**Question of chapter : Ch. 4: Cells**

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**لا تنسوني من دعواتكم لي بالتوفيق و النجاح**

1. Cell Theory states that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

all cells come from other pre-existing cells by cell division  
All organisms are composed of only one cell  
all cells come from tissues  
none of the above

1. In light microscope \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

maximum magnification is up to 1,000 times   
All organisms are composed of only one cell  
electrons are used to view the image  
none of the above

1. Organisms made of many cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

animals cells is an example  
is Prokaryotic  
like bacteria  
none of the above

1. Prokaryotic cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

Genetic material is not surrounded by a nuclear membrane  
Possess organelles surrounded by membranes  
plants cells is an example  
fungi cells is an example

1. Organelles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are the basic unit of life  
are found in cell membrane  
Found in the cytoplasm  
are made of cells

1. Animal cells comparing with plant cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

Relatively smaller in size  
Relatively larger in size  
contain Cell wall  
all of the above

1. The Phospholipids tails \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are made of fatty acids  
point inward toward each other  
are hydrophilic  
a and b

1. Cytoplasm \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are enclosed by cell membrane  
are enclosed by nuclear membrane  
contain phosphate  
none of the above

1. Nucleus \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

contain nucleoplasm   
contain cytoplasm  
contain lysomes  
a and b

1. CHROMOSOMES \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

carry genes  
are made of DNA only  
are made of protein  
a and b

1. Chromatin \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

appear in non-dividing cells  
are made of DNA only  
are made of protein  
all of the above

1. Genes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are a piece of Chromatin  
are a sequence of nucleotides  
code for different carbohydrates  
a and b

1. Nuclear Envelope \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

is Double membrane  
is connected to the rough ER  
is not connected to other organelles  
a and b

1. Ribosomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are protein factories for cell  
are lipid factories for cell  
are made of one unit  
none of the above

1. Endoplasmic Reticulum (ER) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

functions in Synthesis of cell products  
functions in cellullar respiration  
functions in cell breakdown  
a and b

1. Smooth ER \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

lacks ribosomes   
has ribosomes on its surface  
modifies proteins  
none of the above

1. The Golgi apparatus \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

functions in conjunction with the ER  
receive proteins made by ER  
functions in conjunction with the nucleus  
a and b

1. Lysosomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are a membranous sac  
contain synthetic enzymes  
enzymes are produced by the Golgi apparatus and processed by ER  
a and b

1. Vacuoles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are membranous sacs  
make proteins destined for secretion outside the cell  
are found in the side of the plant cells   
are digestive compartments

1. The endomembrane system includes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

Vacuoles  
Mitochondria  
Ribosomes  
a and b

1. Mitochondria \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are the powerhouse of the cell  
are the house of digestive enzymes  
are found in bacteria  
a and b

1. Chloroplasts \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

Contain pigments for Photosynthesis  
are found in animal cells  
have no DNA  
a and b

1. endosymbiosis hypothesis proposes that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

mitochondria were formerly small prokaryotes that began living within larger cells  
chloroplasts were formerly small prokaryotes that began living within larger cells  
chloroplasts were formerly small prokaryotes that began living in bacteria  
a and b

1. Cytoskeleton \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

contains Microfilaments  
contains Microtubules  
is a network of DNA fibers  
a and b

1. Intermediate filament \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

reinforce cell shape  
is the smallest Cytoskeleton fiber  
act as a track for motor protein  
none of the above

1. flagella \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are composed of microfilament  
are composed of nine microtubule triplets  
anchored on a basal body   
are shorter than Cilia

1. basalBody \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

is composed of nine microtubule triplets arranged in a ring  
is composed of three kinds of fibers  
contains Microfilaments  
none of the above

1. Extracellular matrix \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

is made of intermediate filaments  
integrin binds collagen to the connecting glycoprotein  
functions in movement  
collagen span the plasma membrane

1. Tight junctions \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are channels between cells  
allow molecules to flow between cells cytoplasm  
similar to plasmodesmata in plants  
none of the above

