حل مراجعة عامة وفق منهج انسباير

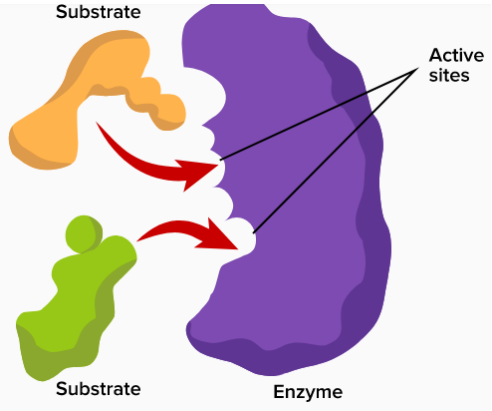
تم تحميل هذا الملف من موقع المناهج الإماراتية	
موقع المناهج ⇦ المناهج الإماراتية ⇦ الصف التاسع المتقدم ⇦ علوم ⇦ الفصل الأول ⇦ ملفات متنوعة ⇦ الملف	
تاريخ إضافة الملف على موقع المناهج: 2025-11-16 14:32:21	
المزيد من مادة علوم:	ملفات ا كتب للمعلم ا كتب للطالب ا اختبارات الكترونية ا اختبارات ا حلول ا عروض بوربوينت ا أوراق عمل منهج انجليزي ا ملخصات وتقارير ا مذكرات وبنوك ا الامتحان النهائي ا للمدرس

التواصل الاجتماعي بحسب الصف التاسع المتقدم					
صفحة المناهج الإماراتية على فيسبوك					
المواد على تلغرام	التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات	

المزيد من الملفات بحسب الصف التاسع المتقدم والمادة علوم في الفصل الأول	
1	مراجعة نهائية عامة منهج انسباير
2	كراسة تدريبية مراجعة وفق الهيكل الوزاري الجديد منهج بريدج
3	تجميعة الصفحات المهمة وفق الهيكل الوزاري الجديد منهج بريدج
4	المراجعة النهائية الشاملة للمقرر وفق الهيكل الوزاري منهج بريدج
5	ملخص وشرح الدرس الرابع Building life of blocks من الوحدة الأولى منهج انسباير

Chapter: Chemistry in Biology

Q. Label the substrates, the enzyme, and the active sites.



Q. Why is the active site of an enzyme important to enzyme activity?

- A) It raises the activation energy of a reaction.
- B) It allows the enzyme to interact with a large variety of substrates.
- C) It allows the enzyme to catalyze very specific reactions.
- D) It allows an endothermic reaction to run as an exothermic reaction.

Q. Which of the following factors influence enzyme activity? Select all that apply.

- A) pH
- B) time of day
- C) temperature
- D) the activation energy
- E) whether the reaction is exothermic or endothermic

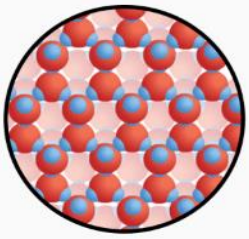
Q. **How do enzymes affect a chemical reaction, making it easier to occur?**

- A) They reduce the activation energy.
- B) They make the reaction endothermic.
- C) They make the reaction exothermic.
- D) They raise the activation energy.

Q. The molecular view shown is best described by which state of water?

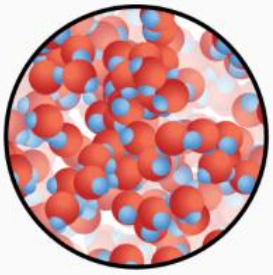
- A ice
- B steam
- C liquid water

Q. The molecular view shown is best described by which state of water?



- A ice
- B steam
- C liquid water

Q. The molecular view shown is best described by which state of water?



- A ice
- B steam
- C liquid water

Q. **Which statement is not true about pure water?**

- A) It is adhesive and cohesive due to hydrogen bonds.
- B) It is a good solvent.
- C) It is composed of ionic bonds.
- D) It is composed of polar molecules.

Q. **Identify which properties of water make it a compound necessary for life to exist on our planet. Select all that apply.**

- A) It is adhesive and cohesive.
- B) It is composed of three atoms.
- C) It is a polar molecule capable of forming hydrogen bonds.

- [ ] D) Its molecular weight is 18.
- [ ] E) Its solid form is less dense than its liquid form, ice floats.
- [ ] F) It is an excellent solvent.

Q.

A(n) [base] is a substance that produces hydroxide ions (OH^-) in water, while a(n) [acid] produces hydrogen ions (H^+) in water.

Q. **Which of the following is not a property of water?**

- A) It is adhesive.
- B) It is cohesive.
- C) It is a good solvent.
- D) It combusts.

