

TEST RESULT

Practice Test-1 (The Cell)



10



10 min



06-Jun-2020



21 sec

Result Detail



Correct

7



Practice Test-1 (The Cell)



Correct



Unattempted



Incorrect



1/10

Q : Phagocytosis is the common character of:



Plant cell



Animal cell



Bacterial cell



All A, B, C

Explanation

Plant cells and bacterial cells usually do not show phagocytosis due to presence of cell wall.

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Practice Test-1 (The Cell)



Correct



Unattempted



Incorrect



2/10

Q : Which of the following is true about plant cell?



A Cytoskeleton present



B Mostly have lysosomes



C Phagocytic cells



D All A, B, C

Explanation

Plant cells do not have lysosomes and cannot do phagocytosis due to presence of cell wall.

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Practice Test-1 (The Cell)



Correct



Unattempted



Incorrect



3/10

Q : Genetic material of a prokaryotic cell is found in:

A

Nucleus

B

Cytoplasm

C

Mitochondria

D

Chloroplast

Explanation

As prokaryotic cells do not have membrane bounded nucleus so DNA is submerged in a cytoplasmic region called nucleoid.

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Practice Test-1 (The Cell)



Correct



Unattempted



Incorrect



4/10

Q : Probably the most distinctive feature of a prokaryotic cell is its:



Cell membrane



Cell wall



Ribosome



Mitochondria

Explanation

As peptidoglycan cell wall is not found in any other cell except for prokaryotes.

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Practice Test-1 (The Cell)



Correct



Unattempted



Incorrect



5/10

Q : Cellulose is present in cell wall of all of the following except:



Bryophytes



Water molds



Green algae



Eubacteria

Explanation

Cell wall of eubacteria contains peptidoglycan.

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Practice Test-1 (The Cell)



Correct



Unattempted



Incorrect



6/10

Q : Which of the following would be least likely to diffuse through a lipid bilayer?



Water



Oxygen



Carbon dioxide



Sodium ions

Explanation

Only lipid soluble substances can cross lipid bilayer. For charged particles, plasma membrane has protein channels.

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Practice Test-1 (The Cell)



Correct



Unattempted



Incorrect



7/10

Q : Type of transport that involves gates:



Diffusion



Osmosis



Active transport



Facilitated diffusion

Explanation

- Gates have channel proteins that allow diffusion e.g. sodium gate and potassium gate.

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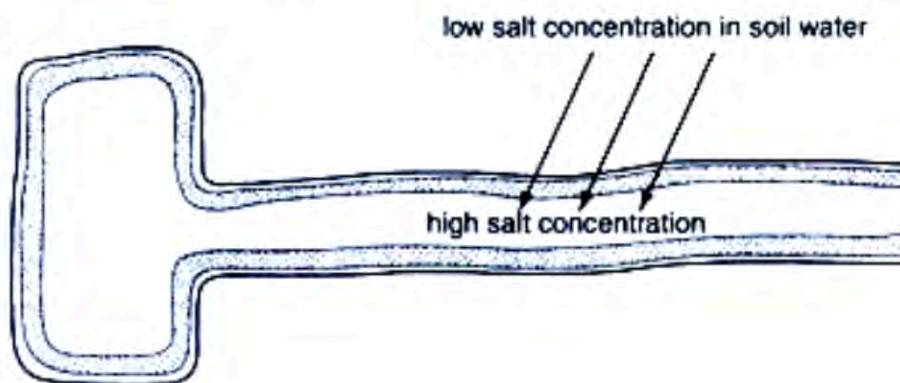
9

1



Practice Test-1 (The Cell)

The arrows show the movement of salts into a cell.



Which describes the movement of the salts?

A

Active transport against the concentration gradient

B

Active transport down the concentration gradient

C

Diffusion against the concentration gradient

D

Diffusion down the concentration gradient

Explanation

From low to high concentration, is always active transport.

