Term1 - Biology 10 General 2024-2025 – هيكل اختبار الفصل 1 مادة الأحياء

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Question	Learning outcome- ناتج التعلم	Figure	Page
1	**Describe the function of enzymes as biological catalysts and their importance in living organisms.**	**Figure 18**	**16**

Q1: Choose the correct answer:

1- Are Reactants that bind to the enzyme its called: **a-Active site** **b- Substrates**

2- Is the specific *location* where a substrate binds on an **enzyme**:

a-Active site **b- Substrates**

3- Substrates interact with enzymes at specific places called: **a-Location** **b-Active site.**

4- Only *substrates* with the same.... and..... as the active site will bind to the enzyme.

a- Size **b-Shape** **c-Both a and b correct** **d- Not a or b**

5- The active site changes its shape To forms the .. ,so the substrates react to form products.

a-Enzyme-substrate complex **b- Enzyme-products complex**

6-At end of the reaction the enzyme-substrate complex releases the:

a-Substrate **b-Products** **c- Enzyme** **d- Nothing**

Figure 18 Substrates interact with enzymes at specific places called active sites. **Only substrates with a specific shape can bind to the active site of an enzyme. Once the substrates bind, the active site changes shape and forms the enzyme-substrate complex. The substrates react to form products. The products are then released.**

7- 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**

8- 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.

9-What is the function of the enzyme-substrate complex?

a-Destroy the enzyme **b-Prevent bondage at the active site**

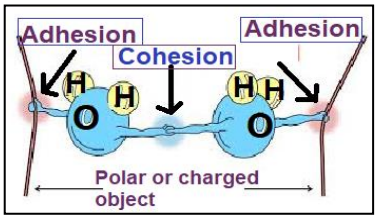
c-Stop chemical reactions **d-break and forming chemical bonds**

2	**Discuss the adhesive and cohesive properties of water**		**21**

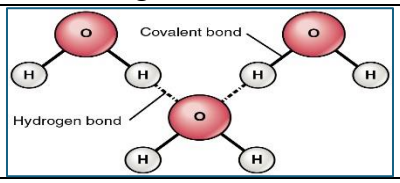
Important Conclusion Because water molecule is Polar, hydrogen bonds form between water molecules. Polarity makes water a good solvent, give its the ability to stick:

1-Stick to other surfaces (تلاصق Adhesion) result in: *Capillary Action*.

2-Stick to it self (تماسك Cohesion) result in: *Surface tension*.



Q1-Compere between the Adhesion and Cohesion of the water molecule in the table below:

	Adhesion	**Cohesion**
Definition	a- Tendency to stick to other water molecules. **b-** Tendency to stick to other substances.	a- Tendency to stick to other water molecules. **b-** Tendency to stick to other substances.
Result In	a- Surface tension b- Capillary action	a- Surface tension b- Capillary action
Example	a- Water Droplets, small particles can rest on water surface. b-Water move through the Plants.	a- Water Droplets, small particles can rest on water surface. b-Water move through the Plants.
Similarity	Both are prosperities Related to hydrogen bonding.	

2- A paperclip floating on the water because of : **a- Adhesion** **b- Surface tension**

3-Water can forms droplets because of: **a -Adhesion** **b- Cohesion**

4- The raindrops stick to a car window because of the : **a- Adhesion** **b- Surface tension**

5- Some insects can walk on the water's surface because of: select all apply:

a- **Adhesion** **b- Surface tension** **c-Cohesion**

6-Which of the following are prosperities of water? *Choose all correct* : **a-Water is cohesion**

b-Solid water is less denes than liquid water **c- Water is adhesion**

d-water molecule is nonpolar **e- Water is the universal solvent.**

7- Because of the water adhesion, water can move from the roots to the leaves in plants?

a- Freezing of water **b-Condensation of water** **c- Capillary action**

8- Because of hydrogen bond, the positive polarity of the hydrogen atom is attracted to the negative polarity of the oxygen atoms this attraction creates a:

a- Capillary action **b- Surface tension** **c-Hydrogen bond.**

3	Compare and contrast solutions, suspensions and colloids	Figure 24	22

-Figure 24 The drink mix forms a homogeneous mixture in water. The particles of the solute (drink mix) are dissolved and spread throughout the solvent (water).

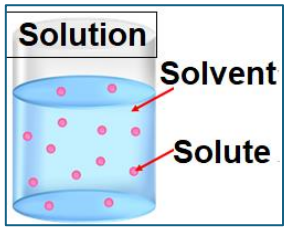
1- Is a combination *of two or more substances* in which each substance retains its individual characteristics and properties: **a-Mixture** **b-Solvent.**

2-A mixture with a uniform composition throughout is called:

a- A homogeneous **b- Heterogeneous** **c-Solution** **d-Both a and c are correct**

3- The substance in which another substance is dissolved:

a-Solven **b-Solute**



4- The substance that is dissolved in the solvent: **a-Solven** **b-Solute**

5-Choose the correct example of the solution:

a- Water and salt. **b- Saliva** **c- Air** **d- All of them correct.**

6- A mixture when the components remain distinct called:

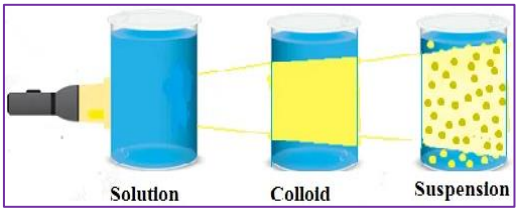
a- A homogeneous **b- Heterogeneous.**

7- Why is water able to dissolve a wide variety of solutes?

a- It acts as a catalyst. **b- Its pH is neutral.** **c- It is a polar molecule.**

8- Choose the correct example of the heterogeneous mixture: **a-Water + sand** **b-Milk.**

9-Type of heterogeneous mixture where the particles settle to the bottom: **Colloid** **b-Suspension**



10- Type of heterogeneous mixture where the particles do not settle to the bottom:

a-Colloid (blood- milk-smoke) **b-Suspension**

4	Discuss the structural and functional characteristics of the building blocks of life.		26
17	Discuss the structural and functional characteristics of the building blocks of life	Tabel 1	26

1- Most of biological macromolecules are: **a- Inorganic** **b- Organic.**

2- Biological Compounds contain the element of **:** **a- Sodium** **b- Carbon.**

3- Which of the following is biological a macromolecule?

