Mosbys Essential Sciences for Therapeutic Massage 7th edition Fritz Test Bank

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Test Bank - Chapter 01

Q: Moving substances into or out of a cell using energy is:

A. active transport. (Correct)
B. passive transport.
C. osmosis.
D. diffusion.

Q: Which compound stores energy?

A. Deoxyribonucleic acid
B. Adenosine triphosphate (Correct)
C. Ribonucleic acid
D. Metabolic water

Q: What is the chemical process in the body that joins simple compounds to form more complex compounds, such as carbohydrates, lipids, proteins, and nucleic acids?

A. Catabolism
B. Metabolism
C. Anabolism (Correct)
D. Meiosis

Q: What is the study of the structures of the body and the relationship of its parts?

A. Physiology
B. Pathology
C. Kinesiology
D. Anatomy (Correct)

Q: The part of epithelial cells exposed to the atmosphere or a passageway in the body is what surface?

A. Apical (Correct)
B. Outer
C. Superficial
D. Basal

Q: What is the smallest particle of an element that retains and exhibits the properties of that element?

A. Proton
B. Atom (Correct)
C. Neutron
D. Electron

Q: A decrease in the size of a body part or organ caused by a decrease in the size of the cells is:

A. hypertrophy.
B. trophy.
C. atrophy. (Correct)

D. hypotrophy.

Q: The part of the tissue that faces the inside of the body is what type of surface?

A. Apical
B. Outer
C. Inner
D. Basal (Correct)

Q: Which structure attaches epithelial tissues to the underlying connective tissues?

A. Basement membrane (Correct)
B. Tissue matrix
C. Connective sheath
D. Cell membrane

Q: Sugars, starches, and cellulose composed of carbon, hydrogen, and oxygen are categorized as:

A. proteins.
B. carbohydrates. (Correct)
C. lipids.
D. amino acids.

Q: What type of fibers are found in the heart?

A. Collagenous
B. Reticular
C. Cardiac muscle (Correct)
D. Smooth muscle

Q: What chemical process in the body releases energy as complex compounds are broken down into simpler ones?

A. Anabolism
B. Metabolism
C. Digestion
D. Catabolism (Correct)

Q: The basic structural unit of a living organism is the:

A. cell. (Correct)
B. atom.
C. molecule.
D. organelle.

Q: A protein substance composed of small fibrils that combine to create the connective tissue of fasciae, tendons, and ligaments is:

A. smooth muscle.
B. collagen. (Correct)
C. elastin.
D. phospholipid bilayer.

Q: Which structures can withstand the most tension force because it has a high degree of tensile strength?

A. Collagen (Correct)
B. Elastin
C. Reticular fibers
D. Cardiac muscle fibers

Q: What constitutes approximately one fourth of the protein in the body?

A. Blood
B. Nerves
C. Collagen (Correct)
D. Matrix

Q: Strength with little capacity for stretch describes what type of fibers?

A. Reticular
B. Elastin
C. Muscle
D. Collagen (Correct)

Q: Supporting and holding together the body and its parts body describes what type of tissue?

A. Connective (Correct)
B. Epithelial
C. Muscle
D. Nervous

Q: The fluid inside the cell membrane is known as:

A. cytoskeleton.
B. cytosol. (Correct)
C. endoplasmic reticulum.
D. ground substance.

Q: What is the material enclosed by the cell membrane?

A. Cytoplasm (Correct)
B. Collagen
C. Inorganic compounds
D. Matrix

Q: What is the framework of proteins inside the cell that provides flexibility and strength?

A. Cytosol
B. Cytoskeleton (Correct)
C. Cytoplasm
D. Cell membrane

Q: The movement of ions and molecules from an area of higher concentration to that of lower concentration is:

A. passive transport. (Correct)

B. active transport.
C. conductivity.
D. permeability.

Q: What is the genetic material of the cell that carries the chemical “blueprint” of the body?

A. RNA
B. Nucleolus
C. Lysosome
D. DNA (Correct)

Q: What type of fiber returns to its original length after being stretched?

A. Elastic (Correct)
B. Reticular
C. Nerve
D. Collagenous

Q: What substance contains only a single kind of atom?

