

***Anatomy & Physiology The Unity of Form and
Function 10th edition Saladin 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) Feeling for swollen lymph nodes is an example of auscultation.
 - ☐ true
 - ☐ false

- 2) We can see through bones with magnetic resonance imaging (MRI).
 - ☐ true
 - ☐ false

- 3) Histology is the study of structures that can be observed without a magnifying lens.
 - ☐ true
 - ☐ false

- 4) Cells were first named by microscopist Robert Hooke.
 - ☐ true
 - ☐ false

- 5) All functions of the body can be interpreted as the effects of cellular activity.
 - ☐ true
 - ☐ false

- 6) The *hypothetico-deductive method* is common in physiology, whereas the *inductive method* is common in anatomy.
 - ☐ true
 - ☐ false

- 7) An individual scientific fact has more information than a theory.
 - ☐ true
 - ☐ false

- 8) Evolutionary (Darwinian) medicine traces some of our diseases to our evolutionary past.
- ☐ true
 - ☐ false
- 9) The terms *development* and *evolution* have the same meaning in physiology.
- ☐ true
 - ☐ false
- 10) Organs are made of tissues.
- ☐ true
 - ☐ false
- 11) A molecule of water is more complex than a mitochondrion (organelle).
- ☐ true
 - ☐ false
- 12) Homeostasis and occupying space are both unique characteristics of living things.
- ☐ true
 - ☐ false
- 13) Negative feedback is a self-amplifying chain of events that tends to produce rapid change in the body.
- ☐ true
 - ☐ false
- 14) Positive feedback helps to restore normal function when one of the body's physiological variables gets out of balance.
- ☐ true
 - ☐ false

- 15) Anatomists around the world adhere to a lexicon of standard international terms which stipulates both Latin names and accepted English equivalents.
- ☐ true
 - ☐ false
- 16) Lou Gehrig disease is the eponym for Amyotrophic Lateral Sclerosis, made famous by the "ice bucket challenge."
- ☐ true
 - ☐ false
- 17) Sometimes anatomical terms come from origins that do **not** lend any insight into their meaning.
- ☐ true
 - ☐ false

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

- 18) The study of normal body structures is called_____.
- A) physiology
 - B) anatomy
 - C) pathology
 - D) microscopy
 - E) biology
- 19) The study of how the body functions is called_____.
- A) neuroanatomy
 - B) anatomy
 - C) chemistry
 - D) histology
 - E) physiology

- 20) Feeling structures with your fingertips is called _____, whereas tapping on the body and listening for sounds of abnormalities is called _____.
- A) palpation; auscultation
 - B) auscultation; percussion
 - C) percussion; auscultation
 - D) palpation; percussion
 - E) percussion; palpation
- 21) Which of these is the best imaging technique for routinely examining the anatomical development of a fetus?
- A) Auscultation
 - B) PET scan
 - C) MRI
 - D) Sonography
 - E) Radiography
- 22) The study of the structure and function of cells is called _____.
- A) cytology
 - B) gross anatomy
 - C) exploratory physiology
 - D) comparative physiology
 - E) radiology
- 23) Ultrastructure refers to the detailed structure to the level of the _____.
- A) molecule
 - B) cell
 - C) organelle
 - D) tissue
 - E) organ

- 24) The study of how hormones function is called _____.
- A) neuroanatomy
 - B) neurophysiology
 - C) endocrinology
 - D) histology
 - E) pathophysiology
- 25) The study of mechanism of disease is called _____.
- A) neuroanatomy
 - B) neurophysiology
 - C) endocrinology
 - D) histology
 - E) pathophysiology
- 26) The terms *physics*, *physiology*, and *physician* come from a term _____ proposed to distinguish natural causes from supernatural causes.
- A) Hippocrates
 - B) Plato
 - C) Schwann
 - D) Aristotle
 - E) Avicenna
- 27) Who was a physician to the Roman gladiators, learned by dissection of animals, and saw science as a method of discovery?
- A) Hippocrates
 - B) Plato
 - C) Schwann
 - D) Aristotle
 - E) Galen

- 28) Known as "the father of modern anatomy," _____ was the first to publish accurate drawings of the body.
- A) Vesalius
 - B) Maimonides
 - C) Harvey
 - D) Aristotle
 - E) van Leeuwenhoek
- 29) The most influential medical textbook of the ancient era was written by _____.
- A) Hippocrates
 - B) Aristotle
 - C) Galen
 - D) Vesalius
 - E) Avicenna
- 30) Who established a code of ethics for physicians and is considered the "father of medicine"?
- A) Aristotle
 - B) Hippocrates
 - C) Galen
 - D) Vesalius
 - E) Hooke
- 31) What is the process of using numerous observations to develop general principles and predictions about a specific subject called?
- A) Experimental design
 - B) The deductive method
 - C) The inductive method
 - D) A hypothesis
 - E) Statistical testing

- 32) Most people think that ulcers are caused by psychological stress. It was discovered that an acid-resistant bacterium, *Helicobacter pylori*, lives in the lining of the stomach. If these bacteria cause ulcers, then treatment with an antibiotic should reduce ulcers. This line of investigation is an example of _____.
- A) hypothetical reasoning
 - B) hypothetico-deductive reasoning
 - C) the inductive method
 - D) experimental design
 - E) statistical analysis
- 33) The use of controls and statistical testing are two aspects of experimental design that help to ensure _____.
- A) an adequate sample size
 - B) objective and reliable results
 - C) experimental bias
 - D) psychosomatic effects
 - E) treatment groups
- 34) Which process submits a scientist's ideas to the critical judgment of other specialists in the field before the research is funded or published?
- A) Adjudication
 - B) Statistical testing
 - C) Falsification
 - D) Peer review
 - E) Hypothetico-deductive testing
- 35) A new drug apparently increases short-term memory. Students were divided randomly into two groups at the beginning of the semester. One group was given the memory pill once a day for the semester, and the other group was given a same-looking pill, but it was just sugar. The sugar pill is termed a(n)_____.
- A) controlled pill
 - B) placebo
 - C) treatment pill
 - D) variable
 - E) effective dose