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1



Practice Test-1 (The Cell)



Correct



Unattempted



Incorrect



9/10

Q : Which of the following atoms or molecules can pass through a cell membrane by simple diffusion?



Sucrose



ATP



Water



Chloride ion

Explanation

Water always moves through diffusion/ osmosis while all others can move both through passive or active transport.

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Practice Test-1 (The Cell)



Incorrect



10/10

Q : Electron microscope is more advantageous than light microscope because it:

A

Requires no light

B

Has higher magnification

C

Gives depth focus

D

Uses vacuum

Explanation

Electron microscopes have two key advantages when compared to light microscopes:

- They have a much higher range of magnification (can detect smaller structures).
- They have a much higher resolution (can provide clearer and more detailed images).

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TEST RESULT

Practice Test-2 (The Cell)



10



10 min

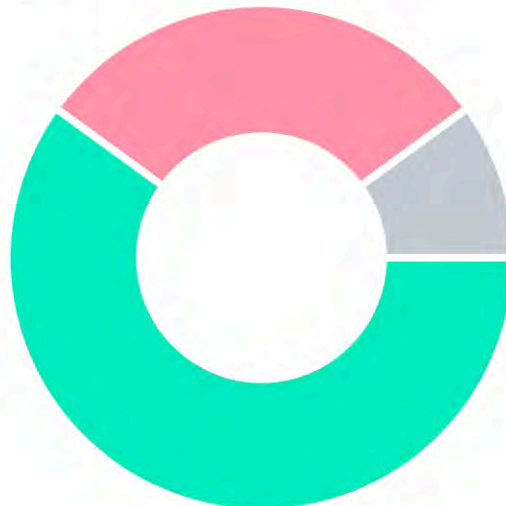


09-Jun-2020



16 sec

Result Detail



Correct

6



Practice Test-2 (The Cell)



Correct



Unattempted



Incorrect



1/10

Q : Connection between nucleoplasm and cytoplasm is:



Nuclear envelope



Nuclear membrane



Nuclear pore



Nucleolus

Explanation

Nuclear pores are involved in exchange of material between nucleoplasm and cytoplasm.

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Practice Test-2 (The Cell)



Correct



Unattempted



Incorrect



2/10

Q : Centromere is a part of:

A

Gene

B

Chromosome

C

Ribosome

D

Mitochondria

Explanation

Centromere is part of chromosome to which chromatids and spindle fibers are attached.

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Practice Test-2 (The Cell)



Correct



Unattempted



Incorrect



3/10

Q : They help to detoxify the harmful drugs:

A

Ribosomes

B

RER

C

SER

D

Golgi bodies

Explanation

SER is involved in detoxification of harmful drugs in a cell and liver is detoxifying center in the body.

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Practice Test-2 (The Cell)



Correct



Unattempted



Incorrect



4/10

Q : Shuttle/ associated vesicles transport chemical substances:



A From RER to SER



B From SER to Golgi apparatus



C Within the Golgi apparatus



D From Golgi apparatus to plasma membrane

Explanation

There are different types of vesicles found in a cell. Shuttle/ associated vesicles are those that transfer chemicals from cis face to trans face of Golgi apparatus.

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Practice Test-2 (The Cell)



Correct



Unattempted



Incorrect



5/10

Q : Protein packaging is done in:



A Golgi apparatus



B Endoplasmic reticulum



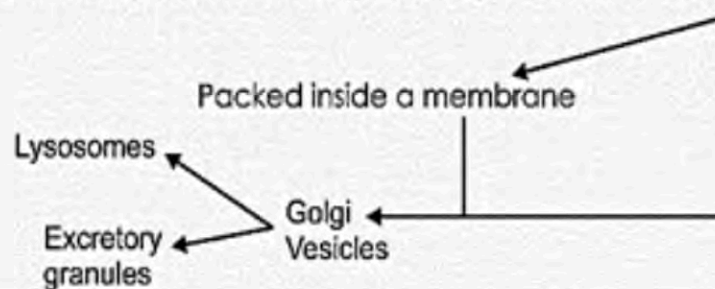
C Ribosome



D Nucleolus

Explanation

Ribosomes → Endoplasmic reticulum → Transport vesicles → Go



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Practice Test-2 (The Cell)