A. Compound
B. Element (Correct)
C. Protein
D. Carbohydrate

Q: The process of bringing particles inside the cell by engulfing them and forming vesicles is:

A. exocytosis.
B. carrier-mediated transport.
C. endocytosis. (Correct)
D. cellular respiration.

Q: A network of tubular intracellular membranes that is connected to the nuclear membrane is the:

A. phospholipid bilayer.
B. ribosome.
C. lysosome.
D. endoplasmic reticulum. (Correct)

Q: What is the term for the capacity to work?

A. Energy (Correct)
B. ATP
C. Transport
D. Elasticity

Q: Covering and lining the surface of the body and body cavities, and forming glands, describes what type of tissue?

A. Connective
B. Epithelial (Correct)
C. Muscle
D. Nervous

Q: The type of tissue that is usually found in areas that move substances into and out of the body during secretion, absorption, and excretion is _____ tissue.

A. nervous
B. muscular
C. epithelial (Correct)
D. connective

Q: What is the term for the movement of substances out of a cell?

A. Endocytosis
B. Phagocytosis
C. Endometriosis
D. Exocytosis (Correct)

Q: The study of body structures visible to the naked eye is what type of anatomy?

A. Gross (Correct)
B. Systemic
C. Surface
D. Regional

Q: What is the term for the relatively constant state of the internal environment of the body that is maintained by adaptive responses?

A. Negative feedback
B. Homeostasis (Correct)
C. Positive feedback
D. Control

Q: Which bond occurs between positively and negatively charged atoms?

A. Covalent
B. Polar covalent
C. Ionic (Correct)
D. Hydrogen

Q: An increase in the size of a cell that results in an increase in the size of a body part or organ is called:

A. atrophy.
B. swelling.
C. hypertonicity.
D. hypertrophy. (Correct)

Q: Which term means the quality of not permitting entry of certain substances?

A. Impermeable (Correct)
B. Semipermeable
C. Resistant
D. Solid

Q: Which substances do not have carbon and hydrogen atoms as the primary structure?

A. Organic compounds
B. Inorganic compounds (Correct)
C. Ions
D. Molecules

Q: What is the period during which a cell grows and carries on its internal activities?

A. Anaphase
B. Metaphase
C. Interphase (Correct)
D. Prophase

Q: Carriers that transport substances into or out of a cell using energy are known as:

A. compounds.
B. carrier cells.
C. high-energy bonds.
D. pumps. (Correct)

Q: Fats are also known as:

A. lipids. (Correct)
B. proteins.
C. starches.
D. fibers.

Q: What is the cell organelle that is part of the intracellular digestive system?

A. Endoplasmic reticulum
B. Lysosome (Correct)
C. Golgi apparatus
D. Nucleus

Q: Which term means the basic substance between the cells of a tissue?

A. Matrix (Correct)
B. Ground substance
C. Basement membrane
D. Plasma

Q: Which structure is composed of an amorphous ground substance consisting of molecules that expand when water molecules and electrolytes bind to them?

A. Gelatin
B. Matrix (Correct)
C. Compound
D. Element

Q: What is the type of cell division in which each daughter cell receives half the normal number of chromosomes, forming two reproductive cells?

A. Anaphase

B. Interphase
C. Meiosis (Correct)
D. Mitosis

Q: What is the thin sheetlike layer of tissue that covers a structure, lines a tube or cavity, or separates one part from another?

A. Adipose
B. Muscle tissue
C. Nerve tissue
D. Membrane (Correct)

Q: The chemical process in the body that converts food and oxygen into energy to support growth, distribution of nutrients, and elimination of waste is known as:

A. metabolism. (Correct)
B. reproduction.
C. absorption.
D. hydration.

Q: Molecules synthesized or broken down inside the body by chemical reactions are known as:

A. transport ions.
B. ground substance.
C. metabolites. (Correct)
D. matrix.

Q: What are the small projections of the cell membrane that increase the surface area of the cell?

A. Golgi apparatus
B. Endoplasmic reticulum
C. Flagella
D. Microvilli (Correct)

Q: “Rod- or oval-shaped cell organelles” describes which structures?

A. Mitochondria (Correct)
B. Vesicles
C. Nuclei
D. Lysosomes

Q: The type of cell division in which the cell duplicates its DNA and divides into two identical daughter cells is:

A. meiosis.
B. mitosis. (Correct)
C. catabolism.
D. anabolism.

Q: The genetic material in the cell is which molecule?