- 36) Two groups of people were tested to determine whether garlic lowers blood cholesterol levels. One group was given 800 mg of garlic powder daily for four months and exhibited an average 12% reduction in the blood cholesterol. The other group was not given any garlic and after four months averaged a 3% reduction in cholesterol. The group that was not given the garlic was the _____ group.
- A) peer
 - B) test
 - C) treatment
 - D) control
 - E) double-blind
- 37) An educated speculation or a possible answer to a question is called a(n) _____.
- A) scientific method
 - B) theory
 - C) law
 - D) hypothesis
 - E) fact
- 38) Which of the following would contain the greatest amount of information that scientists consider to be true to the best of their knowledge?
- A) A fact
 - B) A law of nature
 - C) A hypothesis
 - D) An equation
 - E) A theory
- 39) If a species of animal evolves over generations to grow a large fan-blade like growth on its back to catch the wind and cool its body, this would be an example of responding to _____.
- A) selection pressure
 - B) adaptation
 - C) natural selection
 - D) climate change
 - E) positive feedback

- 40) What is a change in the genetic composition of a population over time called?
- A) Mutation
 - B) Natural selection
 - C) Selection pressure
 - D) Evolution
 - E) Adaptation
- 41) The constant appearance of new strains of influenza virus is an example of _____.
- A) a model
 - B) evolution
 - C) selection pressure
 - D) survivorship
 - E) success
- 42) What is the principal theory of how evolution works?
- A) Natural pressure
 - B) Selective pressure
 - C) Darwinian pressure
 - D) Natural adaptation
 - E) Natural selection
- 43) Stereoscopic vision provides _____.
- A) opposable perception
 - B) color perception
 - C) depth perception
 - D) bipedalism
 - E) opposition of thumbs
- 44) Most primates are _____, meaning they live in trees.
- A) prehensile
 - B) bipedal
 - C) cursorial
 - D) troglodytic
 - E) arboreal

- 45) Which of the following was an adaptation that evolved in connection with human upright walking?
- A) Hair
 - B) Fully opposable thumbs
 - C) Stereoscopic vision
 - D) Color vision
 - E) Spinal and pelvic anatomy
- 46) A human is born before his/her nervous system has matured. This is traceable to _____.
- A) their inability to regulate body temperature
 - B) skeletal adaptations to bipedalism
 - C) the arboreal habits of early primates
 - D) the conditions of modern civilization
 - E) the diet of early species of Homo
- 47) What is the species of modern humans?
- A) *Homo erectus*
 - B) *Homo sapiens*
 - C) *Homo habilis*
 - D) *Neanderthal*
 - E) *Australopithecus*
- 48) An _____ is composed of two or more tissues types, whereas _____ are microscopic structures in a cell.
- A) organ system; organs
 - B) organ system; organelles
 - C) organ; organelles
 - D) organ; molecules
 - E) organelle; molecules

- 49) Which of the following lists levels of human structure from the *most complex to the simplest*?
- A) Organelle, cell, tissue, organ, organ system
 - B) Organ system, organ, cell, tissue, organelle
 - C) Organ system, organelle, tissue, cell, organ
 - D) Organ system, organ, tissue, cell, organelle
 - E) Organ, organ system, tissue, cell, organelle
- 50) Which of the following lists examples of body structures from the *simplest to the most complex*?
- A) Mitochondrion, connective tissue, protein, stomach, adipocyte (fat cell)
 - B) Protein, mitochondrion, adipocyte (fat cell), connective tissue, stomach
 - C) Mitochondrion, connective tissue, stomach, protein, adipocyte (fat cell)
 - D) Protein, adipocyte (fat cell), stomach, connective tissue, mitochondrion
 - E) Protein, stomach, connective tissue, adipocyte (fat cell), mitochondrion
- 51) A(n) _____ is a group of similar cells and their intercellular materials in a discrete region of an organ performing a specific function.
- A) macromolecule
 - B) organ system
 - C) organelle
 - D) organism
 - E) tissue
- 52) All of the following are human organ systems *except* _____.
- A) skeletal
 - B) endocrine
 - C) epidermal
 - D) reproductive
 - E) lymphatic

- 53) All of the following are organs *except* _____.
- A) teeth
 - B) the skin
 - C) nails
 - D) the liver
 - E) the digestive system
- 54) Taking apart a clock to see how it works is similar to _____ thinking about human physiology.
- A) comparative
 - B) evolutionary
 - C) holistic
 - D) inductive
 - E) reductionist
- 55) Which of the following approaches understanding the human body by studying the interactions of its parts?
- A) Naturalism
 - B) Reductionism
 - C) Vitalism
 - D) Holism
 - E) Rationalism
- 56) What is the view that not everything about an organism can be understood or predicted from the knowledge of its components; that is, the whole is greater than the sum of its parts?
- A) Naturalism
 - B) Reductionism
 - C) Holism
 - D) Materialism
 - E) Science