Incorrect



6/10

Q : _____ is because of absence of an enzyme that is involved in catabolism of lipids:

A

Glycogenesis type I disease

B

Glycogenesis type II disease

C

Mysterious brain infection

D

Tay-Sach's disease

Explanation

- It is hexoaminidase (lysosomal enzyme) that causes breakdown of lipids. In this disease lipids are accumulated.
- Glycogenesis disease is associated with accumulation of glycogen.
- Mysterious brain infection is caused by prions.

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Practice Test-2 (The Cell)



Correct



Unattempted



Incorrect



7/10

Q : Tay-Sach's disease leads to:



Mental retardation



Paralysis of legs



Growth retardation



Infertility

Explanation

Tay-sach's is caused by the absence of an enzyme that is involved in catabolism of lipids. As a result, lipids are accumulated in brain cells.

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Practice Test-2 (The Cell)



Correct



Unattempted



Incorrect



8/10

Q : Ribosomes found in a eukaryotic cell are:

A

30S & 50S

B

40S & 60S

C

70S & 80S

D

80S & 100S

Explanation

- Ribosomes in cytoplasm are 80S.
- Ribosomes in mitochondria & chloroplast are 70S.

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Practice Test-2 (The Cell)



Correct



Unattempted



Incorrect



9/10

Q : Ribosomes in the chloroplasts of eukaryotic cells are:



The same size and composition as in bacteria



Larger than in bacteria, but of similar composition



Smaller than in bacteria & different in composition



The same size but completely different in composition from the ribosomes in bacteria

Explanation

Chloroplast are considered to be evolved from prokaryotes by endosymbiont hypothesis so have same ribosome.

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Practice Test-2 (The Cell)

Q : Which of following organelle contribute to the turgidity of the leaves and younger parts of the plants?

A

Mitochondria

B

Chloroplast

C

Vacuole

D

Centriole

Explanation

- Mitochondria and chloroplast are double membrane bounded organelles, and involved in the synthesis of ATP and sugar, respectively.
- Centrioles are present in animal cells, cells of some micro-organisms and lower plants and play important in the location of furrowing during cell division.
- The plant vacuole is the major contributor the turgor that provides support for the individual plant cell and contributes to the turgidity of the leaved and younger parts of the plants.

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TEST RESULT

Practice Test-3 (The Cell)



10



10 min



09-Jun-2020



18 sec

[Result Detail](#)



Correct

5



Practice Test-3 (The Cell)



Correct



Unattempted



Incorrect



1/10

Q : Which one of the following is the site of oxidative phosphorylation in mitochondria?



Cristae



Matrix



Outer membrane



Ribosomes

Explanation

Respiratory chain is found on cristae that is involved in oxidative phosphorylation.

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Practice Test-3 (The Cell)



Correct



Unattempted



Incorrect



2/10

Q : Under compound microscope, mitochondria look like all except:



Lamella



Vesicles



Rods



Filament

Explanation

When seen under compound microscope they appear as vesicles, rods, filaments.

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Practice Test-3 (The Cell)



Correct



Unattempted



Incorrect



3/10

Q : Mitochondria contains enzymes for all of the following processes except:



Glycolysis



Respiratory chain



Translation



Fatty acid metabolism

Explanation

Glycolysis occurs in cytoplasm so enzymes for glycolysis are located in cytoplasm. Mitochondria have enzymes for transcription, translation, pyruvic acid oxidation, Krebs cycle, respiratory chain and fatty acid metabolism.

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Practice Test-3 (The Cell)



Correct



Unattempted



Incorrect



4/10

Q : DNA could be found in:

A

Golgi apparatus

B

Lysosomes

C

Mitochondria

D

Peroxisomes

Explanation

Mitochondrial DNA is circular and double stranded.

