Student name:\_\_\_\_\_\_\_\_\_\_

**TRUE/FALSE - Write 'T' if the statement is true and 'F' if the statement is false.  
1)** True or False? A CT scan allows for a three-dimensional image to be generated.

⊚ true  
 ⊚ false

**2)** True or False? Positive-feedback mechanisms are always damaging to the body.

⊚ true  
 ⊚ false

**3)** True or False? The part of the feedback mechanism that processes information, relates it to other information, and makes a decision of action is the receptor.

⊚ true  
 ⊚ false

**4)** True or False? The control center compares input from a receptor with the ideal normal value for a condition called a set point.

⊚ true  
 ⊚ false

**5)** True or False? Positive feedback mechanisms are less common in healthy individuals than negative feedback mechanisms.

⊚ true  
 ⊚ false

**6)** True or False? Whereas a 'plane' describes an imaginary flat surface, a 'section' describes a way to cut an organ.

⊚ true  
 ⊚ false

**7)** True or False? The thoracic cavity is divided into right and left parts by a median partition called the sternum.

⊚ true  
 ⊚ false

**8)** True or False? Both the spleen and the urinary bladder are contained within the pelvic cavity subdivision of the abdominopelvic cavity.

⊚ true  
 ⊚ false

**9)** True or False? The kidneys are contained within the pelvic cavity subdivision of the abdominopelvic cavity.

⊚ true  
 ⊚ false

**10)** True or False? Scientists believe that any significant change in the composition of the microbiome of the human integumentary system may increase a person’s susceptibility to autoimmune diseases.

⊚ true  
 ⊚ false

**11)** True or False? It has been suggested by some scientists that early exposure to antibiotics that significantly change the makeup of the microbes in the human intestines may increase a person’s susceptibility to autoimmune diseases like Crohn's disease and asthma.

⊚ true  
 ⊚ false

**12)** True or False? Many undergraduate anatomy programs study cats and rats in laboratory settings. Use of these animals is ideal because they are inexpensive, and although they are physically smaller, the internal structures are identical to humans.

⊚ true  
 ⊚ false

**13)** True or False? With regard to biomedical research, because rats, pigs, apes, and other mammals share over 90% of the same genes as humans, these animals are always good predictors for how humans will respond to a specific drug therapy.

⊚ true  
 ⊚ false

**14)** True or False? With regard to biomedical research, it has been found that drugs that are toxic to one mammal species will be toxic to another mammal species.

⊚ true  
 ⊚ false

**15)** True or False? Rats and humans share over 90% of the same genes.

⊚ true  
 ⊚ false

**16)** True or False? A molecule of water is more complex than a mitochondrion (organelle).

⊚ true  
 ⊚ false

**17)** True or False? Homeostasis and occupying space are both unique characteristics of living things.

⊚ true  
 ⊚ false

**MULTIPLE CHOICE - Choose the one alternative that best completes the statement or answers the question.  
18)** Which technique creates a three-dimensional dynamic image of blood vessels?

A) Digital subtraction angiography   
 B) Magnetic resonance imaging  
 C) Dynamic spatial reconstruction  
 D) Positron emission tomography

**19)** Magnetic resonance imaging is based on the movement of

A) electrons in a magnetic field.   
 B) carbons in a magnetic field.  
 C) protons in a magnetic field.  
 D) cells in a magnetic field.

**20)** The delivery of a radioactive compound to the body to study the metabolism of tissues is called \_\_\_\_\_\_\_\_\_\_.

A) MRI   
 B) PET  
 C) DSA  
 D) DSR

**21)** An anatomical image created from sound waves is a/an \_\_\_\_\_\_\_\_\_\_.

A) radiograph   
 B) CT scan  
 C) MRI  
 D) sonogram

**22)** A major limitation of radiographs is that they

A) can only visualize bone.   
 B) give only a flat, two-dimensional image of the body.  
 C) are old technology that do not give good results.  
 D) have very few applications.

**23)** The study of the body's organization by areas is \_\_\_\_\_\_\_\_\_\_.

A) systemic anatomy   
 B) regional anatomy  
 C) molecular biology  
 D) microbiology  
 E) surface anatomy

**24)** The study of the external form of the body and its relationship to deeper structures is \_\_\_\_\_\_\_\_\_\_.

A) systemic anatomy   
 B) regional anatomy  
 C) molecular biology  
 D) microbiology  
 E) surface anatomy

**25)** The study of tissues is \_\_\_\_\_\_\_\_\_\_.

A) cytology   
 B) histology  
 C) molecular biology  
 D) microbiology  
 E) surface anatomy

**26)** Anatomy is

A) the study of function.   
 B) a branch of physiology.  
 C) the study of structure.  
 D) the study of living organisms.  
 E) the study of homeostasis.