- 57) The fact that most of us have 24 ribs, but some people have 23, 26, or more, is an example of what type of variation among organisms?
- A) Cellular
 - B) Holistic
 - C) Physiological
 - D) Anatomical
 - E) Reductionist
- 58) Why does a surgeon need to be familiar with different versions of anatomy?
- A) Cellular adaptation
 - B) Holistic medicine
 - C) Physiological variation
 - D) Anatomical variation
 - E) Evolutionary adaptation
- 59) What are the simplest body structures considered alive?
- A) Organ systems
 - B) Organs
 - C) Cells
 - D) Organelles
 - E) Molecules
- 60) Metabolism is the sum of all _____ change.
- A) external physical
 - B) external chemical
 - C) internal chemical
 - D) internal physical
 - E) internal integrative

- 61) The change in size of the bone marrow (where blood cells are produced) as an infant matures is an example of_____, whereas the transformation of blood stem cells into white blood cells is an example of_____.
- A) development; differentiation
 - B) growth; development
 - C) growth; differentiation
 - D) differentiation; growth
 - E) differentiation; development
- 62) A hemoglobin level of 12g/dL is normal for an adult female, but low for an adult male. What is this an example of?
- A) Cellular adaptation
 - B) Holistic medicine
 - C) Physiological variation
 - D) Anatomical variation
 - E) Structural differentiation
- 63) Which of the following is *not* an aspect that could result in physiological variation?
- A) Age
 - B) Gender
 - C) Environment
 - D) Physical activity
 - E) These are all aspects that can cause physiological variation.
- 64) We live in an ever-changing environment outside of our body, yet our internal conditions remain relatively stable. This is called_____.
- A) homeostasis
 - B) metastasis
 - C) responsiveness
 - D) adaptation
 - E) evolution

- 65) What are the three common components of a feedback loop?
- A) Stimulus, integrating (control) center, and organ system
 - B) Stimulus, receptor, and integrating (control) center
 - C) Receptor, integrating (control) center, and effector
 - D) Receptor, organ, and organ system
 - E) Receptor, integrating (control) center, and organ system
- 66) During exercise, one generates excess heat and the body temperature rises. As a response, blood vessels dilate in the skin, warm blood flows closer to the body surface, and heat is lost. This is an example of_____.
- A) negative feedback
 - B) positive feedback
 - C) dynamic equilibrium
 - D) integration control
 - E) set point adjustment
- 67) Blood glucose concentration rises after a meal and stimulates the pancreas to release the hormone insulin. Insulin travels in the blood and stimulates the uptake of glucose by body cells from the bloodstream, thus reducing blood glucose concentration. This is an example of_____.
- A) negative feedback
 - B) positive feedback
 - C) dynamic equilibrium
 - D) integration control
 - E) set point adjustment
- 68) Negative feedback loops are_____.
- A) homeostatic mechanisms
 - B) not homeostatic mechanisms
 - C) associated with "vicious circles"
 - D) self-amplifying cycles
 - E) usually harmful

69) When a woman is giving birth, the head of the baby pushes against her cervix and stimulates the release of the hormone oxytocin. Oxytocin travels in the blood and stimulates the uterus to contract. Labor contractions become more and more intense until the baby is expelled.

This is an example of_____.

- A) negative feedback
- B) positive feedback
- C) dynamic equilibrium
- D) integration control
- E) set point adjustment

70) Which of the following is *most likely* to cause disease?

- A) Positive feedback
- B) Negative feedback
- C) Homeostasis
- D) Equilibrium
- E) Irritability

71) A physiological_____ is a difference in chemical concentration, electrical charge, physical pressure, temperature, or other variables between one point and another.

- A) gradient
- B) barrier
- C) membrane
- D) imbalance
- E) feedback loop

72) Chemicals in a solution can move down a concentration gradient. This means the chemical will move from the area of _____ concentration to the area of _____ concentration.

