

***Anatomy & Physiology - An Integrative Approach
2025 Release 1st edition McKinley Test Bank***

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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) Anatomy is the study of structure and form.
 - ☐ true
 - ☐ false

- 2) Because the body has been the same for thousands of years, anatomy is considered a static classification system instead of a dynamic science.
 - ☐ true
 - ☐ false

- 3) Cytology is a subdivision of gross anatomy.
 - ☐ true
 - ☐ false

- 4) Physiologists use chemistry to understand the workings of the body's organ systems.
 - ☐ true
 - ☐ false

- 5) Both anatomists and physiologists are aware that form and function are interrelated.
 - ☐ true
 - ☐ false

- 6) Homeostasis refers to an organism's ability to regulate its internal environment despite changes in the external environment.
 - ☐ true
 - ☐ false

- 7) A molecule is made up of a combination of two or more atoms.
 - ☐ true
 - ☐ false

- 8) In the anatomic position, the specimen rests horizontally on the examination table and the arms are extended away from the torso.
- ☐ true
 - ☐ false
- 9) The mediastinum is within the ventral cavity.
- ☐ true
 - ☐ false
- 10) The fact that the structures of cells vary widely reflects the specializations needed for their different functions.
- ☐ true
 - ☐ false
- 11) Organs contain two or more tissues that work together to perform specific, complex functions.
- ☐ true
 - ☐ false
- 12) The cell is the smallest living portion of the human body.
- ☐ true
 - ☐ false
- 13) Fortunately for science, there is but one single property that defines life.
- ☐ true
 - ☐ false
- 14) The life characteristic of reproduction may be interpreted at both the cellular and organismal levels.
- ☐ true
 - ☐ false

- 15) The urinary system filters the blood, concentrates waste products, and removes waste products from the body.
- ☐ true
 - ☐ false
- 16) The anatomic position allows all observers to have a common point of reference.
- ☐ true
 - ☐ false
- 17) A coronal plane is a vertical plane that divides the body into anterior and posterior parts.
- ☐ true
 - ☐ false
- 18) The chest is superior to the head.
- ☐ true
 - ☐ false
- 19) The antecubital region is proximal to the carpal region.
- ☐ true
 - ☐ false
- 20) The mediastinum is a serous cavity.
- ☐ true
 - ☐ false
- 21) The right and left iliac regions are found lateral to the hypogastric region.
- ☐ true
 - ☐ false
- 22) The lumbar regions are located lateral to the umbilical region.
- ☐ true
 - ☐ false

- 23) The central nervous system acts as the control center for the regulation of blood calcium and blood glucose.
- ☐ true
 - ☐ false
- 24) If your body temperature starts to decline, your body responds by exciting skeletal muscles so that you shiver and your temperature returns to normal. This is an example of negative feedback.
- ☐ true
 - ☐ false
- 25) The term "positive feedback" means that the outcome of the system is a good one.
- ☐ true
 - ☐ false
- 26) Damage to the heart can cause inadequate blood circulation, which can lead to more damage to the heart. This is an example of a positive feedback cycle.
- ☐ true
 - ☐ false
- 27) For better retention of material, it is better to break up study sessions into multiple smaller chunks (e.g. 30 minutes each) rather than fewer, longer sessions (e.g. several hours each).
- ☐ true
 - ☐ false

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

- 28) If a scientist forms and tests a hypothesis, but gets unexpected results, what is a logical next step?
- A) Accept the original hypothesis
 - B) Reject the original hypothesis
 - C) Revise the original hypothesis
 - D) Design a new experiment based on a new or modified hypothesis.

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

- 29) The word "anatomy" comes from
- A) Latin and means "to be born."
 - B) Hebrew and means "shape."
 - C) Greek and means "to cut apart."
 - D) German and means "body."
 - E) Italian and means "form."
- 30) A scientist who describes the layers of the heart wall and their relationship to the surrounding pericardium would be a(n)
- A) anatomist.
 - B) physiologist.
 - C) pathologist.
 - D) pulmonologist.
- 31) _____ anatomy examines both superficial anatomic markings and internal body structures as they relate to the skin covering them.
- A) Regional
 - B) Surface
 - C) Radiographic
 - D) Surgical
 - E) Systemic
- 32) Which branch of microscopic anatomy is the study of tissues?
- A) Histology
 - B) Cytology
 - C) Embryology
 - D) Developmental anatomy
 - E) Surgical anatomy