**27)** The study of the structural features and functions of the cell is \_\_\_\_\_\_\_\_\_\_.

A) cytology   
 B) histology  
 C) molecular biology  
 D) microbiology  
 E) surface anatomy

**28)** Microscopic examination of a frozen tissue specimen is an application of which of the following disciplines?

A) Histology   
 B) Physiology  
 C) Gross anatomy  
 D) Radiology  
 E) Regional anatomy

**29)** Which subdivision of anatomy involves the study of organs that function together?

A) Regional   
 B) Developmental  
 C) Systemic  
 D) Histology  
 E) Surface anatomy

**30)** An investigator who conducts an experiment to determine how changes in pH affect the function of enzymes on digestion is most likely to be a/an \_\_\_\_\_\_\_\_\_\_.

A) neurologist   
 B) anatomist  
 C) engineer  
 D) physiologist  
 E) histologist

**31)** An organelle is

A) a small structure within a cell.   
 B) a structure composed of several tissue types.  
 C) the basic structural unit of all living organisms.  
 D) a group of organs with a common set of functions.  
 E) a group of cells with similar structure and function.

**32)** An organ is

A) a small structure within a cell.   
 B) a structure composed of several tissue types.  
 C) the basic structural unit of all living organisms.  
 D) a group ofmolecules with a common set of functions.  
 E) a group of cells with similar structure and function.

**33)** A cell is

A) a small structurewithin a molecule.   
 B) a structure composed of several tissue types.  
 C) the basic structural unit of living organisms.  
 D) a group of organs with a common set of functions.  
 E) a group of atomswith similar structure and function.

**34)** A tissue is a

A) structure contained within a cell.   
 B) lower level of organization than a cell.  
 C) group of organs that performs specific functions.  
 D) group of cells with similar structure and function.  
 E) structure that contains a group of organs.

**35)** An organ system is

A) a small structure within a cell.   
 B) a structure composed of several tissue types.  
 C) the basic structural unit of all living organisms.  
 D) a group of organs with a common set of functions.  
 E) a group of cells with similar structure and function.

**36)** Which of the following systems carries necessary compounds like oxygen and nutrients throughout the body?

A) Nervous   
 B) Cardiovascular  
 C) Urinary  
 D) Lymphatic  
 E) Respiratory

**37)** Which organ system is the location of blood cell production?

A) Cardiovascular   
 B) Skeletal  
 C) Digestive  
 D) Nervous  
 E) Endocrine

**38)** Which body system would be affected by degeneration of cartilage in joints?

A) Muscular   
 B) Nervous  
 C) Cardiovascular  
 D) Skeletal  
 E) Lymphatic

**39)** The gallbladder, liver, and stomach are all part of the \_\_\_\_\_\_\_\_\_\_ system.

A) endocrine   
 B) cardiovascular  
 C) skeletal  
 D) respiratory  
 E) digestive

**40)** The integumentary system

A) regulates body temperature.   
 B) breaks down food into small particles for absorption.  
 C) controls intellectual functions.  
 D) produces body movements.  
 E) coordinates and integrates body function.

**41)** Which system removes nitrogenous waste products from the blood and regulates blood pH, ion balance, and water balance?

A) Respiratory   
 B) Lymphatic  
 C) Cardiovascular  
 D) Immune  
 E) Urinary

**42)** An organism's ability to use energy in order to swim is an example of \_\_\_\_\_\_\_\_\_\_.

A) metabolism   
 B) responsiveness  
 C) organization  
 D) maturation  
 E) development

**43)** The changes an organism undergoes through time is called \_\_\_\_\_\_\_\_\_\_.

A) organization   
 B) metabolism  
 C) reproduction  
 D) growth  
 E) development

**44)** Nerve cells generate electrical signals in response to changes in the environment. This is an example of \_\_\_\_\_\_\_\_\_\_.