Q. **What is a base?**

- A) a substance that releases hydroxide ions (OH^-) into solution
- B) a substance that quenches chemical reactions
- C) a substance that releases hydrogen ions (H^+) into solution
- D) a substance that decreases pH

Q. **How are water molecules in a rain drop held together?**

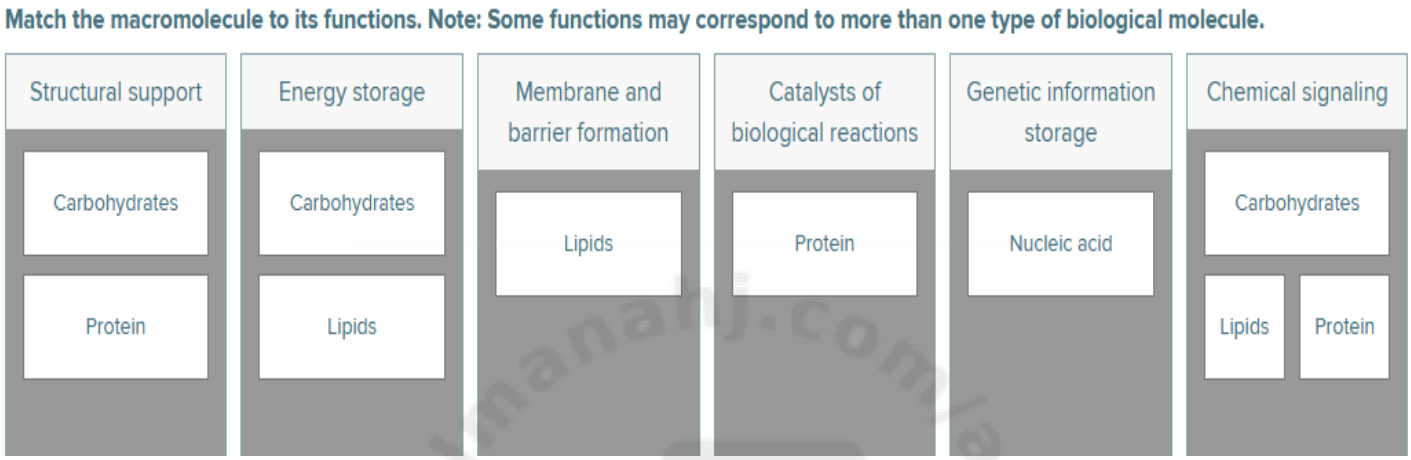
- A) ionic bonds
- B) attraction between positive charges
- C) van der Waals forces
- D) attraction between negative charges

Q. **What are the major classes of biological macromolecules? Select all that apply.**

- [ ] A) acids
- [ ] B) proteins
- [ ] C) lipids

- [ ] D) chlorophylls
- [ ] E) organelles
- [ ] F) carbohydrates
- [ ] G) ribosomes
- [ ] H) nucleic acids

Q.



Q. **Most biological macromolecules are polymers that are made up of many smaller subunits called monosaccharides.**

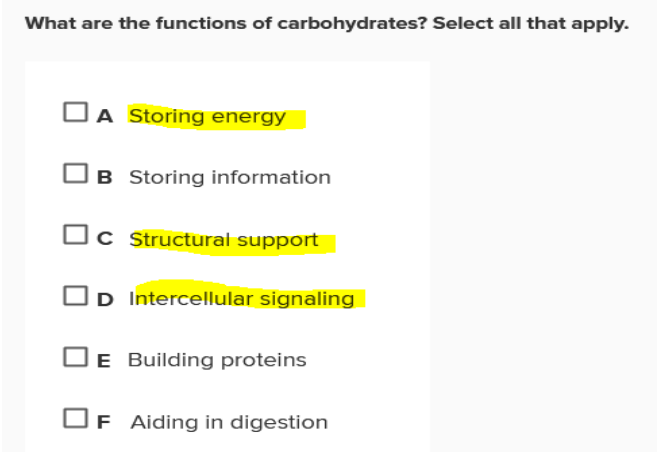
- ○ True
- ○ False

Q. **Which biological macromolecule is not considered a polymer?**

- ○ A) a carbohydrate
- ○ B) a nucleic acid
- ○ C) a lipid
- ○ D) a protein

Q.

Like many other biological molecules, carbohydrates exist both as monomers and polymers. The monomer units are simple sugars, also known as monosaccharides. The polymers are made up of long chains of these simple sugars and are called polysaccharides.

Q. 

Q. **Which of the following molecules can be identified as carbohydrates? Select all that apply.**

- A) steroids
- B) polysaccharides
- C) oils
- D) simple sugars
- E) glucose
- F) DNA
- G) fats
- H) disaccharides

Q. **Which of the following functions can be attributed to carbohydrates?**

- A) structural support
- B) signaling between cells
- C) energy storage
- D) all of the above

Q.