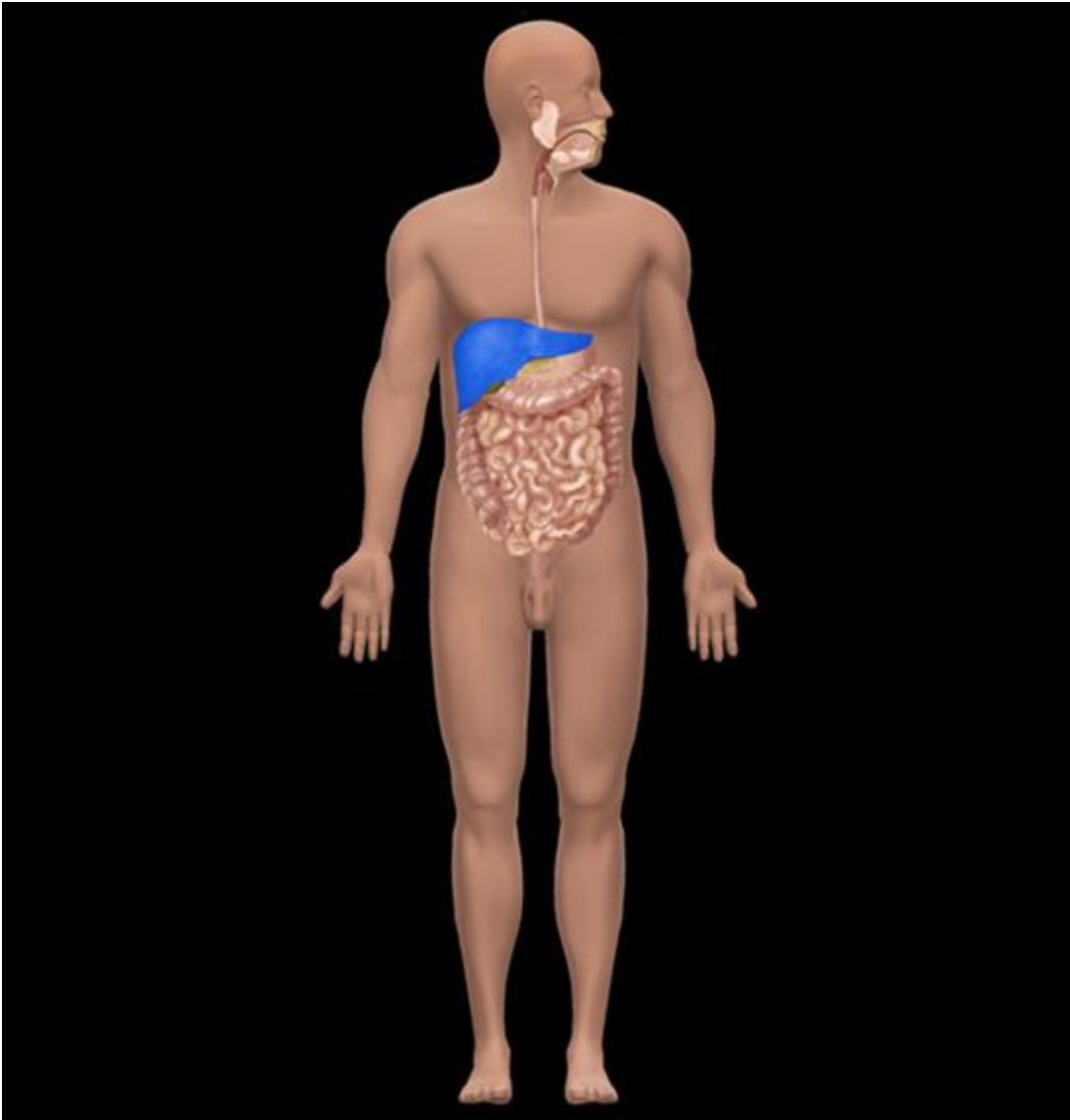
- A) higher; lower
- B) lower; higher
- C) equal; equal
- D) lower; lower
- E) higher; higher

- 73) Which of the following is *not* an example of a physiological gradient?
- A) Tissue
 - B) Thermal
 - C) Concentration
 - D) Pressure
 - E) Electrical
- 74) What type of gradient causes the movement of ions due to *both charge and concentration* differences?
- A) Electrochemical gradient
 - B) Thermal gradient
 - C) Concentration gradient
 - D) Pressure gradient
 - E) Osmotic gradient
- 75) Modern anatomical language is based on what two languages because individuals speaking these languages made most of the early anatomical discoveries?
- A) Greek and Latin
 - B) English and Japanese
 - C) English and Spanish
 - D) Roman and Latin
 - E) Latin and Chinese
- 76) The term *fallopian* tube (uterine tube) is an example of_____.
- A) a Latin root used in medical terminology
 - B) the use of prefixes to name an anatomical structure
 - C) the use of suffixes to name an anatomical structure
 - D) an eponym
 - E) an acronym

- 77) The lexicon of standard international anatomical terms is _____.
A) called *Terminologia Anatomica* (TA)
B) called *Nomina Anatomica* (NA)
C) formed from thousands of English word roots
D) formed from thousands of Italian word roots
E) formed from thousands of French word roots
- 78) The prefix *hypo-* means _____, whereas *hyper-* means _____.
A) front; back
B) right; left
C) inside; outside
D) clear; dark
E) below; above
- 79) What does "hypercalcemia" mean?
A) Elevated calcium levels
B) Lowered calcium levels
C) Elevated sodium levels
D) Lowered sodium levels
E) Elevated potassium levels
- 80) DNA is an example of an _____, whereas PET scan is an example of an _____.
A) abbreviation; acronym
B) acronym; abbreviation
C) eponym; acronym
D) acronym; eponym
E) eponym; abbreviation
- 81) The plural of axilla (armpit) is _____, whereas the plural of appendix is _____.
A) axillae; appendices
B) axillides; appendages
C) axillies; appendi
D) axilli; appendices
E) axilles; appendices