A) respiration   
 B) digestion  
 C) movement  
 D) filtration  
 E) responsiveness

**45)** An increase in the number of cells is \_\_\_\_\_\_\_\_\_\_.

A) reproduction   
 B) growth  
 C) differentiation  
 D) metabolism  
 E) organization

**46)** Which of the following is most consistent with homeostasis?

A) As blood pressure falls, blood flow to cardiac (heart) muscle decreases.   
 B) As the mean blood pressure gradually increases in aging people, the blood vessel walls become thinner.  
 C) Men working in a hot environment drink large quantities of water, and their urine volume increases.  
 D) As body temperature decreases, blood vessels in the periphery dilate.  
 E) Elevated blood glucose levels cause insulin secretion to increase, which in turn, causes cells to take up glucose.

**47)** Which of the following is consistent with homeostasis?

A) As body temperature rises, sweating occurs to cool the body.   
 B) When a person drinks large quantities of water, urine output decreases to raise blood volume.  
 C) Elevated blood glucose levels cause insulin secretion to decline.  
 D) Decreases in blood pressure cause a corresponding decrease in heart rate.  
 E) As blood pressure falls, blood flow to the heart decreases.

**48)** In a negative feedback mechanism, the response of the effector

A) reverses the original stimulus.   
 B) enhances the original stimulus.  
 C) has no effect on the original stimulus.  
 D) is usually damaging to the body.  
 E) creates a cycle that leads away from homeostasis.

**49)** A researcher discovered a sensory receptor that detects decreasing oxygen concentrations in the blood. According to the principles of negative feedback, it is likely that stimulation of this sensory receptor will produce which of the following types of responses?

A) A decrease in heart rate   
 B) An increase in the respiratory rate  
 C) An increase in physical activity  
 D) Unconsciousness  
 E) Both a decrease in heart rate and an increase in the respiratory rate will occur.

**50)** Which of the following is NOT a component of a negative feedback mechanism?

A) Effector   
 B) Stabilizer  
 C) Control center  
 D) Receptor

**51)** The anatomical term that means "away from the midline of the body" is \_\_\_\_\_\_\_\_\_\_.

A) medial   
 B) proximal  
 C) distal  
 D) lateral  
 E) superficial

**52)** The thumb is \_\_\_\_\_\_\_\_\_\_ to the fifth digit (little finger).

A) distal   
 B) lateral  
 C) medial  
 D) proximal  
 E) superficial

**53)** Which of the following describes the position of the nose?

A) Inferior to the chin   
 B) Superior to the forehead  
 C) Posterior to the ears  
 D) Lateral to the eyes  
 E) Superior to the mouth

**54)** The shoulder is \_\_\_\_\_\_\_\_\_\_ to the elbow.

A) lateral   
 B) dorsal  
 C) distal  
 D) ventral  
 E) proximal

**55)** A term that means "toward the attached end of a limb" is \_\_\_\_\_\_\_\_\_\_.

A) medial   
 B) lateral  
 C) superficial  
 D) distal  
 E) proximal

**56)** Which of the following is most inferior in location?

A) Pelvic cavity   
 B) Mediastinum  
 C) Diaphragm  
 D) Pleural cavity  
 E) Pericardial cavity

**57)** While Stacy is in the process of passing over the bar during a pole vault, her hips are considered to be

A) anterior to her shoulders.   
 B) posterior to her shoulders.  
 C) inferior to her shoulders.  
 D) superior to her shoulders.  
 E) cephalic to her shoulders.

**58)** Cephalic means

A) toward the middleor midline of the body.   
 B) away from the surface.  
 C) closer to the head.  
 D) closer than another structure to the point of attachment to the trunk.  
 E) toward the back of the body.

**59)** Posterior means

A) toward the middle or midline of the body.   
 B) away from the surface.  
 C) closer to the head.  
 D) closer than another structure to the point of attachment to the trunk.  
 E) toward the back of the body.

**60)** Medial means

A) toward the middle or midline of the body.   
 B) away from the surface.  
 C) closer to the head.  
 D) closer than another structure to the point of attachment to the trunk.  
 E) toward the back of the body.

**61)** Proximal means

A) toward the middle or midline of the body.   
 B) away from the surface.  
 C) closer to the head.  
 D) closer than another structure to the point of attachment to the trunk.  
 E) toward the back of the body.

**62)** Deep means

A) toward the middle or midline of the body.   
 B) away from the surface.  
 C) closer to the head.  
 D) closer than another structure to the point of attachment to the trunk.  
 E) toward the back of the body.

**63)** In the expression "Let your fingers do the walking," which of the following anatomical terms could be substituted for "fingers?"