Carbohydrates that provide structural support, like chitin, are usually polysaccharides **. These structures are made up of** monosaccharides **.**

Q. **What is the ratio of carbohydrates in a monosaccharide?**

- A) 2 carbon: 1 hydrogen: 2 oxygen
- B) 1 carbon: 2 hydrogen: 1 oxygen

C) 1 carbon: 2 hydrogen: 2 oxygen

D) 1 carbon: 3 hydrogen: 1 oxygen

What are saturated fats?

A lipids with double bonds between carbon atoms

B lipids with a phosphate head and a hydrophobic tail

C lipids with single bonds between carbon atoms

D lipids with several rings of carbon and hydrogen fused together

What are the two primary functions of lipids?

A structural support and energy storage

B energy storage and barrier formation

C barrier formation and chemical signaling

D chemical signaling and structural support

Q. **Which of the following compounds can be classified as lipids? Select all that apply.**

- A) unsaturated fatty acids
- B) phospholipids
- C) steroids
- D) saturated fatty acids
- E) disaccharides
- F) peptides
- G) nucleic acids
- H) enzymes

Q. **Which of the following functions can be attributed to lipids? Select all that apply.**

- A) energy storage
- B) catalyzing biological reactions
- C) information storage
- D) building blocks for cholesterol and other hormones
- E) membrane and barrier formation

Q. **Which of the following joins amino acids together?**

A) metallic bonds

- B) ionic bonds
- C) peptide bonds
- D) van der Waals forces

Q. **Why is the sequence of amino acids important to protein function?**

- A) The order of amino acids determines the shape a protein will take.
- B) The sequence of amino acids doesn't have an effect.
- C) Amino acids can only be combined in a specific order, otherwise the bonds will fall apart.
- D) The order of the amino acids can be read like a code to assemble DNA.

Q.

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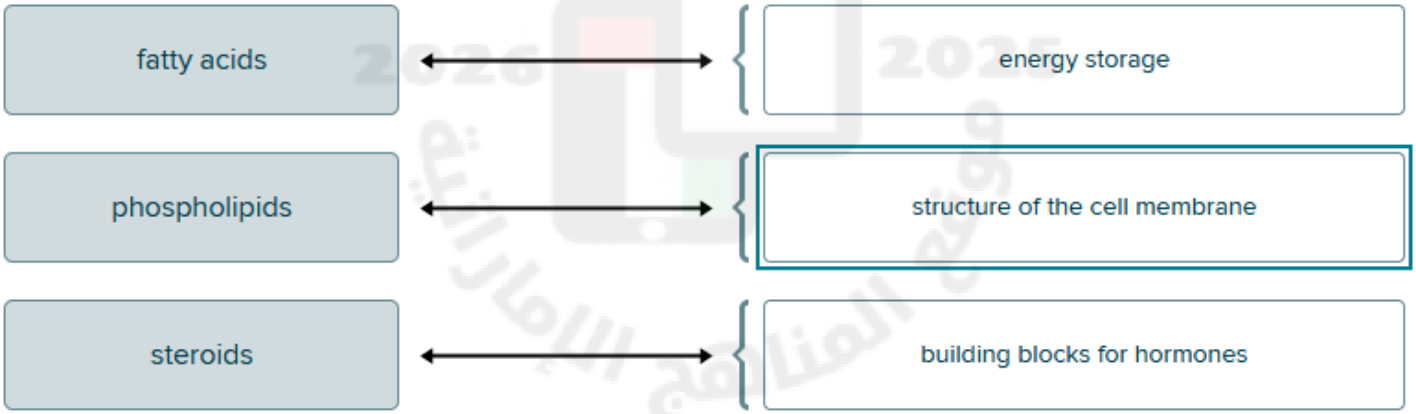
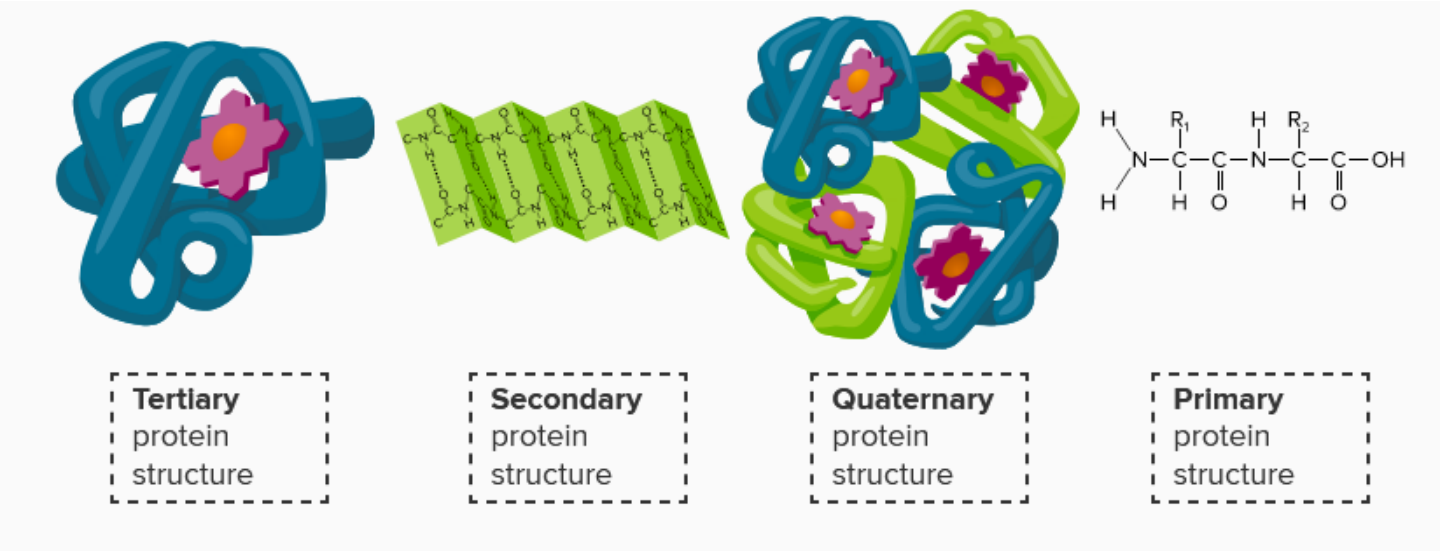