- 33) Gross anatomy refers to the study of
- A) cells.
 - B) structures formed by cells.
 - C) structures not visible to the unaided eye.
 - D) structures visible to the unaided eye.
 - E) nasal secretions.
- 34) The anatomic changes that result from disease are studied under
- A) pathologic anatomy.
 - B) systemic anatomy.
 - C) histology.
 - D) surgical anatomy.
 - E) developmental anatomy.
- 35) The two main divisions of microscopic anatomy are
- A) embryology and parasitology.
 - B) cytology and histology.
 - C) comparative anatomy and pathological anatomy.
 - D) neurobiology and surface anatomy.
- 36) When medical students study all of the structures in a particular area of the body as a unit (for example, all the muscles, blood vessels, and nerves of the leg), that approach is called
- A) surface anatomy.
 - B) comparative anatomy.
 - C) popliteal physiology.
 - D) regional anatomy.
 - E) systemic anatomy.
- 37) The scientific discipline that studies the functions of body structures is
- A) anatomy.
 - B) physiology.

- 38) Which is a physiological description rather than an anatomical one?
- A) The muscles of the intestinal wall contract slowly and involuntarily.
 - B) The walls of blood capillaries are composed of a thin epithelium.
 - C) The muscles of the thigh are composed of skeletal muscle tissue.
 - D) There are fenestrations (openings) in the epithelial cells of some capillary walls.
 - E) The esophageal wall includes a layer of dense irregular connective tissue.
- 39) Respiratory physiology is primarily the study of
- A) cell shape within the alveoli of the lungs.
 - B) the branching pattern of the small airways of the lungs.
 - C) the tissue composition of the airways, air sacs, and blood vessels.
 - D) how gases are transferred between the lungs and the blood vessels supplying them.
- 40) The large surface area of the inside of the small intestine means that this structure is
- A) well adapted for its physiological role in absorption.
 - B) derived from an embryological structure that served a different function.
 - C) anatomically complex but physiologically simple.
 - D) maladaptive in that it harbors bacteria.
- 41) The mechanism by which the body propels food through the digestive tract is primarily a topic of study for
- A) anatomists.
 - B) physiologists.
- 42) The term that refers to the ability of organisms to react to changes in the environment is
- A) responsiveness.
 - B) reproduction.
 - C) metabolism.
 - D) development.
 - E) organization.

- 43) The various chemical reactions that organisms carry out are collectively called
- A) reproduction.
 - B) homeostasis.
 - C) metabolism.
 - D) responsiveness.
 - E) development.
- 44) The category of reactions in which larger molecules are broken down into smaller ones is known as
- A) anabolism.
 - B) catabolism.
 - C) synthesis.
 - D) homeostasis.
 - E) enzymatic.
- 45) The smallest structural unit that exhibits the characteristics of living things is
- A) an organ.
 - B) an individual.
 - C) tissue.
 - D) a cell.
 - E) a system.
- 46) Which level consists of related organs that work to achieve a common function?
- A) Organ system level
 - B) Cellular level
 - C) Tissue level
 - D) Chemical level
 - E) Organ level
- 47) At what level of organization is a tooth, which contains multiple tissue types?
- A) Tissue level
 - B) Cell level
 - C) Organ level
 - D) System level
 - E) Atomic level

- 48) Which of the following statements accurately describes the organization of structures?
- A) Organs are made up of tissues, which are made up of cells, which are made up of organelles and molecules.
 - B) Tissues are made up of organs, which are made up of cells, which are made up of individual atoms.
 - C) Organisms are made up of tissues, which are made up of organ systems, which are made up of DNA.
 - D) Organ systems are made up of cells, which are made up of tissues, which are made up of organelles.
 - E) Organs are made up of cells, which are made up of atoms, which are made up of molecules.
- 49) Which system is responsible for providing protection, regulating body temperature, and being the site of cutaneous receptors?
- A) Respiratory
 - B) Muscular
 - C) Integumentary
 - D) Urinary
 - E) Nervous
- 50) The body system that provides support and protection as well as being a site of blood cell production (hemopoiesis) is the _____ system.
- A) skeletal
 - B) muscular
 - C) cardiovascular
 - D) respiratory
 - E) lymphatic
- 51) The system responsible for the exchange of gases between the blood and atmospheric air is the _____ system.
- A) urinary
 - B) respiratory
 - C) cardiovascular
 - D) endocrine
 - E) nervous