A) Tarsals   
 B) Manuals  
 C) Digits  
 D) Carpals  
 E) Metatarsals

**64)** The anatomical arm refers to the part of the upper limb from the

A) shoulder to the wrist.   
 B) elbow to the wrist.  
 C) shoulder to the elbow.  
 D) elbow to the fingers.  
 E) shoulder to the fingers.

**65)** The lumbar region is the

A) area in front of the elbow.   
 B) chest area.  
 C) lower back.  
 D) bottom of foot.  
 E) forearm.

**66)** The antecubital region is the

A) area in front of the elbow.   
 B) chest area.  
 C) lower back.  
 D) bottom of foot.  
 E) forearm.

**67)** The antebrachial region is the

A) area in front of the elbow.   
 B) chest area.  
 C) lower back.  
 D) bottom of foot.  
 E) forearm.

**68)** The pectoral region is the

A) area in front of the elbow.   
 B) chest area.  
 C) lower back.  
 D) bottom of foot.  
 E) forearm.

**69)** The plantar surface is the

A) area in front of the elbow.   
 B) chest area.  
 C) lower back.  
 D) bottom of foot.  
 E) forearm.

**70)** The brachial region is commonly known as the \_\_\_\_\_\_\_\_\_\_.

A) groin   
 B) buttock  
 C) breastbone  
 D) upper arm  
 E) naval

**71)** The inguinal region is commonly known as the \_\_\_\_\_\_\_\_\_\_.

A) groin   
 B) buttock  
 C) breastbone  
 D) upper arm  
 E) naval

**72)** The gluteal region is commonly known as the \_\_\_\_\_\_\_\_\_\_.

A) groin   
 B) buttock  
 C) breastbone  
 D) upper arm  
 E) naval

**73)** The sternal region is commonly known as the \_\_\_\_\_\_\_\_\_\_.

A) groin   
 B) buttock  
 C) breastbone  
 D) upper arm  
 E) naval

**74)** The umbilical region is commonly known as the \_\_\_\_\_\_\_\_\_\_.

A) groin   
 B) buttock  
 C) breastbone  
 D) upper arm  
 E) naval

**75)** The cervical region is the \_\_\_\_\_\_\_\_\_\_.

A) calf   
 B) armpit  
 C) hollow behind the knee  
 D) neck  
 E) thigh

**76)** The popliteal region is the \_\_\_\_\_\_\_\_\_\_.

A) calf   
 B) armpit  
 C) hollow behind the knee  
 D) neck  
 E) thigh

**77)** The sural region is the \_\_\_\_\_\_\_\_\_\_.

A) calf   
 B) armpit  
 C) hollow behind the knee  
 D) neck  
 E) thigh

**78)** The femoral region is the \_\_\_\_\_\_\_\_\_\_.

A) calf   
 B) armpit  
 C) hollow behind the knee  
 D) neck  
 E) thigh

**79)** The axillary region is the \_\_\_\_\_\_\_\_\_\_.

A) calf   
 B) armpit  
 C) hollow behind the knee  
 D) neck  
 E) thigh

**80)** A vertical plane that separates the body into right and left portions is called a \_\_\_\_\_\_\_\_\_\_ plane.

A) sagittal   
 B) transverse  
 C) frontal  
 D) horizontal  
 E) coronal

**81)** "Cutting off your nose" would be a section in the \_\_\_\_\_\_\_\_\_\_ plane.

A) coronal   
 B) nasal  
 C) median  
 D) transverse  
 E) sagittal

**82)** The cavity of the body immediately inferior to the diaphragm is the \_\_\_\_\_\_\_\_\_\_ cavity.

A) pleural   
 B) thoracic  
 C) inguinal  
 D) pelvic  
 E) abdominal

**83)** The suffix "-itis" means inflammation. Which of the following terms means inflammation of the membrane lining the body cavity that contains the liver?

A) Pericarditis   
 B) Peritonitis  
 C) Pleurisy  
 D) Colitis  
 E) Hepatitis

**84)** The wall of the abdominopelvic cavity is lined by a serous membrane called the

A) visceral pleural membrane.   
 B) parietal peritoneum.  
 C) visceral mediastinal membrane.  
 D) visceral peritoneum.  
 E) epicardium.