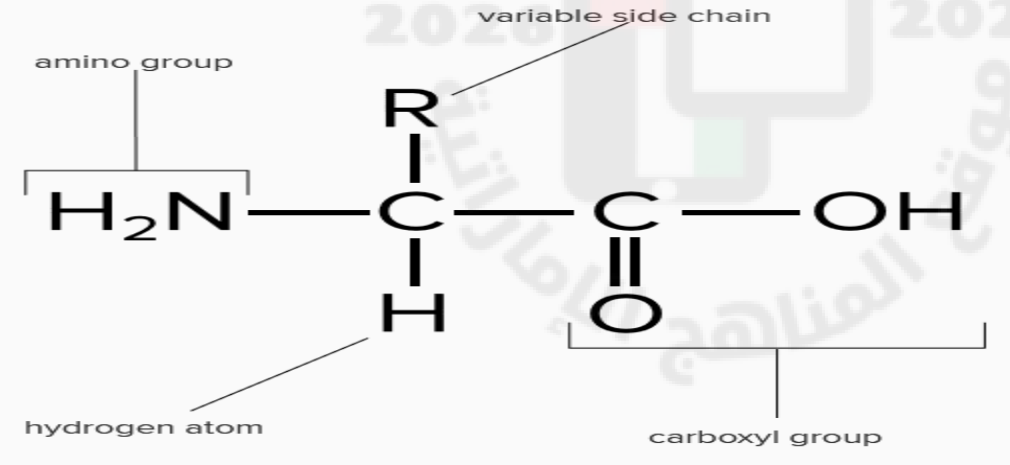


What cellular function are proteins NOT responsible for?

- A Cellular structure support
- B Transportation of molecules throughout and between cells
- C Storing genetic information
- D Catalysis of biological reactions
- E Chemical signaling

Which of the following compounds can be classified as a protein?

- A) fatty acids
- B) nucleic acids
- C) enzymes
- D) polysaccharides



Which of the following compounds are examples of nucleic acids? Select all that apply.

- A) fatty acids
- B) ribonucleic acid (RNA)
- C) deoxyribonucleic acid (DNA)
- D) polysaccharides
- E) amino acids

Which of the following functions can be attributed to nucleic acids and nucleotides?

- A) barrier in biological membranes
- B) chemical signaling between cells
- C) long-term energy storage
- D) genetic information storage and transmission

The primary function of nucleic acids is to [store genetic information]. Nucleic acids are made up of small units called [nucleotides]. There are five different subunits, allowing a nucleic acid polymer to be read like a code.

Cellular Structure and Function

Cells arise only from previously [existing cells] with cells passing copies of their [genetic material] on to their daughter cells.

Organisms that break down molecules to generate energy	Both
Organisms that have cells lacking internal membrane-bound organelles	Prokaryotic cell
Organisms whose cells do not have nuclei	Prokaryotic cell
Organisms that are either unicellular or multicellular	Eukaryotic cell
Organisms that are generally unicellular	Prokaryotic cell
Organisms that have cells containing organelles	Eukaryotic cell
Organisms that have plasma membranes	Both

What is the definition of the cell theory? It states that:

A) All cells have a plasma membrane and genetic material called DNA.

B) The cell is the basic structural and functional unit of all living organisms.

C) Organisms are made of one or more cells, cells are the basic unit of life, and all cells come only from other cells.