- 52) Which describes the anatomic position?
- A) Body is upright.
 - B) Palms are facing forward.
 - C) Thumbs point away from the body.
 - D) Feet are flat on the floor.
 - E) All of the choices are correct.
- 53) The word _____ implies an imaginary flat surface passing through the body.
- A) section
 - B) plane
 - C) direction
 - D) tangent
 - E) figure
- 54) A plane that passes through the structure at an angle is called
- A) frontal.
 - B) coronal.
 - C) oblique.
 - D) sagittal.
 - E) transverse.
- 55) A(n) _____ plane separates the body into superior and inferior parts.
- A) transverse
 - B) oblique
 - C) sagittal
 - D) coronal
 - E) frontal
- 56) Which best defines "superficial"?
- A) On the inside
 - B) On the outside
 - C) Toward the end of an appendage
 - D) Close to the attachment of the appendage to the trunk
 - E) At the head end

- 57) The directional term that means "away from the midline of the body" is
- A) inferior.
 - B) superior.
 - C) medial.
 - D) lateral.
 - E) caudal.
- 58) The directional term that means "closest to the point of attachment to the trunk" is
- A) distal.
 - B) proximal.
 - C) medial.
 - D) cephalic.
 - E) dorsal.
- 59) The directional term that means "in back of" or "toward the back surface" is
- A) posterior.
 - B) caudal.
 - C) cephalic.
 - D) anterior.
 - E) proximal.
- 60) The best term for referring to the rear or "tail end" is
- A) caudal.
 - B) cephalic.
 - C) inferior.
 - D) superior.
 - E) lateral.
- 61) The head, neck, and trunk make up the _____ region of the body.
- A) appendicular
 - B) axial
 - C) cephalic
 - D) caudal
 - E) thoracic

- 62) The cranial cavity houses the
- A) eyeball.
 - B) ear canals.
 - C) brain.
 - D) spinal cord.
 - E) nasal structures.
- 63) The bones of the vertebral column form a cavity called the
- A) nervous system passageway.
 - B) abdominal cavity.
 - C) pleural cavity.
 - D) vertebral canal.
- 64) The axillary region is _____ to the pectoral region.
- A) lateral
 - B) medial
 - C) distal
 - D) proximal
 - E) inferior
- 65) The anatomic term for the cheek is
- A) buccal.
 - B) pelvic.
 - C) cervical.
 - D) crural.
 - E) sacral.
- 66) The popliteal region is best seen from a(n) _____ view.
- A) anterior
 - B) lateral
 - C) superior
 - D) inferior
 - E) posterior

- 67) What is the anatomic term for the foot?
- A) Pubic
 - B) Patellar
 - C) Pes
 - D) Popliteal
 - E) Acromial
- 68) Which anatomical term describes the wrist region?
- A) Tarsal
 - B) Carpal
 - C) Digital
 - D) Olecranal
 - E) Perineal
- 69) With the subject in the anatomic position, one can best see the dorsum of the manus from a(n) _____ view.
- A) lateral
 - B) superior
 - C) inferior
 - D) posterior
 - E) anterior
- 70) The primary function of serous fluid is
- A) to serve as a lubricant.
 - B) to provide a stabilizing force.
 - C) to insulate.
 - D) to store energy.
 - E) to provide an attachment surface.
- 71) The anatomic term for the calf is
- A) crural.
 - B) popliteal.
 - C) tarsal.
 - D) carpal.
 - E) sural.

72) The term "hallux" refers to the

- A) little finger.
- B) thumb.
- C) great toe.
- D) lateral-most toe.
- E) middle digit.

73) What is the anatomic term for the hip region?

- A) Sternal
- B) Coxal
- C) Dorsal
- D) Crural
- E) Sural

74) A professional fighter hit in the mental region might have damage to the

- A) jaw.
- B) ear.
- C) nose.
- D) knee.
- E) shoulder.

75) "Pollex" refers to the

- A) eyebrow.
- B) thumb.
- C) great toe.
- D) little finger.
- E) kneecap.

76) An inguinal hernia is in the region of the

- A) umbilicus.
- B) groin.
- C) calf.
- D) thigh.
- E) shoulder.