A. Collagen
B. Elastin

C. DNA (Correct)
D. ATP

Q: The essential elements and molecules obtained from the diet that are required by the body for normal body function are called:

A. enzymes.
B. metabolites.
C. hormones.
D. nutrients. (Correct)

Q: What are the basic cellular components that perform specific functions within the cell?

A. Organelles (Correct)
B. Golgi apparatus
C. Endoplasmic reticulum
D. Phagocytes

Q: Substances that have carbon and hydrogen as part of their basic structure are considered:

A. inorganic compounds.
B. organic compounds. (Correct)
C. ground substance.
D. connective tissue.

Q: The term for diffusion of water in a solution from a region of lower concentration to a region of higher concentration across the semipermeable membrane of a cell is:

A. edema.
B. hypertrophy.
C. osmosis. (Correct)
D. metabolism.

Q: What is the transportation of a substance across the cell membrane without the use of energy called?

A. Osmosis
B. Active transport
C. Diffusion
D. Passive transport (Correct)

Q: Endocytosis followed by digestion of the vesicle contents by enzymes present in the cytoplasm is:

A. phagocytosis. (Correct)
B. metabolism.
C. homeostasis.
D. exocytosis.

Q: What is the cell membrane that is made up of lipids, carbohydrates, and proteins?

A. Basal membrane
B. Phospholipid bilayer (Correct)

C. Epithelial membrane
D. Ground substance

Q: The study of the processes and functions of the body involved in supporting life is known as:

A. anatomy.
B. pathology.
C. physiology. (Correct)
D. kinesiology.

Q: What substances are formed from amino acids?

A. Lipids
B. Fats
C. Carbohydrates
D. Proteins (Correct)

Q: The study of the structures of a particular area of the body is what type of anatomy?

A. Regional (Correct)
B. Gross
C. Superficial
D. Surface

Q: Which type of fibers occur in networks and support small structures such as capillaries, nerve fibers, and basement membranes?

A. Collagenous
B. Reticular (Correct)
C. Elastin
D. Tensile

Q: The transfer of genetic information is performed by:

A. collagen.
B. DNA.
C. RNA. (Correct)
D. matrix.

Q: The large cross-striated cells that are connected to bones which type of muscle fibers?

A. Smooth
B. Cardiac
C. Visceral
D. Skeletal (Correct)

Q: Regulating blood flow through the cardiovascular system, propelling food through the intestines, and squeezing secretions from glands describes which type of muscle fibers?

A. Smooth (Correct)
B. Cardiac
C. Skeletal
D. Visceral

Q: The study of internal organs and structures as they can be recognized and related to external features is what type of anatomy?

A. Superficial
B. Surface (Correct)
C. Regional
D. Gross

Q: The study of the structure of a particular body system is what type of anatomy?

A. Superficial
B. Regional
C. Systemic (Correct)
D. Surface

Q: What term means a group of similar cells combined to perform a common function?

A. Organ
B. System
C. Organism
D. Tissue (Correct)

Q: The field of anatomy includes which subdivisions?

A. Developmental, organizational, gross, and systemic
B. Organizational, gross, regional, systemic, and pathological
C. Developmental, gross, surface, and pathological
D. Developmental, gross, regional, systemic, and surface (Correct)

Q: The study of physiology can be divided into what three approaches?

A. Systemic, organizational, and pathophysiological
B. Developmental, regional, and pathophysiological
C. Developmental, organizational, and pathophysiological
D. Organizational, pathophysiological, and systemic (Correct)

Q: What is the capacity to work?

A. Energy (Correct)
B. Anabolism
C. Catabolism
D. Physiology

Q: Mitochondria and lysosomes are examples of:

A. molecules.
B. organelles. (Correct)
C. proteins.
D. elements.

Q: Covering and protecting the surface of the body and its parts is a function of which type of tissue?