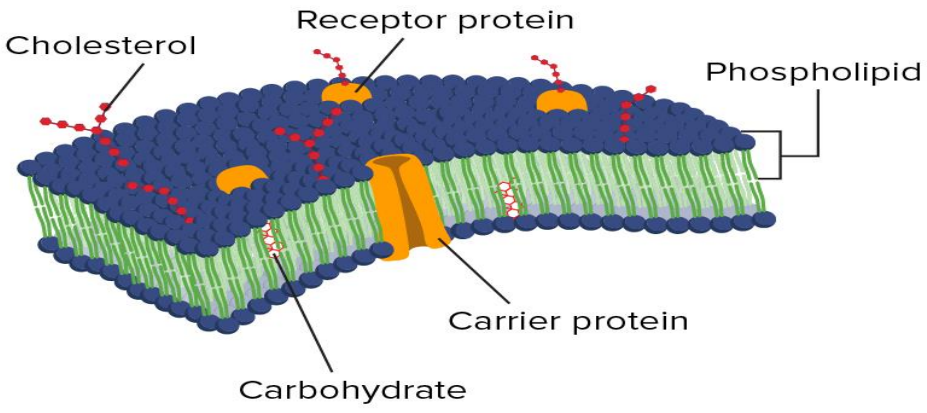
D) Eukaryotic cells are larger than prokaryotic cells.

Categorize the following characteristics as either prokaryotic cells, eukaryotic cells, or both.

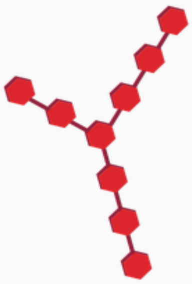
Prokaryotic cells	Eukaryotic cells	Both
smaller cell	nucleus	ribosomes
examples are bacteria	larger cell	plasma membrane
	membrane-bound organelles	DNA
	examples are yeast and algae	

Match each of the following structures with its function.

Function	Structure
a molecule that has a glycerol backbone, two fatty acid chains, and a phosphate-containing group	phospholipid
molecules are arranged tail to tail, allowing it to exist in the watery environment	phospholipid bilayer
transmits signals to the inside of the cell	receptor proteins
gives the cell its shape by anchoring to the cell's inner support structure	inner membrane proteins
moves needed substances or waste materials through the plasma membrane	transport proteins



What is the name of this structure? What is its function?



- ✓ **A** carbohydrate; defines a cell's characteristics and helps identify chemical signals
- **B** cholesterol; helps prevent the fatty-acid tails of the phospholipid bilayer from sticking together
- **C** transport protein; moves needed substances or waste materials through the plasma membrane
- **D** phospholipid; creates separation from polar and non-polar molecules
- **E** receptor protein; transmits signals to inside the cell

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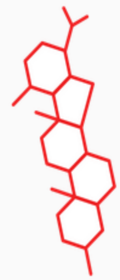

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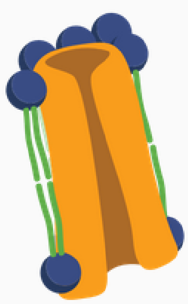

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Where would you find the nonpolar region on the phospholipid?

- ✓ **A** the fatty acid tails
- **B** the glycerol backbone
- **C** the head
- **D** entire molecule is nonpolar

How many phospholipid layers are there in the plasma membrane?

A 1

B 2

C 3

D 4

Which one of these is not part of the phospholipid structure?

A carbohydrate

B glycerol

C fatty acid chain

D phosphate group

What is the definition of selective permeability?

A) It is the property of the plasma membrane that allows it to control movement of substances into or out of the cell.

B) It is the process of maintaining balance in an organism's internal environment.

C) It moves needed substances or waste materials through the plasma membrane.

D) It is layers composed of phospholipid molecules arranged with polar heads facing outside and non-polar tails facing the inside.

What is homeostasis?

A) the ability to arrange phospholipids in a way that allows the plasma membrane to tolerate the watery environment

B) a membrane which allows some substances to pass through while keeping others out

C) the ability to move needed substances or waste materials through the plasma membrane

D) the process of maintaining balance in an organism’s internal environment

Which of the following is not a main factor that affects the rate of diffusion?

A) concentration

B) pressure

C) temperature

D) conductivity

After some important cellular processes, there is an abundance of carbon dioxide (CO_2) molecules inside the cell, but not enough molecules outside the cell. CO_2 molecules would [move out of the cell] because there is a [lower] concentration outside the cell than inside the cell.

A molecule that is important for cell functioning cannot diffuse through the plasma membrane, but needs a protein that can open and close to allow the molecule to diffuse. What is this protein called?