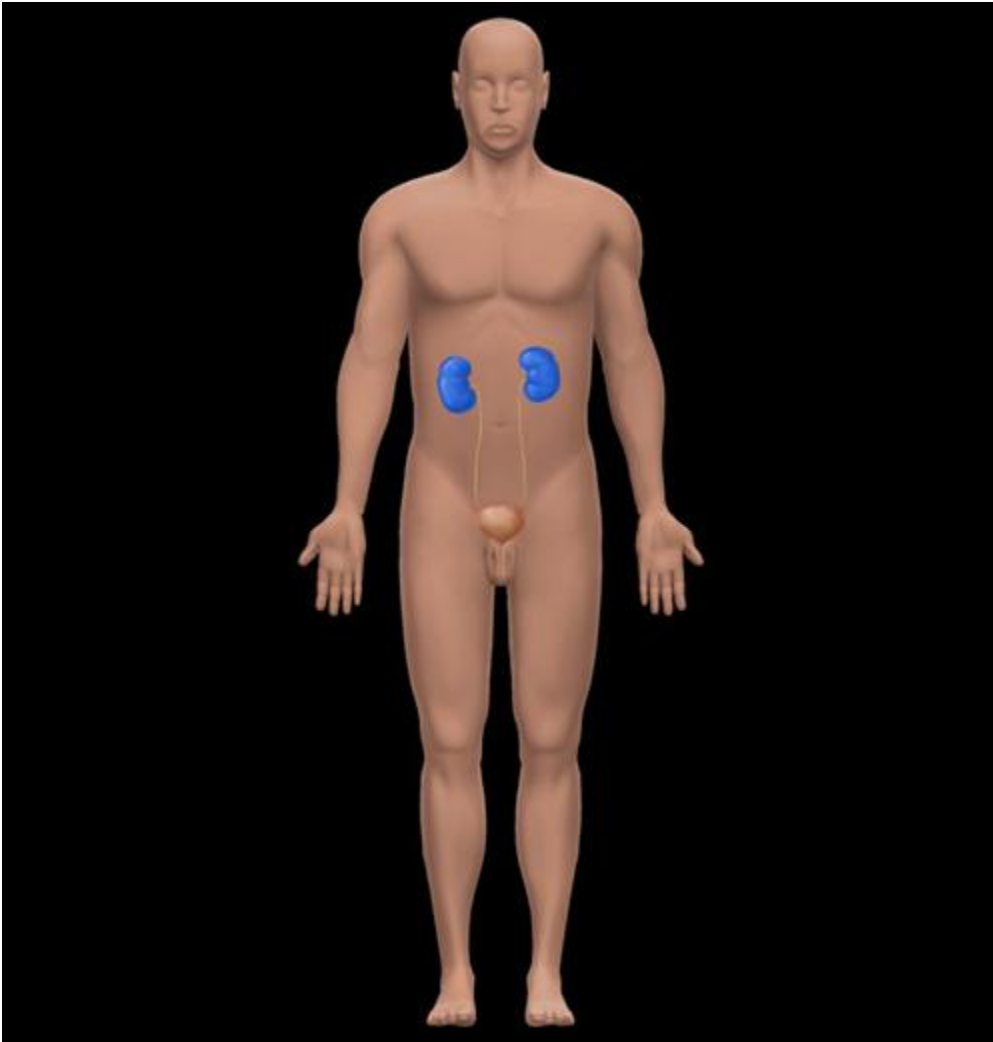
- 82) The plural of villus (hair) is _____, whereas the plural of diagnosis is _____.
- A) villuses; diagnoseses
 - B) villi; diagnoses
 - C) villus; diagnosis
 - D) villi; diagnosis
 - E) villuses; diagnosis
- 83) Why is precise spelling important in anatomy?
- A) It is important to practice language skills.
 - B) There are many different ways to spell certain terms.
 - C) Eponyms are difficult to memorize.
 - D) There are many similar terms in anatomy that refer to different structures.
 - E) It is easier to remember acronyms when spelled correctly.
- 84) The ileum is _____, whereas the ilium is _____.
- A) part of the hip bone; part of the small intestine
 - B) part of the small intestine; part of the hip bone
 - C) a bone in the wrist; a muscle of the back
 - D) a muscle; a bone
 - E) a bone; a muscle

85) What is the name of the highlighted organ?



- A) Small intestine
- B) Stomach
- C) Liver
- D) Large intestine
- E) Spleen

86) What is the name of the highlighted organ?



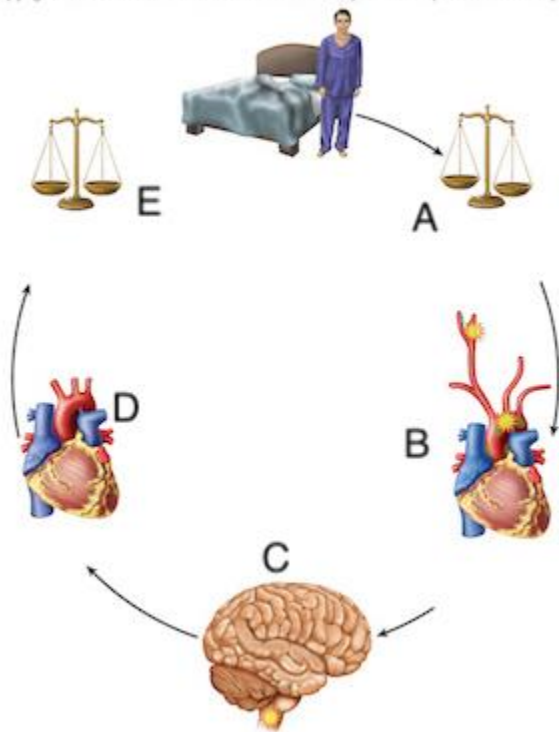
- A) Adrenal gland
- B) Spleen
- C) Liver
- D) Kidney
- E) Pancreas

87) Who was likely the first woman to publish a medical textbook?

- A) Metrodora
- B) Galen
- C) Avicenna
- D) Hippocrates
- E) Maimonides

SECTION BREAK. Answer all the part questions.

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88)