A. Connective
B. Collagenous
C. Epithelial (Correct)
D. Cartilaginous

Q: The chemical process that joins simple compounds to form complex compounds of carbohydrates, lipids, proteins, and nucleic acids is:

A. anabolism. (Correct)
B. physiology.
C. catabolism.
D. transport.

Q: Active transport is the movement of substances into or out of a cell using:

A. gravity.
B. osmosis.
C. energy. (Correct)
D. meiosis.

Q: Skin cancer that originates in the tissue surface that faces the inside of the body means it originates in the:

A. basement membrane.
B. apical surface.
C. basal surface. (Correct)
D. matrix material.

Q: The chemical process in the body that releases energy as complex compounds are broken down is:

A. transport.
B. anabolism.
C. phagocytosis.
D. catabolism. (Correct)

Q: If yin corresponds to the structure of the lungs, what does yang correspond to?

A. Air passageways within the lung itself
B. Coverings of the lungs
C. Swallowing food
D. The breathing process (Correct)

Q: How internal organs and structures can be recognized and related to external features on the outside of the body is what type of anatomy?

A. Systemic
B. Surface (Correct)
C. Regional
D. Gross

Q: What is the term for the movement of ions and molecules from an area of higher concentration to that of a lower concentration?

A. Diffusion (Correct)
B. Mitosis
C. Meiosis
D. Osmosis

Q: Skeletal muscle fibers can be described as:

A. small connective cells.
B. cross-striated. (Correct)
C. involuntary.
D. having limited blood flow.

Q: What is a group of similar cells combined to perform a common function?

A. Muscle
B. Molecule
C. Tissue (Correct)
D. Bond

Q: The composition of lipids, carbohydrates, and proteins are described chemically as:

A. having the same amount of carbon, hydrogen, and oxygen.
B. some having nucleic acids and others not.
C. some incorporating ATP into their structures and others not.
D. having different amounts of carbon, hydrogen, and oxygen. (Correct)

Q: Which type of fiber is found in connective tissue?

A. Reticular (Correct)
B. Cardiac
C. Skeletal
D. Smooth

Q: What is the most abundant type of tissue in the body?

A. Muscle
B. Nervous
C. Connective (Correct)
D. Epithelial

Q: What substance contains only a single kind of atom?

A. Compound
B. Molecule
C. Protein
D. Element (Correct)

Q: Engulfing particles located outside the cell membrane by forming vesicles and bringing it into the cell is called:

A. phagocytosis.
B. endocytosis. (Correct)
C. osmosis.

D. diffusion.

Q: The movement of substances out of a cell is called:

A. exocytosis. (Correct)
B. endocytosis.
C. osmosis.
D. phagocytosis.

Q: The movement of substances from an area of higher concentration to an area of lower concentration is:

A. diffusion. (Correct)
B. endocytosis.
C. exocytosis.
D. active transport.

Q: Amino acids form which substance?

A. Water
B. Lipid
C. Carbohydrate
D. Protein (Correct)

Q: The human body's adaptability in maintaining a relatively constant internal environment even though the outside temperature is freezing is an example of:

A. meiosis.
B. metabolism.
C. anabolism.
D. homeostasis. (Correct)

Q: Small fibrils that combine to create connective tissue of fasciae, tendons, and ligaments describe:

A. cytoplasm.
B. lysosome.
C. collagen. (Correct)
D. DNA.

Q: A massage practitioner is effective with palpation and observation skills. During assessment, they identified asymmetry in the shoulders and hips. In which area of study have they become proficient?

A. Pathophysiology
B. Developmental anatomy
C. Characteristics of life
D. Gross and surface anatomy (Correct)

Q: The influence of massage on body chemicals and their effects describes how massage interacts with:

A. systemic anatomy.
B. yin and yang.

C. physiology. (Correct)
D. organizational structure.

Q: Which statement is accurate of how the study of chemistry relates to massage?

A. Current research is attempting to identify the mechanism of massage effect, and biological plausibility is a strong contender. (Correct)
B. The building blocks at the cellular level influence the visceral anatomy, which in turn influences palpation assessment during massage application.
C. Gross anatomy and pathophysiology are both representatives of the nucleic acids and the phospholipid membrane.
D. Elements, including atoms and molecules, are the basis of the law of five-element theory in Chinese medicine.

Q: During massage application, kneading the tissue increases its pliability. The best description of this benefit is the:

A. electric property of nervous tissue.
B. interrelationship of prana with qi.
C. thixotropic nature of ground substance. (Correct)
D. the activation of mast cells.

Q: The study of bones would best be characterized as:

A. body divided into its systems. (Correct)
B. body structures invisible to the naked eye.
C. cellular physiology.
D. processes and functions of the body.