1. plasmodesmata \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are similar to Tight junctions in animal tissues cells  
are found in animal tissues cells  
are found in plant tissues cells  
are similar to Anchoring junctions in animal tissues cells

1. Cell Theory states that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

all cells come from other pre-existing cells by cell division  
All organisms are composed of only one cell  
all cells come from tissues  
a and b

1. In electrons microscope \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

maximum magnification is up to 100,000 times  
electrons are used to view the image  
maximum magnification is up to 1,000 times   
a and b

1. Organisms made of many cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

is called Unicellular  
is Prokaryotic  
like bacteria  
none of the above

1. Prokaryotic cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

Simple and small  
No membrane-bounded organelles  
Possess organelles surrounded by membranes  
a and b

1. Organelles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are Microscopic  
May or may not be membrane-bound  
are made of cells  
a and b

1. Animal cells comparing with plant cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

Relatively larger in size  
contain achloroplasts  
carry photosynthesis  
Relatively smaller in size

1. The plasma membrane \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are mosaic  
are made of protein bilayers  
are rigid (not fluid)  
none of the above

1. Cytoplasm \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are enclosed by cell membrane  
contain organelles  
are enclosed by nuclear membrane  
a and b

1. Nucleus \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

contain chromosomes  
are bounded by single membrane nuclear envelope  
contain lysomes  
none of the above

1. CHROMOSOMES \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

carry genes  
are made of DNA only  
appear in non-dividing cells  
none of the above

1. Chromatin \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are made of protein  
are decondensed chromosome  
are made of RNA and protein  
appear in dividing cells

1. Genes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are a piece of Chromatin  
are a sequence of nucleotides  
are a sequence of amino acids  
a and b

1. Nuclear Envelope \_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

is Double membrane  
is continous and contains no pores  
is not connected to other organelles  
none of the above

1. Ribosomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are protein factories for cell  
are made of large and small subunits  
are made of Proteins and DNA  
a and b

1. Endoplasmic Reticulum (ER) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

functions in Synthesis of cell products  
functions in cellullar Transport  
functions in cellullar respiration  
a and b

1. Smooth ER \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

has ribosomes on its surface  
makes proteins destined for secretion outside the cell  
transported vesicles to other parts of the endomembrane system  
none of the above

1. The Golgi apparatus \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are Stacks of flattened sacs  
functions in conjunction with the nucleus  
are involved in lipid metabolism  
a and b

1. Lysosomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are a membranous sac  
enzymes are free in the cytoplasm  
enzymes are produced by the Golgi apparatus and processed by ER  
a and b

1. Vacuoles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

have hydrolytic functions  
are attached to plasma membrane  
are found in the side of the plant cells   
all of the above

1. The endomembrane system includes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

Golgi Apparatus  
Plasma membrane  
Mitochondria  
a and b

1. Mitochondria \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

have folded inner membrane  
outer membrane is smooth  
inner membrane is smooth  
a and b

1. Chloroplasts \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

use energy from sunlight to make glucose  
harvest food energy  
site of cellular respiration  
a and b

1. endosymbiosis hypothesis proposes that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

mitochondria were formerly small prokaryotes that began living within larger cells  
chloroplasts were formerly small prokaryotes that began living within larger cells  
chloroplasts were formerly small prokaryotes that began living in bacteria  
a and b

1. Cytoskeleton \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

helps move organelles inside the cell  
is composed of two kinds of fibers  
prevents organelles movement inside the cell  
all of the above

1. Intermediate filament \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

reinforce cell shape  
is the smallest Cytoskeleton fiber  
is called tubulin filament  
a and b

1. flagella \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are important in locomotion  
are composed of microfilament  
are composed of nine microtubule doublet  
a and b

1. basalBody \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

contains Microfilaments  
contains Intermediate filaments  
is composed of nine microtubule doublet arranged in a ring  
none of the above

1. Extracellular matrix \_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

functions in support  
is composed of connecting proteins  
integrin binds collagen to the connecting glycoprotein  
a and b

1. Anchoring junctions \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are found in plant tissues cells  
fasten cells together into sheets  
allow molecules to flow between cells cytoplasm  
similar to plasmodesmata in plants

