenance of stable internal conditions.
- 53) Which of the following is an example of a positive homeostatic mechanism in the human body?
- A) Shivering when body temperature falls below normal.
 - B) Increasing heart rate and force of contraction when blood pressure falls.
 - C) Retention of fluid leading to retention of more fluid.
 - D) Secreting insulin after a meal to return blood sugar concentration toward normal.

- 54) Which of the following are typically required to maintain a stable internal environment?
- A) Positive feedback mechanisms.
 - B) An unstable outside environment.
 - C) Decreased atmospheric pressure.
 - D) Negative feedback mechanisms.
- 55) You accidentally cut your hand. Blood platelets in the area begin to attach to the broken blood vessel walls in the wound. What needs to happen next to create a positive feedback mechanism?
- A) The platelets change shape and encourage more platelets to rush in and stick to each other to form plugs that seal the broken vessels.
 - B) The platelets sticking to the broken blood vessels signals the blood to stop flowing to that area, which stops the bleeding.
 - C) The sensation of pain in your hand causes your muscles to jerk your hand away from the danger.
 - D) The platelets send signals to the brain to slow heart rate and slow the bleeding.
- 56) Which of the following must the human body obtain from the environment in order to survive?
- A) Nitrogen
 - B) Wastes
 - C) Water
 - D) Carbon dioxide
- 57) Homeostasis exists if concentrations of water, nutrients, and oxygen in the body are balanced and heat and pressure _____.
- A) decrease steadily
 - B) remain within certain limited ranges
 - C) increase when the body is stressed
 - D) fluctuate greatly between very high and low values

- 58) In negative feedback mechanisms, what occurs due to changes that move a variable away from the normal state?
- A) Stimulation to change the variable in the same direction.
 - B) Inhibition of all body reactions.
 - C) Stimulation to change the variable in the opposite direction.
 - D) Stimulation to reduce all requirements of the body.
- 59) What is the effect of a positive feedback mechanism?
- A) It causes long-term changes.
 - B) It moves conditions away from the normal state.
 - C) It brings conditions back to the normal state.
 - D) It produces stable conditions.
- 60) Which of the following illustrates a positive feedback mechanism?
- A) Maintenance of blood pressure.
 - B) Uterine contractions during childbirth.
 - C) Body temperature control.
 - D) Control of blood sugar.
- 61) Which of the following is true regarding the effect of a positive feedback mechanisms?
- A) They are the primary means of maintaining homeostasis.
 - B) They stabilize conditions.
 - C) They cause unstable conditions, at least temporarily.
 - D) They maintain the internal environment.
 - E) They move conditions toward a setpoint.
- 62) Which of the following diseases would originate in the abdominopelvic cavity?
- A) Asthma
 - B) Laryngitis
 - C) Myopia (near-sightedness)
 - D) Pancreatitis

- 63) Pneumothorax (collapsed lung) is a condition that occurs when an air-filled space forms between the lung and the wall of the pleural cavity. This space would be between which two layers?
- A) Parietal pleura and visceral pleura
 - B) Parietal pleura and visceral pericardium
 - C) Visceral pericardium and parietal pericardium
 - D) Parietal pericardium and parietal pleura
- 64) What is a main function of the digestive system?
- A) Formation of cells
 - B) Movement of body parts
 - C) Absorption of nutrients
 - D) Providing oxygen for the extraction of energy from nutrients.
- 65) Which of the following is part of the male reproductive system?
- A) Uterus
 - B) Kidneys
 - C) Thymus
 - D) Scrotum
- 66) The thoracic cavity is_____ to the abdominopelvic cavity.
- A) dorsal (posterior)
 - B) ventral (anterior)
 - C) superior
 - D) inferior
- 67) What organ system contains organs that produce blood cells?
- A) Endocrine
 - B) Skeletal
 - C) Respiratory
 - D) Muscular

- 68) A parietal layer of a serous membrane _____, whereas a visceral layer of a serous membrane _____.
- A) covers organs; lines cavities
 - B) lines cavities; covers organs
 - C) secretes serous fluid; secretes mucus
 - D) secretes mucus; secretes a serous fluid
- 69) When does cell death first occur?
- A) Around age 60
 - B) Around age 50
 - C) At puberty
 - D) During fetal development
- 70) What causes wrinkling and sagging of the skin?
- A) Drinking too much water
 - B) Genetics
 - C) Loss of subcutaneous fat, elastin, and collagen.
 - D) Excess subcutaneous fat
- 71) What is a characteristic that many centenarians share?
- A) They had high level of exercise throughout life.
 - B) They have long-lived relatives.
 - C) They follow the Mediterranean diet.
 - D) They never smoked.
- 72) A body has been sectioned in such a way that both lungs and the urinary bladder are visible. What type of section was used?
- A) Frontal
 - B) Transverse
 - C) Midsagittal
 - D) Sagittal

- 73) The upper midportion of the abdomen is called the _____ region.
- A) hypochondriac
 - B) iliac
 - C) hypogastric
 - D) epigastric
- 74) When the body is placed in the anatomical position, which of the following is **not** true?
- A) The head is facing to the front.
 - B) The palms are facing backwards.
 - C) The body is erect.
 - D) The upper limbs are at the sides.
- 75) What is the anatomical term that indicates a structure close to the surface?
- A) Anterior
 - B) Proximal
 - C) Superficial
 - D) Superior
- 76) What type of structures can be visualized using ultrasonography?
- A) Dense organs, such as bones.
 - B) Air-filled organs, such as lungs.
 - C) Soft internal structures, such as fetuses.
 - D) Microscopic structures, such as mitochondria.
- 77) Magnetic resonance imaging uses _____.
- A) X-rays
 - B) radio waves
 - C) radioisotopes
 - D) high-frequency sound waves