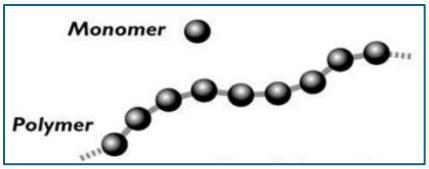
a- Carbohydrates **b- Lipids** **c- Proteins**

d-Nucleic acids **e- all of them are correct.**

4- Which statement best describes monomers?

a- A polymer is the building block of a monomer.

b- A monomer is the building block of polymer.



5-Molecules made from units of identical compounds linked by covalent bonds are:

a-Monomer **b- Polymer** **c-Elements**

Table 1 Group	Example	Function	Building block Monomer
Carbohydrates	Monosaccharide- Disaccharide - Polysaccharide	1- Store energy 2- Provide structural support.	Monosaccharide: Glycose
Lipids NOT polymer	Triglyceride, Fat, Oil, Phospholipid- Steroids.	1- Store energy 2- Provide barriers.	Fat & oil made of Triglyceride
Proteins	Enzymes-	1- Transport substances 2- Speed reactions 3- Provide structural support 4- Control cell growth	Monomer: Amino acid
Nucleic Acid	DNA & RNA	1- Store and communicate genetic information.	Monomer: Nucleotide

6- All biological macromolecules are polymers that are made up of many smaller subunits called monosaccharides: **a- True** **b- False**

7- Which biological macromolecule is *Not considered a polymer*?

a – A carbohydrate **b-A nucleic acid** **c- A lipid** **d- A protein**

8- The main function of carbohydrate is:

a- Store energy **b- Provide structural support** **c-Both a and b correct**

8- The main function of Lipid is:

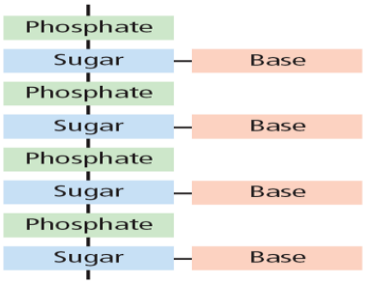
a- Store energy **b- Provide barriers** **c-Both a and b correct**

9-What is the function of this biological macromolecule? -->

a. Communicate signals between cells

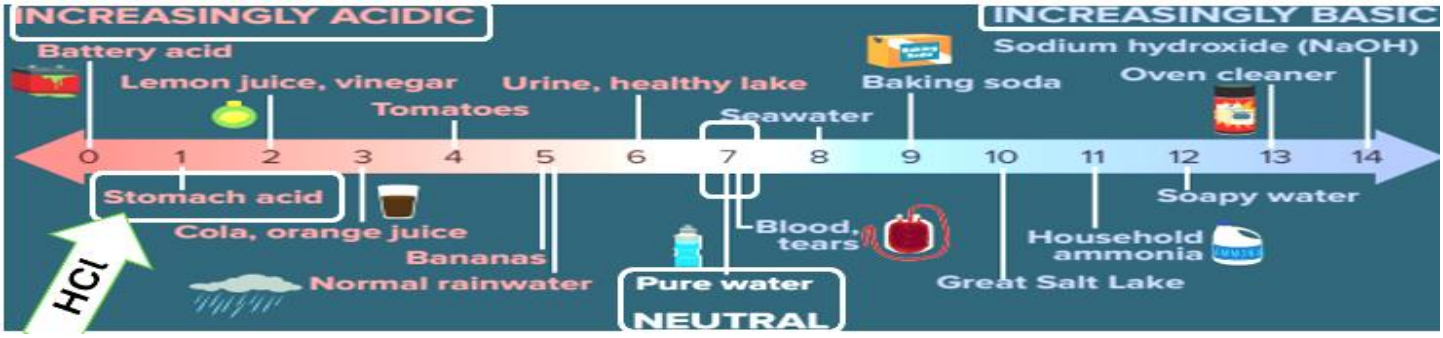
b. Produce vitamins and hormones

c. Store and transmit genetic information.



5	Define pH and illustrate the pH scale	Figure 28	24

Figure 28 The pH scale is used to indicate the relative strength of acids and bases.



1- Depend on this figure: the rage of the Acid is from **0 to 6.9**.....

2- Depend on this figure: the rage of the Base from ... **7.9 to 14** ....

3- Depend on this figure the pH value of water is ... **7** ....

4- Which is more acidic**:** **a- Orange juice** **b- Lemon juice**

5- Which is more basic**:** **a-Oven cleaner** **b- Household ammonia.**

6-The importance of the pH scale is to indicate the relative strength of:

a-Acid only **b- Base only** **c- Both acid and base.**

7-The pH is a measure of the concentration of which ions in a solution?

a-Oxygen ions **b- Carbon ions** **c- Nitrogen ions** **d-Hydrogen ions**

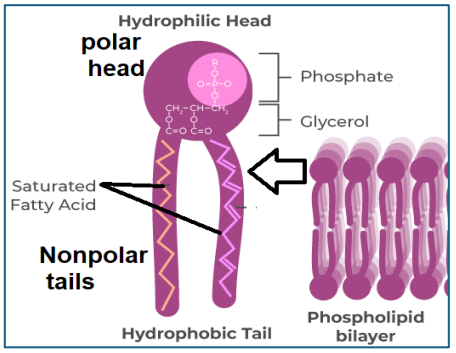
8- Which of the following a substance that keeps the pH in cells within the 6.5 to 7.5 pH range? **a- Alkali** **b- Antacid** **c- Buffer** **d- Neutralizer**

9-How do buffers help maintain homeostasis?

a-Neutralize acids and bases **b- remove all hydrogen ions**

6	Explain the structures and functions of the plasma membrane (cell membrane).	Figure 5	43
14	Explain the structures and functions of the plasma membrane (cell membrane).	Figure 5	43

Figure 5 The phospholipid bilayer looks like a sandwich, with the polar heads facing the outside and the nonpolar tails facing the inside.