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Practice Test-3 (The Cell)



Correct



Unattempted



Incorrect



5/10

Q : A function that is not attributed to centrioles:



Spindle formation



Cilia formation



Cytokinesis in plant cell



Cytokinesis in animal cell

Explanation

Cytokinesis in plant cell is attributed to phragmoplast and Golgi apparatus.

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Practice Test-3 (The Cell)



Correct



Unattempted



Incorrect



6/10

Q : Centrosome is responsible for:



Cell wall formation



Cell plate formation



Initiation of cell division



Inhibition of cell division

Explanation

During cell division centrosomes move apart forming spindles that helps in movement of chromosomes. Furthermore, these spindles also signal for initiation of cytokinesis.

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Practice Test-3 (The Cell)



Correct



Unattempted



Incorrect



7/10

Q : How many centrosomes are there in typical non-dividing animal cell?



0



1



2



4

Explanation

Non-dividing animal cell has a pair of centrioles which are placed in same centrosome.

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Practice Test-3 (The Cell)



Correct



Unattempted



Incorrect



8/10

Q : WBCs show amoeboid movement which is due to:

A

Centrioles

B

Cytoskeleton

C

Vacuoles

D

Flagella

Explanation

Microfilaments are important for amoeboid movements.

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Practice Test-3 (The Cell)



Correct



Unattempted



Incorrect



9/10

Q : Which cytoskeleton is considerably more slender and involved in internal cell motion?



Microtubule



Intermediate filament



Microfilament



All A, B, C

Explanation

- Microtubules are involved in the assembly and disassembly of the spindle structure during mitosis.
- Intermediate filaments play role in the maintenance of cell shape.

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Practice Test-3 (The Cell)



Correct



Unattempted



Incorrect



10/10

Q : Identify the incorrect statement:



The chloroplast contains chlorophyll and carotenoid pigments



Chromoplast contains water soluble carotenoid pigments like carotene, xanthophylls



Plastid is easily observed under microscope



Chloroplast is a double membrane bound organelle

Explanation

Carotenoid pigments like carotenes and xanthophylls are terpenoids and are water insoluble and soluble in organic solvents like alcohol, phenol, and acetone etc.

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TEST RESULT

Test Level-1 (The Cell)



20



15 min



03-Jul-2020



0 sec

Result Detail



Correct

0



Test Level-1 (The Cell)



Correct



Unattempted



Incorrect



1/20

Q : A non-membranous organelle is:



Vacuole



Lysosome



Ribosome



Peroxisome

Explanation

Vacuole, Lysosomes and Peroxisomes are bounded by a single membrane whereas ribosomes are not bounded by any membrane.

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Test Level-1 (The Cell)



Correct



Unattempted



Incorrect



2/20

Q : Cell organelle responsible for turgor movement in plants is:



Nucleus



Cell wall



Cytoplasm



Vacuole

Explanation

Vacuole has ability to develop turgor pressure.

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Test Level-1 (The Cell)

Q : A human cheek cell and a spongy mesophyll cell from a leaf are examined under a microscope. The structures observed common in both are:

A

Cell membrane, nucleus and cytoplasm

B

Cytoplasm, cell wall and cell membrane

C

Cell wall, cell membrane and nucleus

D

Nucleus, cytoplasm and cell wall

Explanation

A) Cell membrane, nucleus and cytoplasm
(Present in Both)

B) Cytoplasm, cell wall and cell membrane
(Cheek cells do not have cell wall)

C) Cell wall, cell membrane and nucleus
(Cheek cells do not have cell wall)

D) Nucleus, cytoplasm and cell wall (Cheek cells do not have cell wall)

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Test Level-1 (The Cell)



Correct



Unattempted



Incorrect



4/20

Q : Golgi apparatus is absent in:



Higher plants



Blue green algae



Yeast



Amoeba

Explanation

Membrane bounded organelles are absent in prokaryotes which include bacteria and blue green algae (cyanobacteria).