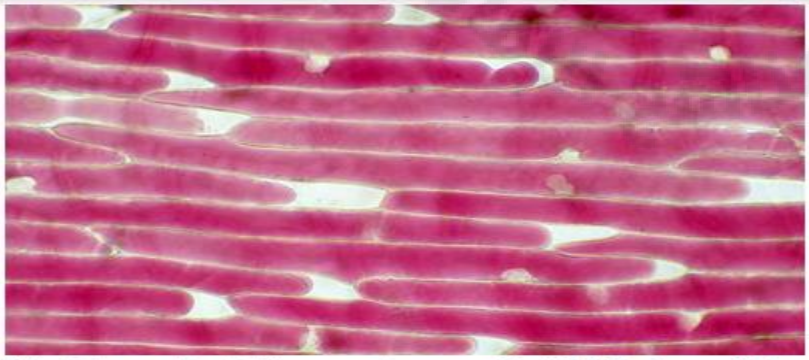
A) motor protein

B) carrier protein

C) receptor protein

D) channel protein

A molecule needs to enter into the cell but cannot go through the plasma membrane because of its polarity. However, the molecule can bind to a [carrier] protein and the protein changes shape to allow the particle to move through the membrane.



What type of solution are these cells in? What would be the net movement of water?

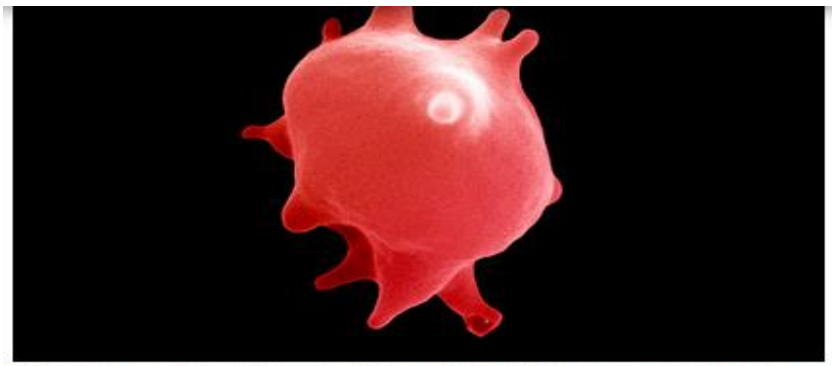
A) hypertonic; out of the cell

B) hypotonic; out of the cell

C) hypotonic; into the cell

D) hypertonic, into the cell

E) isotonic; zero



What type of solution is this cell in? What would be the net movement of water? Select all that apply.

- ☐ **A)** out of the cell
- ☐ **B)** zero
- ☐ **C)** isotonic
- ☐ **D)** hypotonic
- ☐ **E)** into the cell
- ☐ **F)** hypertonic

When a cell is in a(n) isotonic **solution, the cytoplasm and the solution have the same concentration of water and solutes. Therefore, the net movement of water is** zero **.**

Categorize the following characteristics as either endocytosis, exocytosis, or both.

Endocytosis	Exocytosis	Both
Vacuoles are used	Vesicles are used	Process maintains homeostasis
Cell surrounds a substance and brings it inside	Cell expels wastes at the plasma membrane	Too large to move through plasma membrane

The Na^+/K^+ ATPase pump is an example of active transport, which requires energy to move substances from a higher concentration to a lower concentration.

- ○ True

False

water from high area to low area concentration	osmosis
oxygen and carbon dioxide	diffusion
ions from low to high area concentration	sodium-potassium ATPase pumps
large particles	endocytosis