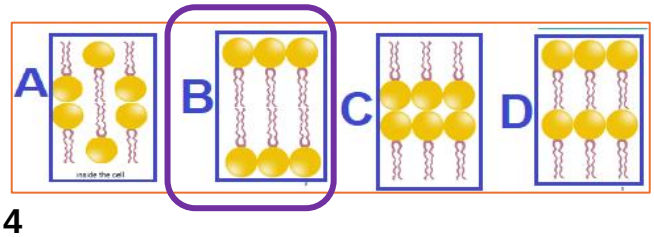
1-The plasma membrane is found in:

a-Prokaryotic **b-Eukaryotic** **c- All types of cells**

2-What are the three main components of the phospholipid molecule? **a- 2 fatty acids** **b- Vitamin D**

c-Nucleic acid **d- 3 fatty acids** **e- Glycerol** **f- Phosphate group**

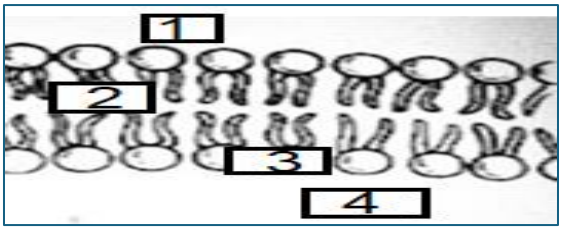
3- Which figure orientations of the phospholipids best represent the **Phospholipid bilayer**--→



4-How many phospholipids layers in the plasma membrane? **a- 1** **b- 2** **c- 3** **d- 4**

5-Molecules are arranged tail to tail, allowing it to exist in the watery environment:

a- **Phospholipid bilayer** **b-Phospholipid**



6-Used this figure to answer all questions below:

a-The number where you find the water insoluble substance is .. **2** .....

b-The numbers where you find the watery environment are . **1** . and **4**

c-The number where you find the polar head of phospholipid is .. **3** ..

7-Which is the effect having the polar and nonpolar ends of phospholipid molecules oriented as they are in the illustration? Select all apply

a- It allows transport proteins to move easily through the membrane.

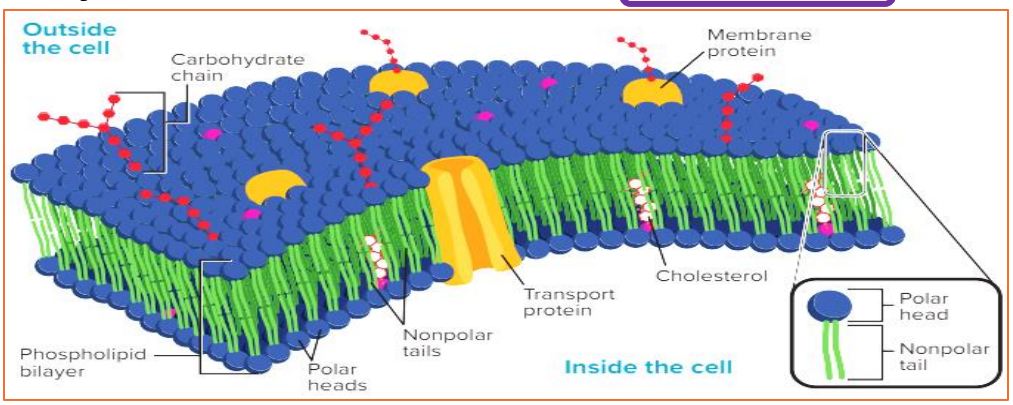
b- It controls the movement of substances across the membrane.

c-It helps the cell to maintain homeostasis.

8-The plasma membrane has many components like:

a-Proteins **b-Carbohydrate** **c- Cholesterols** **d- All of them**

Plasma membrane its also called cell membrane. *Fluid mosaic model* because of the movement of it and membrane have many components.



9-Which situation would increase the fluidity of a phospholipid bilayer:

a-Decrease the temperature. **b-Increase the number of cholesterol molecules.**

10- The Fatty acid tail forming the .... of the plasma membrane: **a-Inner** **b-Outer**

But the phospholipid heads facing the watery environments found ... and ..... the cell:

a-Inside only **b-Outside only** **c- Both inside and outside**

11-What crucial function do the nonpolar tails of phospholipids have?

a- Keep water-soluble substances from passing easily into the cell.
b- Allows water-soluble substances to pass easily into the cell.

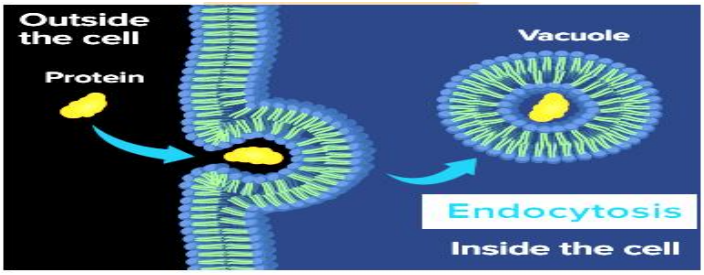
12-Phospholipid consists of a hydrophilic polar head and hydrophobic nonpolar tail, so what are the meaning of Hydrophilic and hydrophobic :

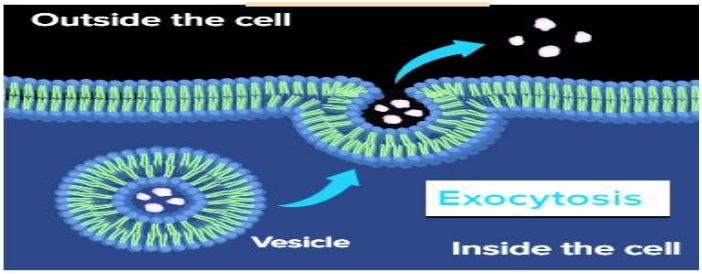
a- Water loving, water hating **b- Water hating, water loving**

13-Which plasma membrane component can be either found on its surface or embedded in the membrane structure? **a-Protein** **b- Cholesterol** **c- Carbohydrate**

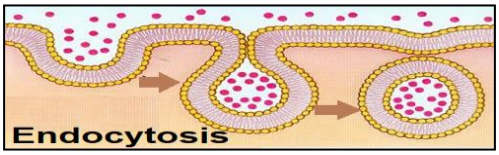
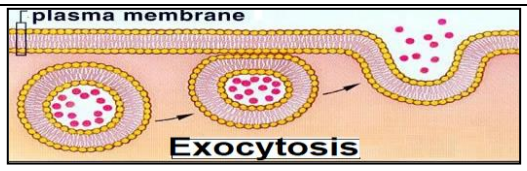
7	Compare and contrast different forms of active transport including protein pumps, endocytosis and exocytosis	Figure 15	54

Figure 15: Left: Large substances can enter a cell by endocytosis. Right: Substances can be deposited outside the cell by exocytosis.