Q: What does physiology explain?

A. Functions of the body that support life (Correct)
B. Wholeness of the structure of the body
C. How the body is laid out like a map?
D. How the different parts of the body connect to each other?

Q: Yin and yang combine to form a whole unit and describe:

A. the physiology of thinking.
B. how solid organs form?
C. the relationship of opposites. (Correct)
D. physiology in terms of Western science.

Q: Which process is a characteristic of life?

A. Movement
B. Growth
C. Excretion
D. All of the above (Correct)

Q: Metabolism occurs in which body organization level?

A. System

B. Organelle
C. Chemical (Correct)
D. Tissue

Q: The organ level of organization would explain the structure and function of the:

A. body.
B. cardiac cell.
C. lungs. (Correct)
D. epithelial tissues.

Q: The matrix of connective tissue includes:

A. alignment of the cells.
B. the basement membrane.
C. shapeless ground substance. (Correct)
D. smooth muscle fibers.

Q: Blood and bone are both types of which structure?

A. Adipose tissue
B. Connective tissue (Correct)
C. Cartilage
D. Membranes

Q: The main characteristic of muscle tissue is what ability?

A. Coordinates and regulates body activity.
B. Performs more complex body functions.
C. Functions in the body without any attachment to connective tissue.
D. Provides movement by shortening. (Correct)

Q: A practicing massage therapist is asked to justify how massage to the surface of the body can influence cellular function. Which response would be the most accurate?

A. Massage directly affects the function of the cell when pressure is applied to the tissues. The response is isolated to mechanical force deformation of the cell wall.
B. Massage can move fluid in the body, which then stimulates cellular division and DNA mutation, with the resulting changes in organ function.
C. Massage indirectly influences homeostatic function of the body at an organism level, supporting efficient physiological function. (Correct)
D. Massage indirectly influences metabolism, which produces phagocytes, in turn building strength in the cellular wall.

Q: The scientific method is very similar to:

A. critical thinking. (Correct)
B. physical assessment.
C. biomechanics.
D. kinesiology.

Q: What is the proper sequence used during the clinical reasoning process?

A. Define the problem. Collect the facts and do research. Generate possibilities. Develop and implement a plan. Analyze results and adjust the plan. (Correct)

B. Generate possibilities. Define the problem. Collect the facts and do research. Develop and implement a plan. Analyze results and adjust the plan.

C. Define the problem. Develop and implement a plan. Collect the facts and do research. Generate possibilities. Analyze results and adjust the plan.

D. Develop and implement a plan. Analyze results and adjust the plan. Define the problem. Collect the facts and do research. Generate possibilities.

Licensing Review Questions - Chapter 01

Q: What characteristic of life means the ability to sense and adapts to changes in the environment?

A. Responsiveness (Correct)
B. Circulation
C. Movement
D. Growth

Q: Which of the following terms refers to the study of how the body functions?

A. Anatomy
B. Conductivity
C. Physiology (Correct)
D. Secretion

Q: What type of bond is found in a molecule of carbon dioxide?

A. Covalent (Correct)
B. Ionic
C. Hydrogen
D. Polar covalent

Q: What is the primary carrier of chemical energy in cells?

A. DNA
B. ATP (Correct)
C. Lipids
D. Carbohydrates

Q: What is the term for a decrease in the size of a muscle?

A. Atrophy (Correct)
B. Hypertrophy
C. Anabolism
D. Catabolism

Q: Which of the following types of fibers is the most prevalent in tendons?

A. Elastin
B. Collagen (Correct)
C. Muscle
D. Reticular

Q: What is the term for the property of cold or undisturbed tissues that become more fluid when warmed or stirred?

A. Piezoelectric
B. Malleable
C. Fluid
D. Thixotropic (Correct)

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Q: Which of the following types of cartilage is found in the external ear?

A. Hyaline
B. Chondro
C. Elastic (Correct)
D. Fibro

Q: What type of muscle fiber is found in the small intestine?

A. Smooth (Correct)
B. Striated
C. Cardiac
D. Skeletal

Q: Which of following are systems of control for the body?

A. Cardiovascular and respiratory
B. Nervous and endocrine (Correct)
C. Reproductive and urinary
D. Digestive and muscular