**85)** The visceral pleura is

A) a double-layered serous membrane that anchors some of the abdominal organs to the body wall.   
 B) the serous membrane that covers the lungs.  
 C) the serous membrane that lines the abdominal and pelvic cavities.  
 D) the space located between the visceral and parietal pleura.  
 E) the membrane that lines the pericardial sac.

**86)** The parietal peritoneum is

A) a double-layered serous membrane that anchors some of the abdominal organs to the body wall.   
 B) the serous membrane that covers the lungs.  
 C) the serous membrane that lines the abdominal and pelvic cavities.  
 D) the space located between the visceral and parietal pleura.  
 E) the membrane that lines the pericardial sac.

**87)** The mesentery is

A) a double-layered serous membrane that anchors some of the abdominal organs to the body wall.   
 B) the serous membrane that covers the lungs.  
 C) the serous membrane that lines the abdominal and pelvic cavities.  
 D) the space located between the visceral and parietal pleura.  
 E) the membrane that lines the pericardial sac.

**88)** The pleural cavity is

A) a double-layered serous membrane that anchors some of the abdominal organs to the body wall.   
 B) the serous membrane that covers the lungs.  
 C) the serous membrane that lines the abdominal and pelvic cavities.  
 D) the space located between the visceral and parietal pleura.  
 E) the membrane that lines the pericardial sac.

**89)** The parietal pericardium is

A) a double-layered serous membrane that anchors some of the abdominal organs to the body wall.   
 B) the serous membrane that covers the lungs.  
 C) the serous membrane that lines the abdominal and pelvic cavities.  
 D) the space located between the visceral and parietal pleura.  
 E) the membrane that lines the pericardial sac.

**90)** Which branch of physiology would study the effects of sunbathing on the skin?

A) Cell physiology   
 B) Systemic physiology  
 C) Regional physiology  
 D) Organ physiology

**91)** Which of the following is *not* a function of the control center within a feedback mechanism?

A) Receives and processes information   
 B) Controls effectors  
 C) Establishes a set point  
 D) Detects a change in the value of a variable

**92)** In reference to the body temperature in living organisms, the set point can be defined as the

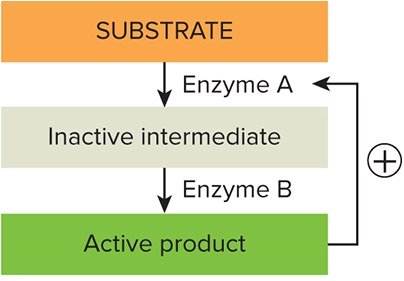
A) ideal normal value.   
 B) current specific value.  
 C) amount of change that must occur for a condition to return to ideal normal value.

**93)** Which of the following is*not*a characteristic of homeostatic variables?

A) Their values can change.   
 B) They must remain within a narrow change.  
 C) They always remain at a fixed value.

**94)** Imagine the following scernerio: *Blood pressure decreases below normal levels.→ Blood flow to the heart decreases → Heart is unable to pump as much blood.→ Blood pressure decreases even more.*  
 This is an example of \_\_\_\_\_\_\_\_\_\_ feedback.

A) positive   
 B) negative

**95)** This figure illustrates changes in blood pressure when \_\_\_\_\_\_\_\_\_\_ feedback mechanisms are in control.  


A) positive   
 B) negative

**96)** Imagine the following scenario:  
 *Platelets adhere to a damaged blood vessel → Platelets secrete various substances → Platelets adhere to a damaged blood vessel*  
 This is an example of \_\_\_\_\_\_\_\_\_\_ feedback.

A) positive   
 B) negative

**97)** True or False? Positive feedback mechanisms are more commonly seen in \_\_\_\_\_\_\_\_\_\_ individuals.

A) healthy   
 B) unhealthy

**98)** A person lying with his/her face down is said to be in what position?

A) Supine   
 B) Prone  
 C) Anatomical  
 D) Reverse

**99)** Which of the following is *not* a term that describes a cut that separates the body into left and right portions?

A) Sagittal   
 B) Median  
 C) Parasagittal  
 D) Coronal

**100)** The plane that cuts the body lengthwise and separates the body into anterior and posterior portions is called \_\_\_\_\_\_\_\_\_\_.

A) Transverse   
 B) Frontal  
 C) Sagittal

**101)** A cut through the long axis of an organ is a/an \_\_\_\_\_\_\_\_\_\_ section.

A) longitudinal   
 B) oblique  
 C) transverse

**102)** An example of a structure contained by the mediastinum is the \_\_\_\_\_\_\_\_\_\_.

A) brain   
 B) stomach  
 C) esophagus  
 D) sternum  
 E) lung

**103)** There are more microbial cells than human cells in your body, and the health of this microbiota clearly influences human well-being. How many microbes are there?