1-Choose the correct answer for each one:

	Endocytosis	Exocytosis
Moving direction	a- molecules enter cell b- molecules leave cell	a- molecules enter cell b- molecules leave cell
Mechanism	a- **Vesicle** approaches cell membrane, and merges with it, releasing molecules. b-Cell membrane engulfed and enclosed then pinches in, creating vesicle to enter molecules .	a- **Vesicle** approaches cell membrane, and merges with it, releasing molecules. b Cell membrane engulfed and enclosed then pinches in, creating vesicle to enter molecules .
Example	a- Cell releasing wastes or hormones. b- Cell taking in nutrients.	a- Cell releasing wastes or hormones. b- Cell taking in nutrients.
Both	1- (**Not need OR Need**) energy. ***Answer all by choose one***. 2- Involve (**Protein OR Vesicle**) which are made of phospholipid of plasma membrane. 3- The molecules that enter or leave cell are (**small OR Large**).	
Figure		

2-Which of the following is Not true of exocytosis?

a-Results in hormone secretion. **b-Dose not require energy input.**

c-Allows waste matter to be expelled. **d- Occurs at the plasma membrane**

What is a significant difference of endocytosis and exocytosis?	
A)	Exocytosis does not require energy input.
B)	Endocytosis does not involve waste secretion.
C)	Endocytosis does not require energy input.
D)	Exocytosis does not maintain homeostasis.

8	**Distinguish the differences between hypotonic, hypertonic and isotonic solutions**	**Figure11**	**51**

Figure 11(A) In an **isotonic solution**, **water** molecules **move into and out** of the cell at the **same rate**, and cells retain their normal shape.

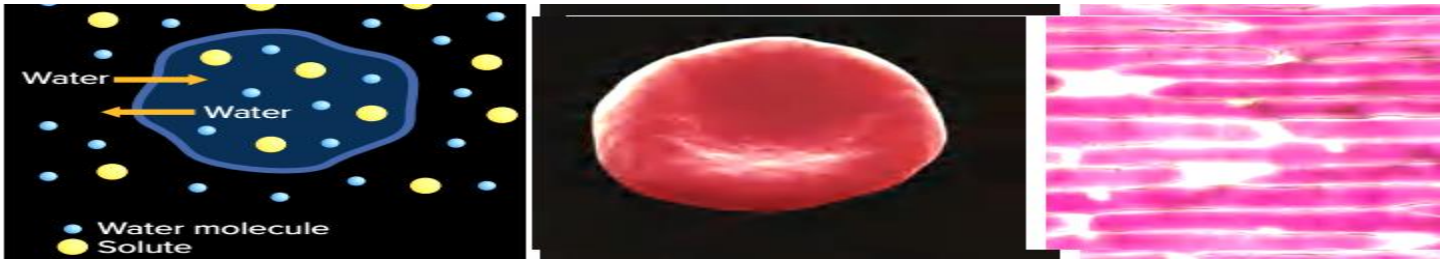
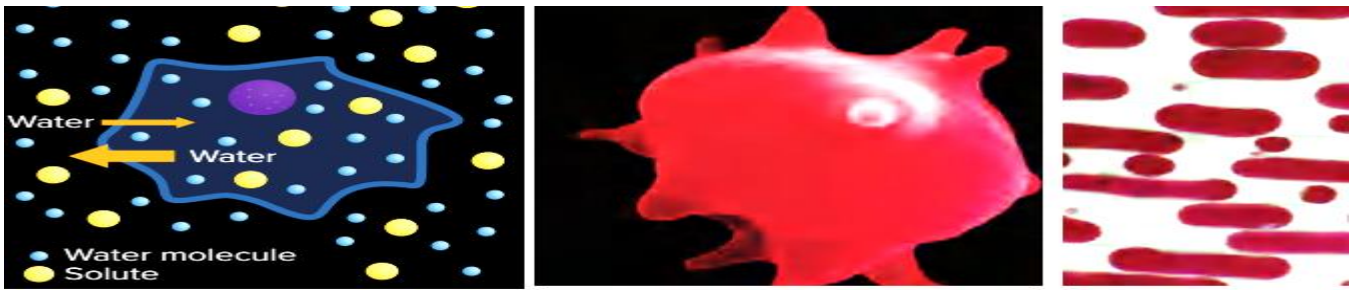
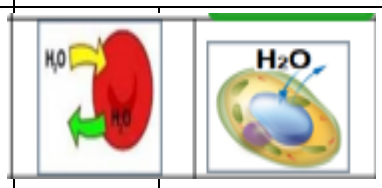
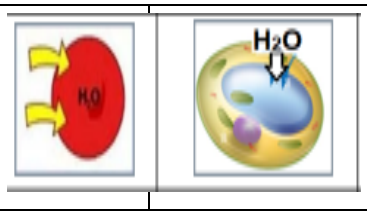


Figure 11(B) In a Hypotonic solution, **water enters** a cell by osmosis, causing the **cell** to **swell**. Animal cells may continue to swell until they burst. Plant cells swell beyond their normal size as internal pressure increases, it becomes **firmer.**

Figure 11(C) In a Hypertonic solution, **water leaves** a cell by osmosis, causing the cell to shrink. **Animal cells shrivel** up as they lose water. As plant cells lose internal pressure, the plasma membrane shrinks away from the cell wall. Plant cell Shrink then wilting.