- 78) What is/are the origin(s) of many of the terms in anatomy and physiology?
- A) Greek and Latin
 - B) Spanish and Portuguese
 - C) French and German
 - D) Chinese and Japanese
- 79) At what level of organization is skin?
- A) Tissue level
 - B) Cellular level
 - C) Organ level
 - D) System level
 - E) Chemical level
- 80) What requirement of life is the most abundant chemical in the body and is the major component of extracellular fluid?
- A) Water
 - B) Oxygen
 - C) Cell
 - D) Heat
 - E) Food
- 81) Name two types of cavities found in the head.
- A) Paranasal sinuses and nasal cavity
 - B) Oral cavity and mediastinum
 - C) Cranial cavity and vertebral canal
 - D) Tympanic cavities and pleural cavities
- 82) What organ system includes the kidneys?
- A) Respiratory system
 - B) Digestive system
 - C) Endocrine system
 - D) Urinary system

- 83) The pancreas releases hormones. It also releases enzymes needed to break down food. Because of this dual role, the pancreas could be considered part of what two organ systems?
- A) Nervous and digestive systems
 - B) Cardiovascular and lymphatic systems
 - C) Endocrine and digestive systems
 - D) Urinary and endocrine systems
 - E) Lymphatic and integumentary systems
- 84) Bell's palsy results in the lack of stimulation to facial muscles, so they do not contract. Bell's palsy is associated with what organ system?
- A) Nervous system
 - B) Endocrine system
 - C) Skeletal system
 - D) Integumentary system
- 85) Which is a physiological description rather than an anatomical one?
- A) Heart muscle is under involuntary control and is fatigue resistant.
 - B) The skin is composed of an epithelial layer over a connective tissue layer.
 - C) The quadriceps femoris and hamstring muscles are located in the thigh.
 - D) The aorta is a large vessel connected to the heart.
- 86) The femoral region is _____ to the popliteal region.
- A) distal
 - B) medial
 - C) proximal
 - D) lateral
- 87) What term refers to an increase in body size without overall change in shape?
- A) Growth
 - B) Atrophy
 - C) Assimilation
 - D) Metabolism

FILL IN THE BLANK. Write the word or phrase that best completes each statement or answers the question.

- 88) Dissection of human bodies became part of formal medical school coursework in the _____ century.
- 89) The branch of science that deals with the structure of human body parts is called _____.
- 90) The branch of science that deals with the functions of human body parts is called _____.
- 91) A group of cells with common properties that are organized into a layer or mass is called a(n) _____.
- 92) A subcellular structure built of assemblies of macromolecules that carries out a particular function is a(n) _____.
- 93) The process by which food substances are chemically changed into simpler forms that can be absorbed is called _____.
- 94) An increase in body size without overall change in shape is called _____.
- 95) The most abundant molecule in the human body is _____.
- 96) Self-regulating control mechanisms usually operate by a process called _____ feedback.
- 97) The pleural cavity is a potential space between the _____ membranes.
- 98) The chemicals secreted by endocrine glands are called _____.

- 99) Deep vein thrombosis, heart attack, and high blood pressure are all diseases of the _____ system.
- 100) Individuals who live more than 100 years are called _____.
- 101) Standing erect with face and palms forward and upper limbs at the sides describes the _____ position.
- 102) A lengthwise cut that divides the body into right and left portions is termed a(n) _____ section.

Answer Key

Test name: Chapter 01

- 1) TRUE
- 2) TRUE
- 3) FALSE
- 4) TRUE
- 5) FALSE
- 6) FALSE
- 7) TRUE
- 8) TRUE
- 9) TRUE
- 10) FALSE
- 11) FALSE
- 12) FALSE
- 13) FALSE
- 14) TRUE
- 15) TRUE
- 16) FALSE
- 17) TRUE
- 18) FALSE
- 19) TRUE
- 20) FALSE
- 21) TRUE
- 22) FALSE
- 23) TRUE
- 24) TRUE
- 25) FALSE
- 26) FALSE
- 27) FALSE
- 28) TRUE
- 29) FALSE
- 30) TRUE
- 31) FALSE
- 32) TRUE
- 33) [B, C]
- 34) B
- 35) A
- 36) A
- 37) C

- 38) D
- 39) B
- 40) B
- 41) D
- 42) D
- 43) A
- 44) C
- 45) A
- 46) C
- 47) D
- 48) D
- 49) D
- 50) C
- 51) C
- 52) D
- 53) C
- 54) D
- 55) A
- 56) C
- 57) B
- 58) C
- 59) B
- 60) B
- 61) C
- 62) D
- 63) A
- 64) C
- 65) D
- 66) C
- 67) B
- 68) B
- 69) D
- 70) C
- 71) D
- 72) A
- 73) D
- 74) B
- 75) C
- 76) C
- 77) B

- 78) A
- 79) C
- 80) A
- 81) A
- 82) D
- 83) C
- 84) A
- 85) A
- 86) C
- 87) A
- 88) twentieth
- 89) anatomy
- 90) physiology
- 91) tissue
- 92) organelle
- 93) digestion
- 94) growth
- 95) water
- 96) negative
- 97) pleural
- 98) hormones
- 99) cardiovascular
- 100) centenarians
- 101) anatomical
- 102) sagittal