A) For every cell in your body, there are ten microbial cells.   
 B) For every cell in your body, there are one hundred microbial cells.  
 C) For every cell in your body, there are one thousand microbial cells.  
 D) For every cell in your body, there are ten thousand microbial cells.

**104)** A molecular biologist discovers that if a specific drug effectively treats obesity in mice, what can researchers conclude?

A) If the drug was effective in a large number of mice, it will therefore be effective in humans.   
 B) If the drug was effective in a small proportion of mice, it will be effective in a small proportion of humans.  
 C) The mice have provided a positive control in this experiment that proves the drug is effective in humans.  
 D) The drug is effective in the mouse model; it must still be tested in humans.  
 E) The effect of the drug on mice has no bearing on the effect of the drug on humans.

**105)** With regard to the validity of biomedical research in physiological studies, which statement is correct?

A) Although the general homeostatic mechanisms may be the same in some animal species, the individual variables are often very different.   
 B) Although the individual variables may be the same in some animal species, the general homeostatic mechanisms are often very different.

**106)** Which of the following statements is TRUE?

A) The coordinated activity of the organ systems is necessary for normal function.   
 B) Because organ systems are so interrelated, dysfunction in one organ system can have profound effects on other systems.  
 C) An organism is any living thing considered as a whole, whether composed of one cell, such as a bacteria, or trillions of cells, such as a human.  
 D) Living things are highly organized, and disruption of this organized state can lead to loss of function and death.  
 E) All of these statements are true.

**107)** Which of the followinglists 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

**108)** The fact that most of us have five lumbar vertebrae, but some people have six and some have four, is an example of \_\_\_\_\_\_\_\_\_\_ variation among organisms.

A) cellular   
 B) holistic  
 C) physiological  
 D) anatomical  
 E) reductionist

**109)** 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) negativefeedback   
 B) positivefeedback  
 C) dynamicequilibrium  
 D) integrationcontrol  
 E) set pointadjustment

**110)** When a woman is giving birth, the head of the baby pushes against her cervix and stimulates therelease 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) negativefeedback   
 B) positivefeedback  
 C) dynamicequilibrium  
 D) integrationcontrol  
 E) set pointadjustment

**111)** 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 ofglucose by body cells from the bloodstream, thusreducing blood glucose concentration. This is an example of \_\_\_\_\_\_\_\_\_.

A) negativefeedback   
 B) positivefeedback  
 C) dynamicequilibrium  
 D) integrationcontrol  
 E) set pointadjustment

**112)** 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

**113)** Which of the following statements provides an accurate description of cellular physiology involving structures of the digestive system?

A) Hepatocytes (liver cells) produce bile to aid in the breakdown of ingested lipids.   
 B) Hemocytoblasts (blood stem cells) are located in the red bone marrow.  
 C) Cardiac muscle cells contract to generate pressure that moves the blood through blood vessels.  
 D) The epidermis, the superficial layer of the skin, is composed of multiple layers of cells.

**114)** If the thoracic cavity was cut along the midsaggital plane, which of the following descriptions of the two halves would be accurate?

A) The midsaggital cut would create an anterior half that contained portions of the lungs and heart and a posterior half that contained the spinal cord.   
 B) The midsagittal plane would produce a medial half and a lateral half, each containing a lung.  
 C) The midsagittal plane would produce a right half that contained one lung and a left half that contained a lung and most of the heart.  
 D) The midsagittal plane would produce an inferior half that contained portions of the heart and portions of both lungs and a superior half that contained portions of the lungs and the thymus.

**115)** Aldosterone is a hormone that increase the level of Na + in the blood. Considering negative-feedback regulation of blood Na + levels, which of the following events would most likely be an effect of aldosterone on the body in blood Na + levels decreased?

A) Aldosterone would cause a decrease in the amount of Na + that was excreted as part of urine.   
 B) Aldosterone would cause an increase in the amount of Na + that was excreted as part of urine.  
 C) Aldosterone would reduce activity in the brain that stimulated salty food cravings.  
 D) Aldosterone would decrease the amount of Na + that is absorbed at the small intestine.