The Osmosis effect on Animal & Plant cell in 3 types of solution			
Solution Types	**Isotonic solution**	**Hypotonic Solution منخفض**	**Hypertonic solution عالي**
The meaning	a cell is in a solution that same concentration of water and solutes as its cytoplasm.	a cell is in a solution that has a lower concentration of solute,	a cell is in a solution that has concentration of the solute is higher than it is inside.
Concentration of Solute outside cell مذاب	Equal in and out	Lower outside	Higher outside
Concentration of waterمذيب	Equal in and out	More outside	Lower outside-more in
Water Movement	Same rate moving	Move to enter the cell	Move out cell
Cell State	Normal	Animal's cell **Swall then burst.** Plant's cell **Swall-Fermer**	Animal's cell **Shrivel.** Plant's cell **Shrink-wilting**.
Image (animal-plant cell)			

9- Which of the following will happened if an animal's cell has high pressure in extremely hypotonic solution : **a-Swell** **b- Shrink** **c- Burst**

How could you prevent cells from bursting in an extremely hypotonic solution?	
A)	Allow water to increase osmotic pressure.
B)	Decrease the concentration of solute outside cell.
C)	Increase the concentration of solute outside the cell.
D)	Wait for diffusion to reach equilibrium.

9	Explain the structures and functions of the cells.		56
20	Explain the structures and functions of the cell.	Figure 17	56

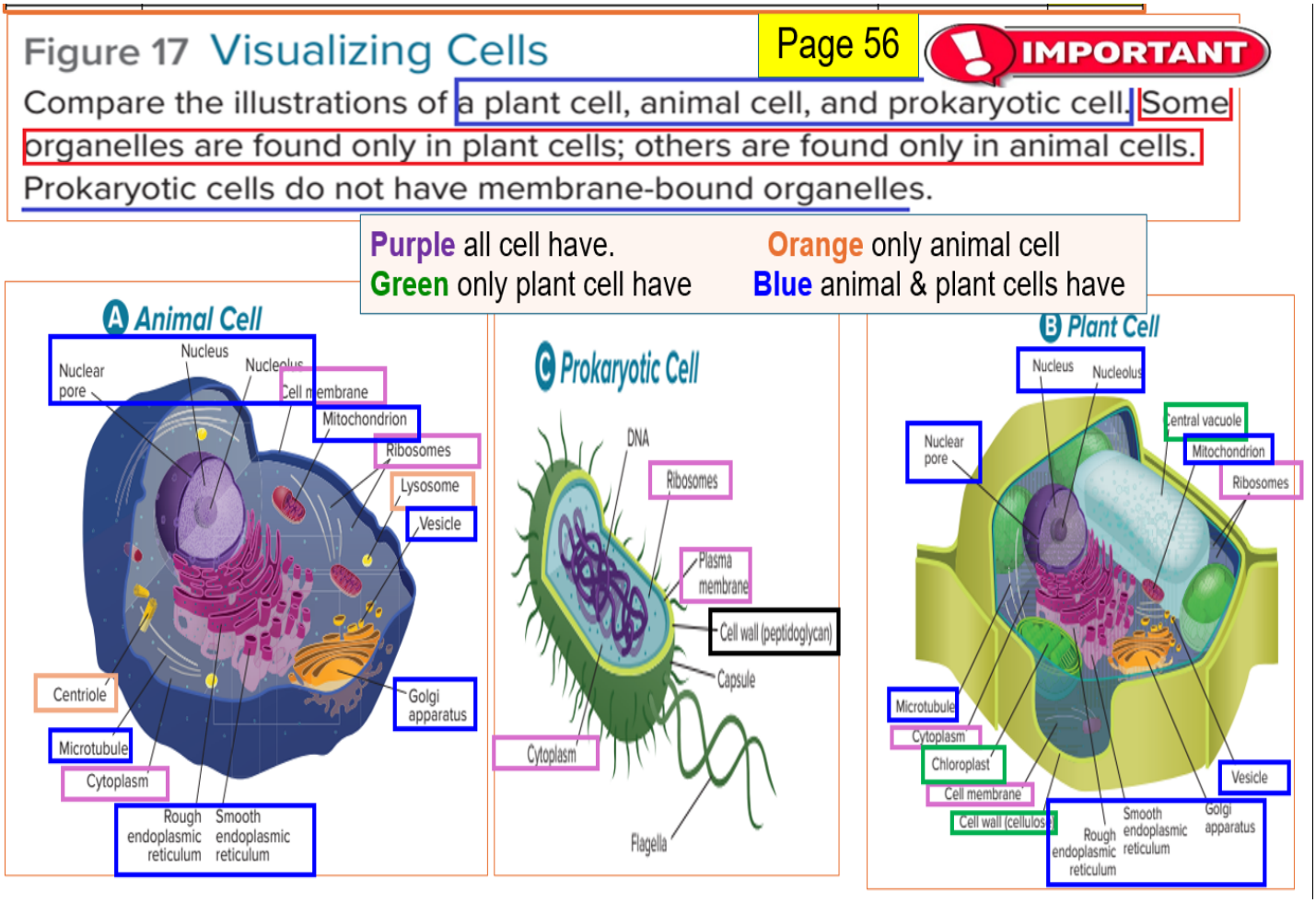
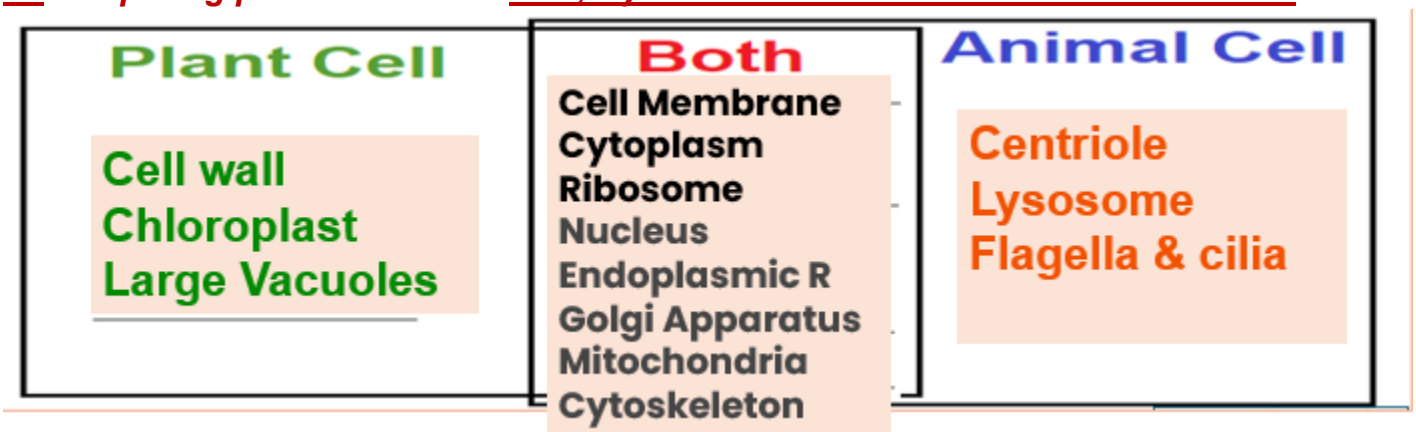