1. plasmodesmata \_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

allow communication between plant cells  
are found in animal tissues cells  
allow communication between animal cells  
a and b

1. Cell Theory states that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

All organisms are composed of one or more cells  
All organisms are composed of only one cell  
all cells come from tissues  
a and b

1. In light microscope \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

Light is used to view the image  
All organisms are composed of only one cell  
electrons are used to view the image  
none of the above

1. Organisms made of many cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

plants cells is an example  
is Prokaryotic  
like bacteria  
all of the above

1. Eukaryotic cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

plants cells is an example  
No membrane-bounded organelles  
Bacteria cell is an example  
all of the above

1. Organelles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are Microscopic  
are made of cells  
are found in cell membrane  
a and b

1. Plant cells comparing with Animal cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

contain Cell wall  
contain achloroplasts  
No cell wall  
a and b

1. The plasma membrane \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are made of phospholipids  
are permeable  
are made of protein bilayers  
are semipermeable

1. Cytoplasm \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

contain nucleolus  
are solid  
contain phosphate  
none of the above

1. Nucleus \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

control the normal activities of the cell  
are bounded by double membrane nuclear envelope  
contain cytoplasm  
a and b

1. CHROMOSOMES \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are made of DNA and protein  
are made of DNA only  
appear in non-dividing cells  
a and b

1. Chromatin \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

carry genes  
are made of RNA and protein  
are made of DNA only  
a and b

1. Genes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are a piece of chromosome  
are a piece of protein  
are a sequence of amino acids  
a and b

1. Nuclear Envelope \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

is Double membrane  
contains nuclear pores  
is not connected to other organelles  
a and b

1. Ribosomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are synthesized in the nucleolus  
are made of Proteins and DNA  
make proteins for external use only  
all of the above

1. Endoplasmic Reticulum (ER) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

functions in cellullar Transport  
functions in cellullar respiration  
functions in cell breakdown  
none of the above

1. Rough ER \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

is involved in lipid synthesis  
is involved in Steroids synthesis  
is involved in destruction of toxic substances  
none of the above

1. The Golgi apparatus \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

modify proteins made by ER  
functions in conjunction with the nucleus  
receive proteins made by smooth ER  
all of the above

1. Lysosomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

contain digestive enzymes  
are digestive compartments  
are attached to plasma membrane  
a and b

1. Vacuoles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are digestive compartments  
are attached to plasma membrane  
are found in the side of the plant cells   
none of the above

1. The endomembrane system includes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

Lysosomes  
Mitochondria  
Ribosomes  
a and b

1. Mitochondria \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are found in plant cells  
have no DNA  
outer membrane has cristae  
all of the above

1. Chloroplasts \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

have Thylakoids  
are found in bacterial cells  
stacks of thylakoids is called stroma  
none of the above

1. endosymbiosis hypothesis proposes that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

chloroplasts were formerly small prokaryotes that began living within larger cells  
chloroplasts were formerly small euokaryotes that began living within larger cells  
mitochondria were formerly small euokaryotes that began living within larger cells  
all of the above

1. Cytoskeleton \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

is a network of protein fibers  
prevents organelles movement inside the cell  
is made of vertebrates  
all of the above

1. Intermediate filament \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

reinforce cell shape  
is made of actain protein  
is the largest Cytoskeleton fiber  
a and b

1. flagella \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are important in locomotion  
are composed of nine microtubule doublet  
are shorter than Cilia  
none of the above

1. basalBody \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

is found in the cytoplasm  
is site for Cilia and flagella anchoring  
is composed of nine microtubule doublet arranged in a ring  
a and b

1. Extracellular matrix \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

functions in movement  
the connecting glycoprotein binds collagen to integrin  
Integrins span the plasma membrane  
all of the above

1. Tight junctions \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are found in animal tissues cells  
are channels between cells  
similar to plasmodesmata in plants  
all of the above

1. plasmodesmata \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

allow molecules to flow between cells cytoplasm  
are found in animal tissues cells  
allow communication between animal cells  
a and b