**116)** Which structure is located inferior and lateral to the heart?

A) Liver   
 B) Brain  
 C) Urinary bladder  
 D) Lung

**117)** Which of the following structures is located in the right-lower quadrant but NOT in the right iliac region?

A) Urinary bladder   
 B) Appendix  
 C) Large intestine  
 D) All of the listed organs are in both the right-lower quadrant and the right iliac region.

**118)** A construction worker was injured when a metal rod penetrated his abdominal wall inferior to his umbilicus and in the hypogastric region. The rod passed through to the lumbar region. Which of the following structures was most likely damaged?

A) Urinary bladder   
 B) Stomach  
 C) Kidney  
 D) Liver

**119)** Parathyroid hormone functions to increase calcium ion levels in blood. If its secretion is regulated through negative feedback, under which conditions would this hormone normally be released?

A) Parathyroid hormone secretion occurs when blood calcium levels are too low.   
 B) Parathyroid hormone secretion occurs when blood calcium levels are too high.  
 C) Parathyroid secretion is constant to maintain blood calcium levels.  
 D) Parathyroid hormone secretion increases in the morning and decreases in the afternoon.

**120)** Which of the following statements provides an example of responsiveness?

A) Sandra began to shiver while she walked from her lab to her dorm room, through the freezing rain.   
 B) James finally saw the results of working out as the sleeves on his t-shirt were tighter around his biceps.  
 C) Jarrod was happy to see that the wound he received from falling on the sidewalk was almost completely healed.  
 D) None of the choices are correct.

**121)** Which of the following would indicate dysfunction of the respiratory system?

A) Change in blood pH   
 B) Increase in blood glucose levels  
 C) Increased blood pressure  
 D) All of the choices are correct.

**122)** Which of the following statements best describes reseach focused on the physiology of the lymphatic system?

A) Dr. Ali studies the signaling that occurs between defense cells and abnormal cells of the body.   
 B) Dr. Johnson's research focuses on the factors that regulate blood pH.  
 C) Dr. Salak is interested in the chemical signaling that maintains normal blood glucose levels.  
 D) Dr. Woods is interested in the development of cell communication junctions associated with memory.

**123)** If the esophagus were cut from superior to inferior, as it occurs in the thoracic cavity, this would be considered a \_\_\_\_\_\_\_\_\_\_ section.

A) longitudinal   
 B) transverse  
 C) oblique  
 D) cross

**124)** A cut along which plane would result in the anterior perspective of the body appearing normal, with no evident cuts?

A) Frontal   
 B) Midsaggital  
 C) Parasagittal  
 D) Transverse

**125)** Which of the following structures is most like the receptor of a homeostatic control mechanism?

A) The mechanism that detects a decrease in tire pressure on an automobile   
 B) The mechanism that opens the automatic door at the local grocery store  
 C) The heating element of a hot water heater  
 D) All of the choices are correct.

**Answer Key**Test name: Chap1

1) TRUE

2) FALSE

3) FALSE

4) TRUE

5) TRUE

6) TRUE

7) FALSE

8) FALSE

9) FALSE

10) FALSE

Early research seems to indicate that any significant change in the profile of the microbiome of the human **gut** may increase a person's susceptibility to autoimmune diseases, not the **integumentary** system.

11) TRUE

12) FALSE

13) FALSE

14) FALSE

15) TRUE

16) FALSE

17) FALSE

18) A

19) C

20) B

21) D

22) B

23) B

24) E

25) B

26) C

27) A

28) A

29) C

30) D

31) A

32) B

33) C

34) D

35) D

36) B

37) B

38) D

39) E

40) A

41) E

42) A

43) E

44) E

45) B

46) E

47) A

48) A

49) B

50) B

51) D

52) B

53) E

54) E

55) E

56) A

57) C

58) C

59) E

60) A

61) D

62) B

63) C

64) C

65) C

66) A

67) E

68) B

69) D

70) D

71) A

72) B

73) C

74) E

75) D

76) C

77) A

78) E

79) B

80) A

81) A

82) E

83) B

84) B

85) B

86) C

87) A

88) D

89) E

90) D

91) D

92) A

93) C

94) A

95) A

96) A

97) B

98) B

99) D

100) B

101) A

102) C

103) A

104) D

105) A

106) E

107) B

108) D

109) A

110) B

111) A

112) C

113) A

114) C

115) A

116) A

117) A

118) A

119) A

120) A

121) A

122) A

123) A

124) A

125) A