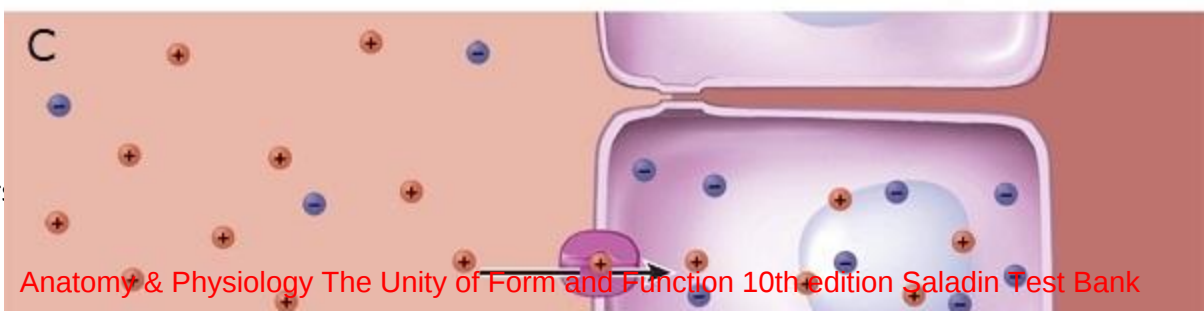
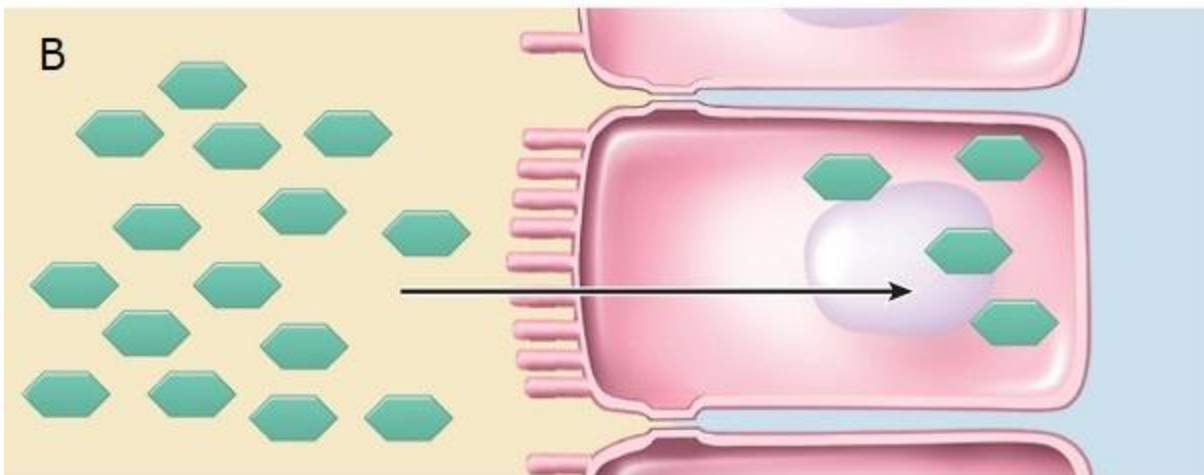
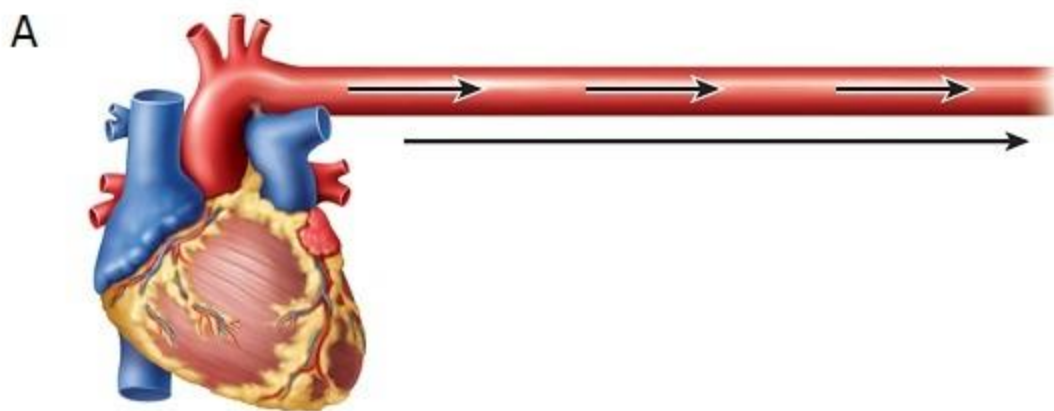
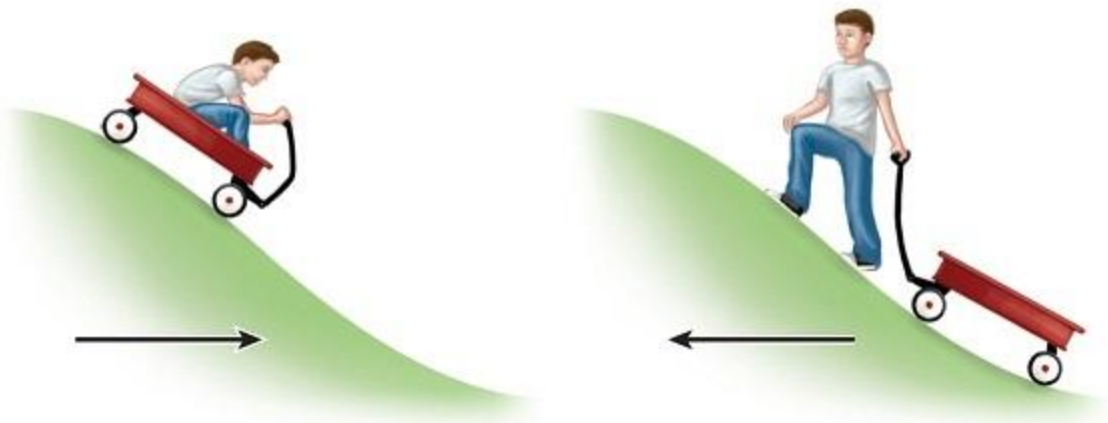
88.1) Which letter represents the *receptor* of this feedback loop?

- A) A
- B) B
- C) C
- D) D
- E) E

88.2) Which letter represents the *effector* of this feedback loop?