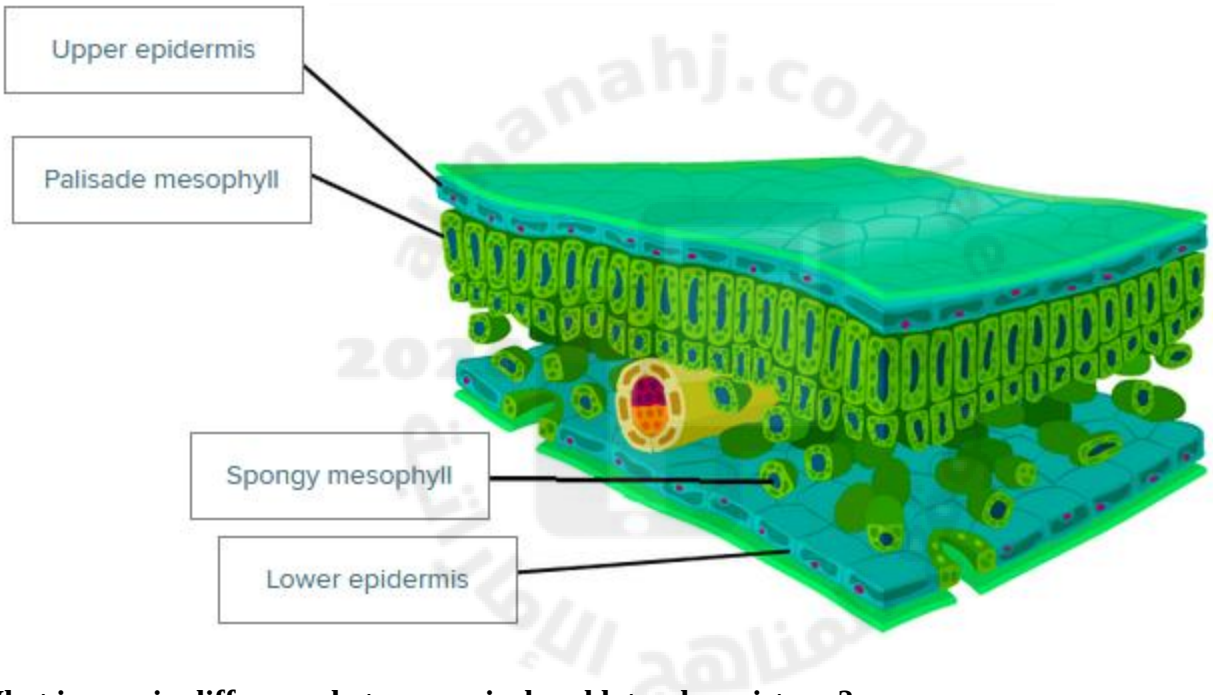
Chapter- Plant structure and Function

Determine whether the functions listed below are performed by parenchyma cells, collenchyma cells, or sclerenchyma cells. Some functions may be performed by one or more cell types.

	parenchyma	collenchyma	sclerenchyma
structural support	☐	☑	☑
photosynthesis	☑	☐	☐
tissue repair	☑	☑	☐
transport materials	☐	☐	☑
protection	☑	☐	☐
storage	☑	☐	☐
gas exchange	☑	☐	☐

Which of the following are functions of roots? Select all that apply.

- [ ] **A)** protection
- [x] **B)** absorb water and nutrients
- [x] **C)** anchor plants
- [x] **D)** act as support
- [x] **E)** store food
- [ ] **F)** sexual reproduction
- [ ] **G)** perform photosynthesis



What is a main difference between apical and lateral meristems?

- A) laterals are never seen in eudicots; apical are typically in eudicots
- B) apical results in photosynthesis; lateral results in gas exchange
- C) apical increases root diameter; lateral increases plant height
- D) apical results in primary growth; lateral results in secondary growth

Collenchyma, parenchyma, and sclerenchyma are examples of plant cells .

Which of the following is true about sclerenchyma plant cells?

- A) Sclerenchyma plant cells are spherical in shape, with thin cell walls.

- B) Sclerenchyma plant cells lack living components when they mature.
- C) Sclerenchyma plant cells have an elongated shape and can be stretched.
- D) Sclerenchyma plant cells maintain the greatest variety of organelles.

What is the function of parenchyma cells?

- A) accelerate plant growth in stems and roots
- B) provide support for surrounding cells
- C) undergo cell division to help repair a plant
- D) form wood to support the entire plant

If a sunflower plant lost all of its collenchyma cells, it would __.

- A) lose petals
- B) turn brown
- C) fall over
- D) stop growing

Match the correct plant tissue to its description.

Description	Tissue
have diverse functions, including photosynthesis	ground tissues
transport food and water throughout the plant	vascular tissues
produce new cells to increase plant length	meristematic tissues

Plant structures that quickly move water, sugar, and nutrients through a plant are called vascular **tissues.**

Q. Which is the vascular tissue that transports water and dissolved minerals from roots to leaves?

- A) phloem
- B) epidermis
- C) xylem
- D) parenchyma

Which of the following produce cells that results in an increase in length?

- A) lateral meristems
- B) intercalary meristems
- C) apical meristems
- D) vascular cambium

Which vascular tissue is composed of living tubular cells that carry sugars from the leaves to other parts of the plant?

- A) xylem
- B) cambium
- C) phloem
- D) parenchyma

Which of the following enables exchange of gases?

- A) parenchyma
- B) stomata
- C) xylem
- D) phloem

Which control(s) the movement of water vapor through the stomata?

- A) vascular tissues
- B) bark
- C) pericycle
- D) guard cells

Match the specialized root to its function.

Function	Root
Supports plant stems	prop root
Anchors plant, provides food and water storage	taproot
Supplies oxygen to submerged roots	pneumataphore
Anchors plant, povides rapid water storage	fibrous root

Determine whether the specialized roots listed below function either for food storage, asexual reproduction, or both.

Specialized stem	Function
corm	food storage
runner	asexual reproduction
tuber	food storage
rhizome	both
bulb	food storage

Match the leaf structures to their correct description. Each term is used once.

Description	Structure
most photosynthesis takes place here	palisade mesophyll
secretes a covering that protects the leaf	upper epidermis
houses the guard cells and stoma	lower epidermis
irregularly shaped, loosely packed cells surrounded by gases	spongy mesophyll

Which of the following is an example of a nastic response?