1. Cell Theory states that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

all cells come from other pre-existing cells by cell division  
All organisms are composed of only one cell  
all cells come from tissues  
a and b

1. In light microscope \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

All organisms are composed of only one cell  
maximum magnification is up to 100,000 times   
electrons are used to view the image  
maximum magnification is up to 1,000 times

1. Organisms made of one cell \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

is called Unicellular  
is called Multicellular  
is bicellular  
none of the above

1. Prokaryotic cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

Simple and small  
Genetic material is surrounded by a nuclear membrane  
Possess organelles surrounded by membranes  
a and b

1. Organelles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are Microscopic  
are made of cells  
are the basic unit of life  
all of the above

1. Plant cells comparing with Animal cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

do not contain Lysosomes and centrioles  
contains Lysosomes and centrioles  
No cell wall  
all of the above

1. The plasma membrane \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

controls the movement of molecules into and out of the cell  
are selectively permeable  
are rigid (not fluid)  
a and b

1. Cytoplasm \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

contain nucleolus  
are solid  
are enclosed by nuclear membrane  
all of the above

1. Nucleus \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

control the normal activities of the cell  
contain chromosomes  
contain cytoplasm  
a and b

1. CHROMOSOMES \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

carry genes  
are made of DNA only  
appear in non-dividing cells  
a and b

1. Chromatin \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

appear in non-dividing cells  
are made of DNA only  
appear in dividing cells  
none of the above

1. Genes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

control cell characteristics  
code for different proteins  
are a piece of chromosome  
all of the above

1. Nuclear Envelope \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

is Double membrane  
is continous and contains no pores  
is not connected to other organelles  
a and b

1. Ribosomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are made of Proteins and rRNA  
are made of Proteins and DNA  
are made of one unit  
all of the above

1. Endoplasmic Reticulum (ER) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

functions in Synthesis of cell products  
functions in cellullar respiration  
functions in cell breakdown  
a and b

1. Rough ER \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

has ribosomes on its surface  
lacks ribosomes   
is involved in destruction of toxic substances  
is involved in lipid synthesis

1. The Golgi apparatus \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

functions in conjunction with the ER  
modify proteins made by ER  
functions in conjunction with the nucleus  
a and b

1. Lysosomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

contain digestive enzymes  
are attached to plasma membrane  
contain synthetic enzymes  
a and b

1. Vacuoles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

have hydrolytic functions  
are attached to plasma membrane  
contain DNA  
a and b

1. The endomembrane system includes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

Golgi Apparatus  
Plasma membrane  
Ribosomes  
a and b

1. Mitochondria \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

generate cellular energy  
outer membrane is folded  
inner membrane is smooth  
a and b

1. Chloroplasts \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are found in bacterial cells  
stacks of thylakoids is called stroma  
have no DNA  
none of the above

1. endosymbiosis hypothesis proposes that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

mitochondria were formerly small prokaryotes that began living within larger cells  
chloroplasts were formerly small prokaryotes that began living within larger cells  
chloroplasts were formerly small euokaryotes that began living within larger cells  
a and b

1. Cytoskeleton \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

is a network of DNA fibers  
contains Microtubules  
is composed of two kinds of fibers  
is made of vertebrates

1. Intermediate filament \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

reinforce cell shape  
act as a track for motor protein  
is called tubulin filament  
a and b

1. Cilia \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

are composed of microfilament  
are composed of nine microtubule doublet  
are important in locomotion  
have 9 triplets + 2 in the center pattern of microtubules

1. basalBody \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

is site for Cilia and flagella anchoring  
is composed of three kinds of fibers  
have 9 + 2 pattern of microtubules  
a and b

1. Extracellular matrix \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

is composed of integrins  
integrin binds collagen to the connecting glycoprotein  
is made of microtubules  
a and b

1. Gap junctions \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

allow molecules to flow between cells cytoplasm  
fasten cells together into sheets  
fasten cells together into sheets  
none of the above

1. plasmodesmata \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

allow communication between plant cells  
are similar to Gap junctions in animal tissues cells  
are found in animal tissues cells  
a and b