Figure 17 Page 56:

1-Which of the following are found in **all types of living cells**: *Select 4 apply:*

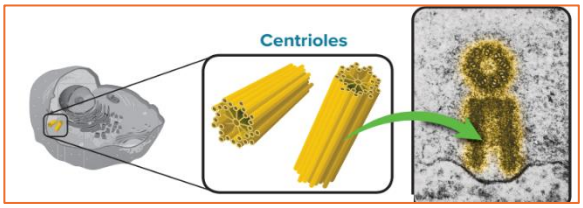
a-Cell membrane	**b- Cell wall**	**c- DNA**
d-Cytoplasm	**e-Chloroplast**	**g-Ribosome.**

2- Compering plant and animal cell, By write the structure that those cell have:



10	**Explain the structures and functions of the cells.**	**Figure19**	**58**

Figure 19 **Centrioles** **are made of microtubules and play a role in cell division.**



From page 58

1- An organelle *made of microtubules* that function ***during cell division*** its:

a- Cytoskeleton **b- Centrioles** **c- Microfilament** **d- Flagella**

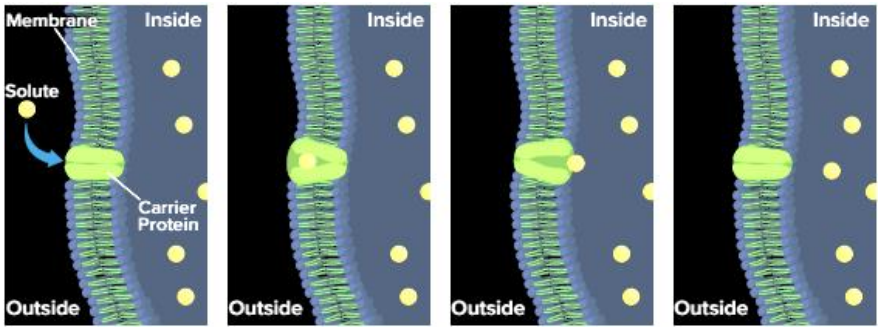
2- The *Centrioles* are found in cytoplasm **usually** near the nucleus of:

a-Plant cells **b-Bacteria cells** **c- Animal and protists cells.**

3- The .... is NOT found in Plant cell: **a-Centrioles** **b- Cell wall**

11	**Compare and contrast different forms of active transport including protein pumps, endocytosis and exocytosis**	**Figure12**	**52**
12	**Compare and contrast different forms of active transport including protein pumps, endocytosis and exocytosis**		**52**

Figure 12 **Carrier proteins** pick up and move substances across the plasma membrane **against the concentration gradient** and into the cell it **required energy**.



1-The movement against a concentration gradient means:

a-From higher to lower concentration **b- From lower to higher concentration.**

2- This movement of substances across the plasma membrane against a concentration gradient and requires energy is: **a-Passive transport** **b- Active transport**

3- The Pumps are kind of carrier proteins that move materials across plasma membrane:

a-Move one substance in only one direction **b-Move two substances in the same direction**

c- Move two substances in opposite directions. **d- All of them are correct.**

How do carrier proteins facilitate active transport?	
A)	block the plasma membrane
B)	move substances against a concentration gradient
C)	prevent homeostasis
D)	create an isotonic solution

4-Which of the following an active transport pump found in the plasma membrane of animal cells? **a- K+/Na+ ATPase pump** **b- C+/Na+ ATP pump** **c- Na+/K+ ATPase pump**

Na+/K+ ATPase pump the sodium-potassium ATPase pump, shown in Figure 13, is an **active transport pump** found in the **plasma membrane of animal cells**. need energy.

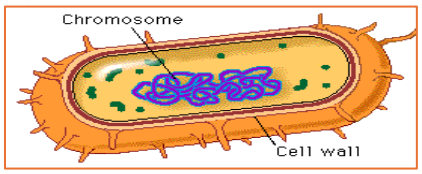
This Pump work by: 3 Na+ pumped OUT for every 2 K+ pumped IN; creates a membrane potential Using 1 ATP.

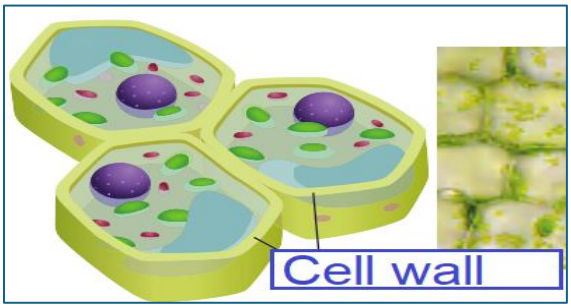
5- Choose the correct answer in the table below:

	Passive transport	Active transport
Movement	a- Against concentration b- With concentration	a- Against concentration b- With concentration
Graduate of concentration	a- Lower to high concentration b- Higher to lower concentration	a- Lower to high concentration b- Higher to lower concentration
Required energy	a-Yes b- No	a-Yes b- No
Involve proteins carriers	a- Always need b-Sometime	a-Always need b-Sometime
Example **Circle correct answer:**	Endocytosis – exocytosis - diffusion - osmosis - protein's pumps - Na+/K+ pump - facilitate diffusion.	Endocytosis – exocytosis - diffusion - osmosis - protein's pumps - Na+/K+ pump - facilitate diffusion.
Both sharing	Both allowed movement of molecules through cell membrane. Both are a ways that cell regulate what enters or and leaves cell.	