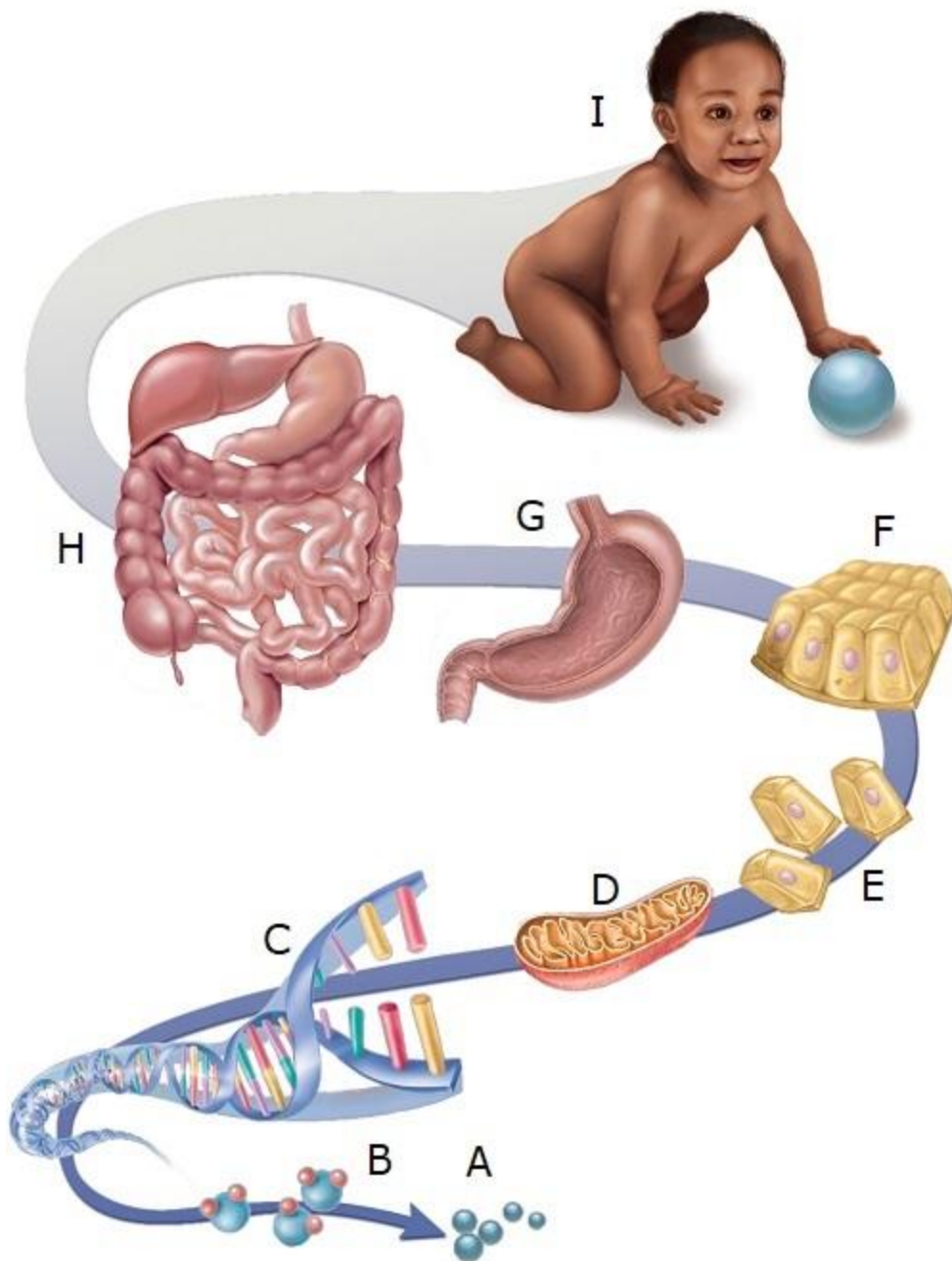
- A) A
- B) B
- C) C
- D) D
- E) E

- 88.3) Where in this feedback loop is homeostasis present?
- A) A
 - B) B
 - C) C
 - D) D
 - E) E
- 88.4) This feedback loop is an example of which of the following?
- A) Negative feedback
 - B) Positive feedback
 - C) Dynamic equilibrium
 - D) Thermal gradient
 - E) Natural selection



Ver.

- 89.1) Which letter represents a *pressure* gradient?
- A) A
 - B) B
 - C) C
 - D) D
 - E) All of these represent a pressure gradient.
- 89.2) Which letter represents a *thermal* gradient?
- A) A
 - B) B
 - C) C
 - D) D
 - E) All of these represent a thermal gradient.
- 89.3) Which picture depicts glucose flowing down a chemical gradient into an intestinal cell?
- A) A
 - B) B
 - C) C
 - D) D
 - E) Glucose can move via all of these mechanisms.
- 89.4) Ions would move down which of these gradients?
- A) A
 - B) B
 - C) C
 - D) D
 - E) Ions can move via all of these mechanisms.