- 77) Which serous membrane covers the surface of an organ?
- A) The parietal layer
 - B) The visceral layer
 - C) The muscle layer
 - D) The dorsal layer
 - E) The ventral layer
- 78) The pleural cavity is the
- A) same as the mediastinum.
 - B) the serous membrane lining the abdomen.
 - C) space within which the heart sits.
 - D) potential space between the two serous membranes surrounding a lung.
- 79) The limbs of the body are attached to the axis and make up the
- A) abdominal region.
 - B) thoracic region.
 - C) axial region.
 - D) appendicular region.
 - E) antebrachial region.
- 80) The median space in the thoracic cavity is called the
- A) pleural cavity.
 - B) pericardial cavity.
 - C) mediastinum.
 - D) peritoneal cavity.
 - E) hypochondriac space.
- 81) The pericardium is a two-layered serous membrane that
- A) surrounds the heart.
 - B) surrounds the kidney.
 - C) surrounds a lung.
 - D) provides lubrication for the knee.
 - E) covers the small intestine.

- 82) The serous fluid that helps in cardiac function is located
- A) inside the heart's chambers.
 - B) between the parietal pericardium and the sternum.
 - C) in the pericardial cavity, between the parietal and visceral pericardial layers.
 - D) between the visceral pericardium and the cardiac muscle.
- 83) With a specimen in the anatomic position, you can best see the mediastinum with a _____ view.
- A) midsagittal
 - B) superior
 - C) inferior
 - D) frontal
 - E) posterior
- 84) The moist, two-layered serous membrane that lines the abdominopelvic cavity is called the
- A) peritoneum.
 - B) thoracic diaphragm.
 - C) synovium.
 - D) pleura.
 - E) pericardium.
- 85) Of the nine abdominopelvic regions, the one that is most superior in the middle column is called the
- A) lumbar.
 - B) umbilical.
 - C) epigastric.
 - D) hypogastric.
 - E) hypochondriac.
- 86) Which abdominopelvic regions have both a right and a left side?
- A) Only the lumbar and iliac
 - B) Only the hypogastric and hypochondriac
 - C) The hypochondriac, lumbar, and hypogastric
 - D) Only the iliac and hypochondriac
 - E) The lumbar, iliac, and hypochondriac

- 87) Lateral to the umbilical abdominopelvic region are the _____ regions.
- A) hypochondriac
 - B) iliac
 - C) hypogastric
 - D) epigastric
 - E) lumbar
- 88) The urinary bladder is found in which abdominopelvic region?
- A) Hypogastric
 - B) Right lumbar
 - C) Hypochondriac
 - D) Left iliac
 - E) Left lumbar
- 89) The abdominopelvic quadrants are formed by passing one horizontal and one vertical line through the
- A) patellar region.
 - B) umbilicus.
 - C) antebrachial region.
 - D) gluteal region.
 - E) crural region.
- 90) The control center of a homeostatic mechanism
- A) brings about change to the internal environment.
 - B) integrates sensory input and signals for change as needed.
 - C) is a change in the external environment.
 - D) detects a change in a variable that is being regulated.
- 91) The part of the homeostatic control mechanism that brings about change is the
- A) control center.
 - B) stimulus.
 - C) effector.
 - D) receptor.

- 92) When you are exposed to bright light, a reflex is initiated and the muscles of your iris contract to decrease your pupil size. The iris muscles are acting as a(n)
- A) effector.
 - B) control center.
 - C) receptor.
 - D) positive feedback.
- 93) When you are exposed to bright light, cells in the retina detect the stimulus and send it to the brain for processing. The brain commands the iris to constrict and decrease pupil size. Which structure serves as a receptor in this system?
- A) The retina
 - B) The iris
 - C) The eyelid
 - D) The brain's visual cortex
- 94) Which of the following choices places the components of a homeostatic control system in proper order?
- A) Effector, control center, stimulus, receptor
 - B) Stimulus, receptor, control center, effector
 - C) Receptor, effector, control center, stimulus
 - D) Stimulus, control center, effector, receptor
 - E) Receptor, control center, stimulus, effector
- 95) The normal level at which a physiological variable is maintained is known as its
- A) stimulus.
 - B) control center.
 - C) negative feedback.
 - D) set point.
 - E) effector.
- 96) If carbon dioxide levels rise in the body, negative feedback mechanisms will trigger
- A) an increase in breathing so that carbon dioxide levels decline to the set point.
 - B) an increase in breathing so that carbon dioxide levels rise further above set point.
 - C) a decrease in breathing so that carbon dioxide levels rise to the set point.
 - D) a decrease in breathing so that carbon dioxide levels decline below set point.