13	**Explain the structures and functions of the cells.**	**Figure 21**	**59**

Figure 21 The illustration shows **plant cells** and their **cell walls**. Compare this to the photomicrograph showing cell walls of adjacent plant cells.





From page 59 Cell wall

1-The thick, rigid structure that *surrounds the plasma membrane* it found in plant cell and some Prokaryotic cells its : **a-Cell membrane** **b- Cell wall** **c-Cytoplasm**

2-The main function of the .... is to support, shape, and protect the cell:

a-Cell membrane **b-Cytoplasm** **c- Cell wall** **d- DNA**

3- Rigid .... allow plants to stand at various heights from blades of grass to taller wood trees:

a-Cell membrane **b- Cell wall** **c-Cytoplasm**

4- *Plant* cell walls are made of a carbohydrate called: **a- Cellulose** **b-Peptidoglycan**

5- *Prokaryotes* (bacteria) have cell walls made up of: **a- Cellulose** **b-Peptidoglycan**

6- The peptidoglycan which made up the Prokaryote's cell wall combination of:

a- Polysaccharides & peptide parts **b- Disaccharides and peptide parts.**

7-In which structure would you expect to find a cell wall?

a- Human skin cell **b- Liver cell from a mouse**

C- Cell from an oak tree **d- Blood cell from a cat.**

15	**Explain the structures and functions of the cells.**	**Figure 24**	**63**

صفحة 63 لا يوجد بها شكل 24 الشكل فى صفحة 61

From page 63 **Processing, Transporting and Storing Molecules:**

1- A flattened stack of membranes that modifies, sorts, and packages proteins into sacs called vesicles: **a-Golgi apparatus** **b-Mitochondrion**

2 - Which organelle is like to the section of a factory that organizes, boxes, and ships the final product (Proteins) into sacs called vesicles? **a- Chloroplast** **b- Golgi apparatus.**

3- Which of the following organelle have membrane-bound use to *storage of materials* within the cytoplasm: a- **Golgi apparatus** **b-Mitochondrion** **c- Cell membrane**

4- **Order the processing and transporting of Proteins from processing to transporting:**

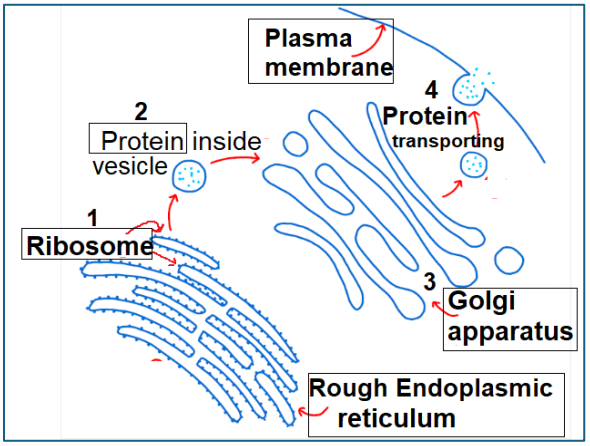
Use the figure to help you: --→

3 . Golgi organize, boxes, and ships the Protein.

1 Ribosome in the rough ER produce Protein.

2 .. The vesicle storage Proteins after produced.

4 .. The vesicle contain protein to transport out of the cell.



From page 63

5-A membrane-bound sac used for temporary storage of materials within the cytoplasm.

a- **Golgi apparatus** **b-Mitochondrion** **c- Vacuoles**

6- The *vacuoles in the plant cell* can store:

a- Food **b- Enzymes** **c- Wastes** **d- All are correct.**

7- Choose the correct answer for each one in the table below:

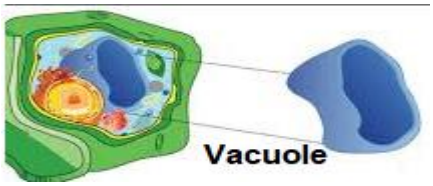
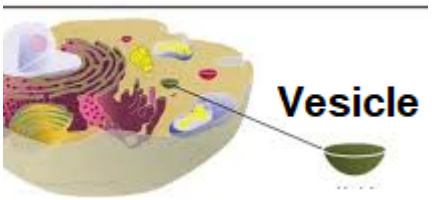
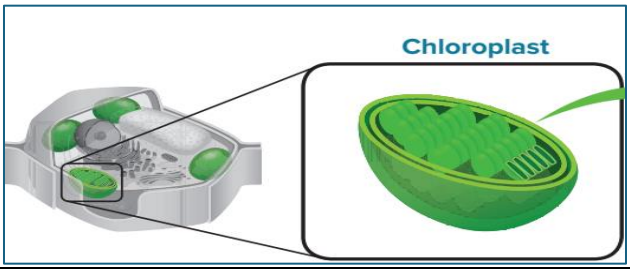
Types	Vacuolesفجوات	Vesicleحويصله
Structure & Function	Membrane-bound sacs. Function in *storage and transport*.	
Size	**a- Larger** **b- Small**	**a-Larger** **b- Small**
Fused with the membranes.	**a- Its fuse** **b- Do NOT fuse**	**a- Its fuse** **b- Do NOT fuse**
Plant cells	**a-Present large** **b-absent**	**a-Present** **b- absent**
Animal cells	**a-Present** **b-Rarely a few small**	**a-Present** **b- absent**
Figure		

Figure 24 In plants, **chloroplasts** capture and **convert light energy to chemical energy.**