- A) upward growth of a new stem
- B) houseplant growing toward a window
- C) grapevine wrapping around a flowerpot
- D) sunflower bending toward the Sun

Match the following descriptions to the correct tropism.

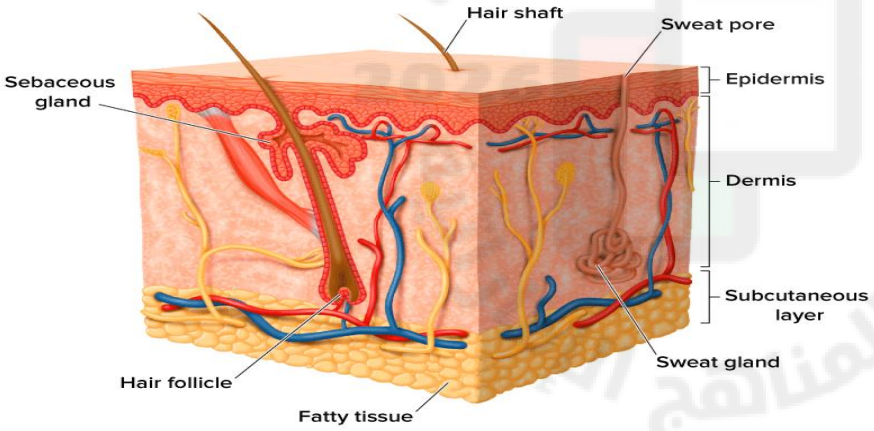
Description	Tropism
A vine or stem grows around a wire or a fence.	thigmotropism
Roots exhibit this positive tropism, while stems exhibit this negative tropism.	gravitropism
A houseplant grows toward the direction of the light.	phototropism

Chapter- Skeletal- Muscular and Integumentary sytem

Which of these is not one of the four main types of skin tissues?

- A) connective
- B) nerve
- C) keratin
- D) epithelial

What important function does the bottom skin layer in this image have?



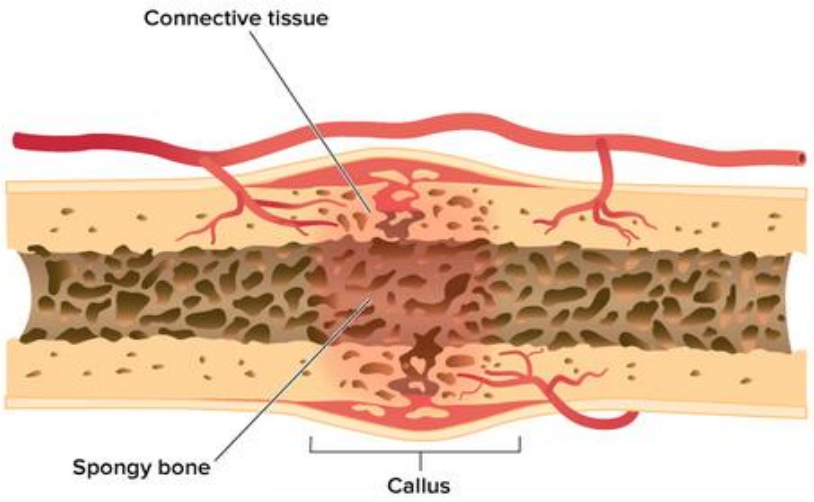
- A) opens pore
- B) waterproofs skin
- C) regulates temperature
- D) absorbs sunlight

What structure produces oil?

- A) acne
- B) hair follicle
- C) sebaceous gland
- D) hair

A pigment called melanin **absorbs sunlight to protect the cell.**

What type of cell is working during this phase of bone repair?



A) compact cells

B) marrow cells

C) osteoblasts

D) cardiac cells

Muscles arranged in a network with efficient and rhythmic contractions are called cardiac **muscles.**

Which of these are *not* important functions of the skeletal system?

- **A)** stores minerals; provides support
- **B)** forms platelets; stores minerals
- **C)** transmits nerve signals; produces actin
- **D)** helps maintain homeostasis; stores minerals

spongy **bone contains cavities and bone marrow.**

The appendicular skeleton **includes bones of the shoulders, arms, hands, hips, legs, and fee**

Ligaments important because they hold bones together.

- True
- False

Protein filaments that make up myofibrils are called ___.

- A) sarcomeres and myosin
- B) actin and myosin
- C) sarcomeres and actin
- D) cardiac cells and sarcomeres

What do muscles require for ATP production?

- A) an anaerobic process
- B) anaerobic fermentation
- C) oxygen and cellular respiration
- D) lactic acid and fermentation

Which of the following statements is not true regarding sliding filament theory?

- A) Actin filaments slide together.
- B) Myosin filaments remain still.
- C) Contractions are activated by nerve signals.
- D) Myosin filaments slide together.