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Test Level-1 (The Cell)



Correct



Unattempted



Incorrect



5/20

Q : *Mycoplasma* is:

A

Eukaryotic and unicellular

B

Eukaryotic and multicellular

C

Prokaryotic and unicellular

D

Prokaryotic and multicellular

Explanation

It is a bacterium and all bacteria are prokaryotes and unicellular.

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Test Level-1 (The Cell)



Correct



Unattempted



Incorrect



6/20

Q : Transport of Na & K ions through Na-K pump is an example of:



Diffusion



Osmosis



Direct active transport



Indirect active transport

Explanation

- Na-K pumps transports these ions against concentration gradient.
- These pumps use ATP as source of energy. This type of active transport is called direct active transport.

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11



Test Level-1 (The Cell)



Correct



Unattempted



Incorrect



7/20

Q : Chemically cell membrane is:



Glycoprotein



Lipoprotein



Glycolipid



Nucleoprotein

Explanation

Cell membrane has 60-80% proteins and 20-40% lipids.

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Test Level-1 (The Cell)

Incorrect



8/20

Q : Unit membrane consists of:

A

Lipid + Sugar + Lipid

B

Lipid + Protein + Lipid

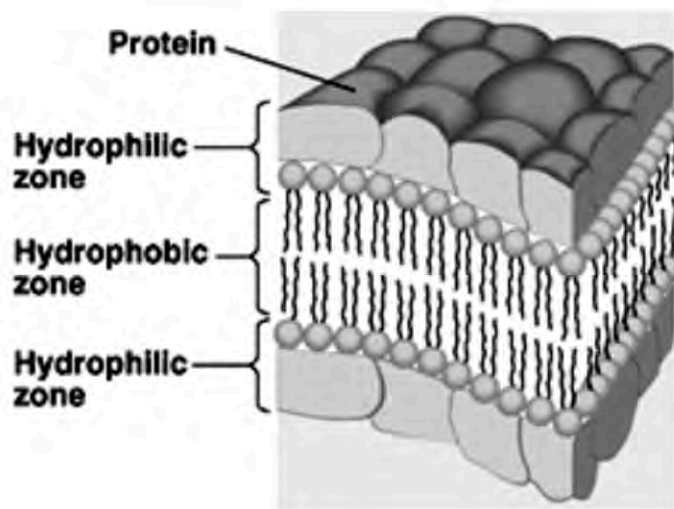
C

Protein + Lipid + Protein

D

Protein + Protein + Protein

Explanation



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11



Test Level-1 (The Cell)



Correct



Unattempted



Incorrect



9/20

Q : Pick an incorrect statement about nucleolus:



A It is an organelle



B It has no separating membrane



C It is factory of synthesis of ribosomes



D It is composed of two regions

Explanation

Organelles are structures found in cytoplasm.

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11



Test Level-1 (The Cell)



Correct



Unattempted



Incorrect



10/20

Q : Endoplasmic reticulum contains a system of flattened membrane-bounded sacs which are named as:



Cristae



Marks



Cisternae



Tubules

Explanation

Cristae are found in mitochondria.

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12

13



Test Level-1 (The Cell)



Incorrect



11/20

Q : Under an electron microscope a network of channels is seen extending throughout the cytoplasm. These channels are of:

Cytoskeleton

A

B

Endoplasmic reticulum

C

Golgi apparatus

D

Plasmodesmata

Explanation

ER is network of channels that extends between nucleus and plasma membrane.

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Test Level-1 (The Cell)



Correct



Unattempted



Incorrect



12/20

Q : It is concerned with cell secretions:



RER



SER



Vacuole



Golgi apparatus

Explanation

Secretions are the products formed within the cell on ribosomes and then passed to the outside through endoplasmic reticulum and Golgi apparatus. Most of the cell secretions come from Golgi apparatus.

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13



Test Level-1 (The Cell)



Correct



Unattempted



Incorrect



13/20

Q : Which of these metabolic processes do not occur in mitochondria?