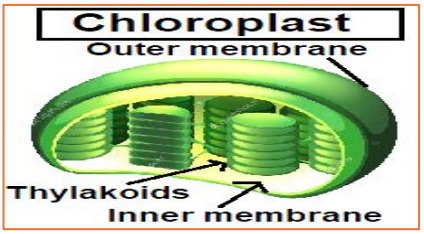


The Plastid Types		
Types	**Color**	**Function**
1-Chloroplast	**Green**	**Catch the energy from sunlight. Give green color to plant's parts**
2-Chromoplasts	**Red- Orange- Yellow**	**Catch the energy from sunlight. Color for flowers & leaves.**
3- Other plastids	**No color**	**Store starches or lipids.**

1- Plants and some other eukaryotic cells contain structure that captured light energy and converted to chemical energy? **a- Chloroplast** **b- Lysosome**

2- Which process transform light energy into chemical energy:

a- Protein synthesis **b- Photosynthesis**



3- The inner membrane of chloroplast has many small, disk-shaped compartments called:

a- Thylakoids **a- Chloroplast**

4- The pigment catches the energy from sunlight and *gives leaves, stems* their *green color*:

a- Thylakoids **a- Chromoplast**

5- The pigment catches the energy from sunlight and gives *fruits and flowers* their *color*:

a- Thylakoids **a- Chloroplast** **c- Chromoplast** **d- Chlorophyll**

6- Which of the following is mainly responsible of photosynthesis process in plants?

a- **Plasma membrane** **b-Central vacuole** **c- cell wall** **d- Chlorophyll**

16	**Explain the structures and functions of the cell.**	**Tabel 1**	**65**
18	**Explain the structures and functions of the cell.**	**Tabel 1**	**65**

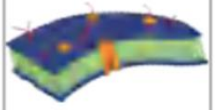
Table 1 Summary of Cell Structures

Page 65 IMPORTANT

Cell Structure	Example	Function	Cell Type
Cell wall		An inflexible barrier that provides support and protects the plant cell	Plant cells, fungi cells, and some prokaryotes
Centrioles		Organelles that occur in pairs and are important for cell division	Animal cells and most protist cells
Chloroplasts		A double-membrane organelle with thylakoids containing chlorophyll; where photosynthesis takes place	Plant cells and some protist cells
Cilia		Projections from cell surfaces that aid in locomotion and feeding; also used to sweep substances along surfaces	Some animal cells, protist cells, and prokaryotes
Cytoskeleton		A framework for the cell within the cytoplasm	All eukaryotic cells
Endoplasmic reticulum		A highly folded membrane that is the site of protein synthesis	All eukaryotic cells

Page 65

IMPORTANT

Flagella		Projections that aid in locomotion and feeding	Some animal cells, prokaryotes, and some plant cells
Golgi apparatus		A flattened stack of tubular membranes that modifies proteins and packages them for distribution outside the cell	All eukaryotic cells
Lysosome		A vesicle that contains digestive enzymes for the breakdown of excess or worn-out cellular substances	Animal cells and rare in plant cells
Mitochondria		A membrane-bound organelle that makes energy available to the rest of the cell	All eukaryotic cells
Nucleus		The control center of the cell that contains coded directions for the production of proteins and cell division	All eukaryotic cells
Plasma membrane		A flexible boundary that controls the movement of substances into and out of the cell	All cells
Ribosome		Organelle that is the site of protein synthesis	All cells
Vacuole		A membrane-bound vesicle for the temporary storage of materials	Plant cells–one large; rarely animal cells–a few small

19	Explain the processes of diffusion and osmosis and their roles within a cell	Figure 10	49

Figure 10 Before osmosis, the sugar concentration is greater on the right side. After osmosis, the concentrations are the same on both sides. Water molecules continue to move across the membrane.

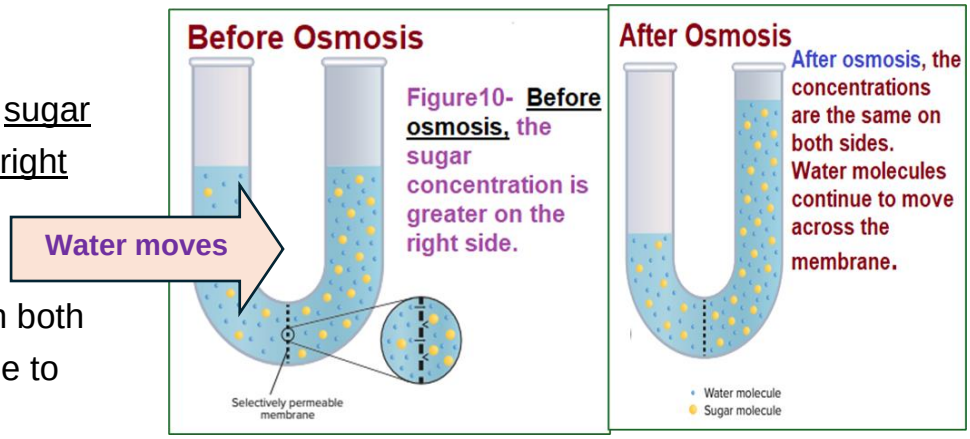


Figure10- **Before osmosis,** the sugar concentration is greater on the right side.

Q1- Depend on figure 10 page 49:

1- It's diffuse to the side of more sugar concentration**:** **a- Water** **b- Sugar**

2- Dynamic equilibrium occurs when concentration of solutions is the.... on both sides.

a- Different **b- Same** **c- Less than** **d- More then**

2-**Figure 10** shows a sugar solution with a selectively permeable membrane. What has been occurred?

a- Water diffused toward higher concentration.

b- Sugar molecules crossed the membrane.

c- Water diffused toward lower sugar concentration.

d- Water did not cross the membrane.

Osmosis: Diffusion of Water page 49

1- The passage of water from a region of high-water concentration, through a semi-permeable membrane, to a region of low water concentration its: **a- Pump** **b- Osmosis**

2 Channel proteins which facilitate the passive diffusion of water and small neutral molecules across biological membranes it's called: **a-Carrier protein** **b- Aquaporins**

3- Why its importance to regulate move water across plasma membrane?

a-Cells need more water. **b- Maintaining homeostasis** **c- Cells do not need water.**

With My Wish all of you will Pass and have higher marks in Biology.
مع خالص امنياتي لكم جميعا بالنجاح والحصول على أعلى الدرجات في مادة الأحياء :)
Ms. Arwa Almessabi - November 2024