90)

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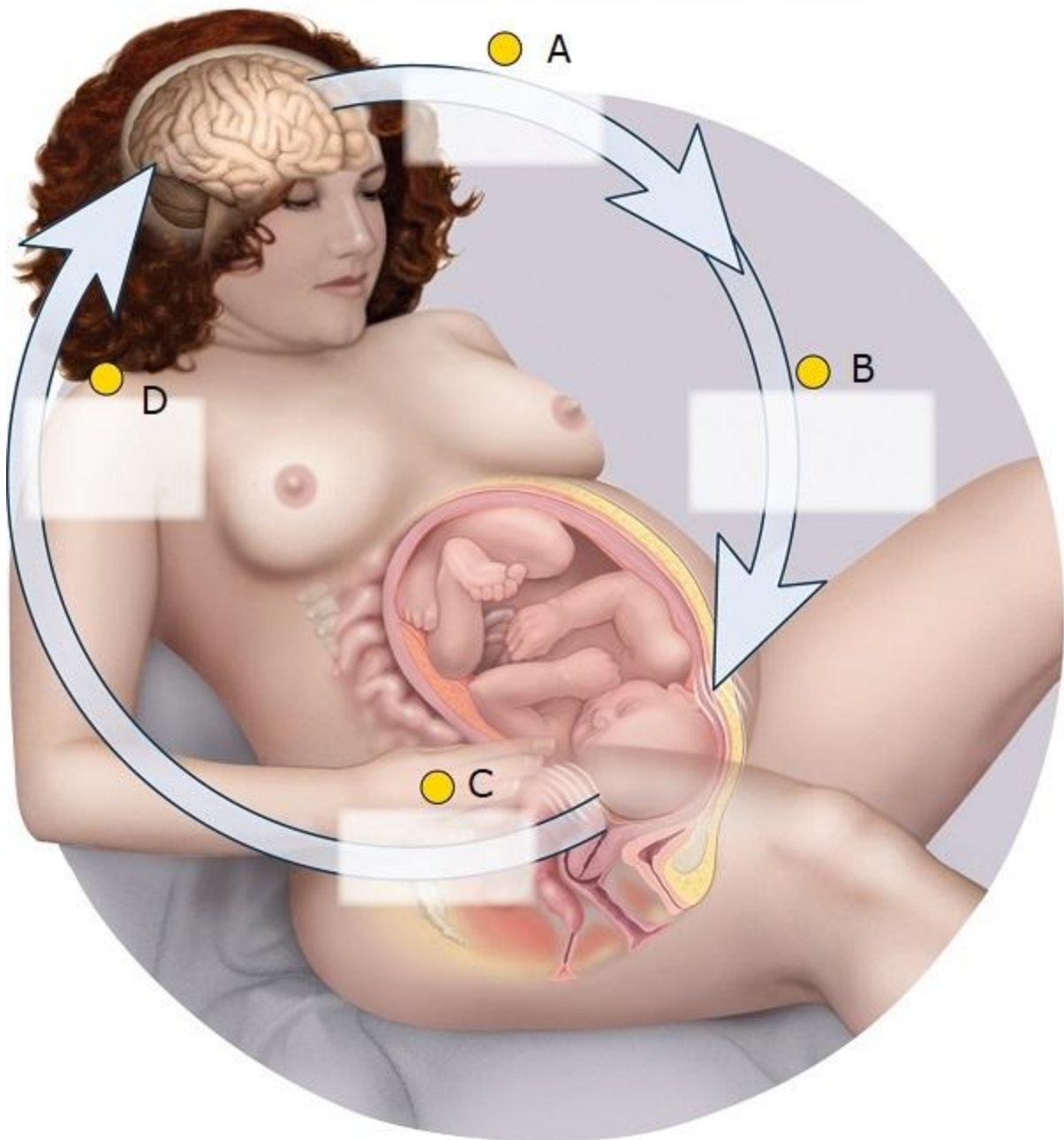
- 90.1) What level of structural hierarchy is represented by the letter E?
- A) Organelle
 - B) Cell
 - C) Tissue
 - D) Organ
 - E) Molecule
- 90.2) What level of structural hierarchy is represented by the letter H?
- A) Organ system
 - B) Cell
 - C) Tissue
 - D) Organ
 - E) Molecule
- 90.3) What is the study of the structure at E called?
- A) Cytology
 - B) Histology
 - C) Physiology
 - D) Organismal biology
 - E) Pathology
- 90.4) What is the study of the structure at F called?
- A) Cytology
 - B) Histology
 - C) Physiology
 - D) Organismal biology
 - E) Pathology
- 90.5) The integumentary system is an example of which level of structural hierarchy?
- A) A
 - B) C
 - C) E
 - D) H
 - E) I

90.6) A lymph node is an example of which level of structural hierarchy?

- A) G
- B) C
- C) E
- D) H
- E) I

90.7) A ribosome is an example of which level of structural hierarchy?

- A) A
- B) C
- C) E
- D) H
- E) D



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- 91.1) This is an example of which of the following?
- A) Positive feedback
 - B) Negative feedback
 - C) Dynamic equilibrium
 - D) Adaptation
 - E) Natural selection
- 91.2) In this feedback loop, what is the receptor?
- A) Brain
 - B) Oxytocin
 - C) Nerve endings in cervix (neck of uterus)
 - D) Pituitary gland
 - E) Uterine muscle
- 91.3) In this feedback loop, what is the effector?
- A) Brain
 - B) Oxytocin
 - C) Nerve endings in cervix (neck of uterus)
 - D) Pituitary gland
 - E) Uterine muscle

Answer Key

Test name: CH-01

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

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

- 78) E
- 79) A
- 80) A
- 81) A
- 82) B
- 83) D
- 84) B
- 85) C
- 86) D
- 87) A
- 88) Section Break
- 88.1) B
- 88.2) D
- 88.3) E
- 88.4) A
- 89) Section Break
- 89.1) A
- 89.2) D
- 89.3) B
- 89.4) C
- 90) Section Break
- 90.1) B
- 90.2) A
- 90.3) A
- 90.4) B
- 90.5) D
- 90.6) A
- 90.7) E
- 91) Section Break
- 91.1) A
- 91.2) C
- 91.3) E