- 97) In the positive feedback mechanism governing breastfeeding, the mammary glands of the breast serve as the
- A) control center.
 - B) receptor.
 - C) effector.
 - D) set point.
- 98) Disease is often considered the result of
- A) negative feedback.
 - B) failure of homeostatic systems.
 - C) maintenance of set point.
 - D) feedback loops.
- 99) Diagnosing a disease involves determining the
- A) cause of the homeostatic imbalance.
 - B) multiple side effects of a drug.
 - C) effector and the set point.
 - D) negativity of the feedback.
- 100) Which of the following is an example of a best practice for effectively studying anatomy and physiology material?
- A) Explaining a concept to a study partner
 - B) Study by exclusively reading and re-reading the material
 - C) Wait until a day or two before the test before studying
 - D) Study in fewer, longer sessions as compared to numerous, shorter sessions
- 101) Which of the following describes the sequence of steps in the scientific method?
- A) Observe a natural event, form a hypothesis, experiments and testing, form conclusions
 - B) Form a hypothesis, form conclusions, experiments and testing, observe a natural event
 - C) Experiments and testing, form a hypothesis, observe a natural event, form conclusions
 - D) Form conclusions, observe a natural event, form a hypothesis, experiments and testing

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

- 102) The discipline known as _____ anatomy examines similarities and differences across species.
- 103) The discipline that studies the functions of the nervous system, including the way that impulses are conducted, is known as _____.
- 104) The discipline that associates changes in organ system function with disease or injury is known as _____.
- 105) The group of metabolic reactions in which smaller molecules are combined to form larger ones is _____.
- 106) Specialized subunits of cells that are made of macromolecules are called _____.
- 107) The organ system that transports and filters interstitial fluid while also participating in immune responses is the _____ system.
- 108) The pituitary, thyroid, and adrenal glands are typically grouped within the _____ system.
- 109) The appendix is in the right iliac region, and is therefore located in the _____ quadrant.
- 110) The level of organization one step more complex than the organ level is the _____ level.
- 111) The state of equilibrium, or fairly constant internal environment, in the body is called _____.

- 112) The _____ reproductive system produces oocytes.
- 113) The antecubital region is _____ to the brachial region.
- 114) The muscular partition that separates the thoracic and abdominopelvic cavities is the thoracic _____.
- 115) The hypogastric region is located _____ to the right iliac region.
- 116) Sensory nerves that detect changes in a variable that is being regulated comprise the _____ of the control mechanism.
- 117) In a homeostatic control mechanism, the receptor detects changes in the environment and relays that information to the _____.
- 118) The reinforcement of a stimulus so that a climax is reached is known as _____.

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

- 119) Describe the positions of the thumbs and the palms of the hands in the anatomic position.
- 120) Explain the spatial relationship between the following: thoracic cavity, pericardial cavity, ventral cavity, mediastinum.

121) Define the term "negative feedback."

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

122) Some researchers think pheromones are important tools in human communication.

Pheromones are chemical signals that one individual sends to another. What research questions might be asked by anatomists, and what questions might be asked by physiologists, to determine if pheromones are important to humans?

123) Iron atoms help our blood transport oxygen. Describe each level of anatomical structural complexity for an iron atom in your blood, working from the simplest level (atom) to the most complex (organism).

124) If someone speaks too loudly into a microphone, a public address system will sometimes produce a loud whistle of amplified feedback. Explain whether this is an example of negative or positive feedback, and explain how the microphone, control box, and speaker of the system serve as the different components of a feedback loop.

Answer Key

Test name: Chapter 01

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

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

- 78) D
- 79) D
- 80) C
- 81) A
- 82) C
- 83) D
- 84) A
- 85) C
- 86) E
- 87) E
- 88) A
- 89) B
- 90) B
- 91) C
- 92) A
- 93) A
- 94) B
- 95) D
- 96) A
- 97) C
- 98) B
- 99) A
- 100) A
- 101) A
- 102) comparative
- 103) neurophysiology
- 104) pathophysiology
- 105) anabolism
- 106) organelles
- 107) lymphatic
- 108) endocrine
- 109) right lower
- 110) organ system
- 111) homeostasis
- 112) female
- 113) distal
- 114) diaphragm
- 115) medial
- 116) receptor
- 117) control center

- 118) positive feedback
- 119) Short Answer
- 120) Short Answer
- 121) Short Answer
- 122) Essay
- 123) Essay
- 124) Essay