Fatty acid metabolism



Krebs cycle



Glucose breakdown



Aerobic Respiration

Explanation

Glucose breakdown occurs during glycolysis in cytosol.

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14

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16

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Test Level-1 (The Cell)



Correct



Unattempted



Incorrect



14/20

Q : Extra chromosomal DNA is found in:



Nucleus



Ribosomes



Mitochondria



Chromosomes

Explanation

DNA found in nucleus is called chromosomal DNA.

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Test Level-1 (The Cell)



Incorrect



15/20

Q : It is true about arrangement of microtubules in a centriole

A

9×3

B

8×2

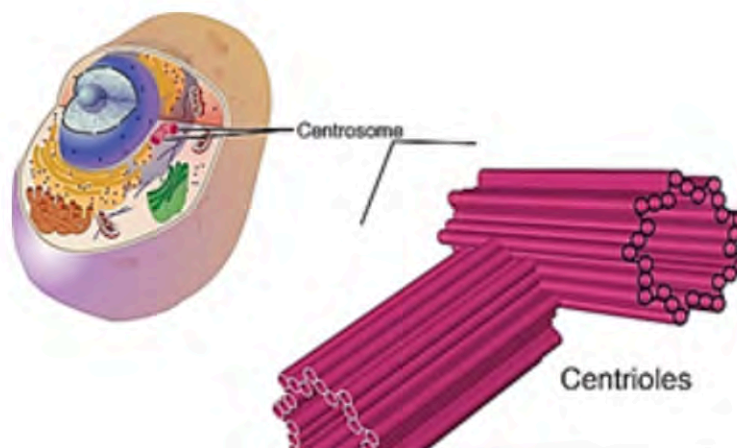
C

$9 + 2$

D

27×3

Explanation



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16

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Test Level-1 (The Cell)



Correct



Unattempted



Incorrect



16/20

Q : The term storage disease is used when _____ are not functioning properly:



Lysosome



Initiation complex



Peroxisome



Polysome

Explanation

Lysosomal enzymes are involved in breakdown of larger particles. Absence of lysosomal enzymes may result in abnormal accumulation of these substances in cells.

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Test Level-1 (The Cell)



Correct



Unattempted



Incorrect



17/20

Q : Eukaryotic ribosomes are composed of RNA and protein in:



1:1



1:2



2:1



3:1

Explanation

rRNA and proteins in ribosomes are found in almost equal proportion.

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Test Level-1 (The Cell)



Correct



Unattempted



Incorrect



18/20

Q : Resolution power is the capacity to:



A Distinguish two close points as distinct



B Distinguish two objects



C Distinguish between two organelles



D Magnify an object

Explanation

The resolution of a microscope is defined as the shortest distance between two points on a specimen that can still be distinguished by the observer or camera system as separate entities.

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Test Level-1 (The Cell)

Q :

Following is the list of process that occurs in cells. Identify the processes occur in both eukaryotes and prokaryotes.

1. Hydrolysis
2. Mitosis
3. Transcription
4. Translation

A

1, 2 and 3

B

1, 2 and 4

C

1, 3 and 4

D

2, 3 and 4

Explanation

Hydrolysis, transcription and translation are the processes that occur in both prokaryotic and eukaryotic cells while mitosis is a type of cell division that occur in eukaryotic cells. Prokaryotic cells, however, divide through binary fission.

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Test Level-1 (The Cell)



Correct



Unattempted



Incorrect



20/20

Q : Central, large and single vacuole that occupy major portion of the cell volume is the feature of:

A

Animal cells

B

Prokaryotic cells

C

Lower plant cells

D

Higher plant cells

Explanation

Animal cells and lower plant cells have small, multiple vacuoles that are dispersed in the cytoplasm while higher plant cells have central, large and single vacuole that is formed by the coalescence of smaller vacuoles during plant's growth and development. Prokaryotic cells, however, lacks vacuoles.

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Biology - The Cell
Test Level-2

Key
SAEED MDCAAT

- 1-D 11-C 21-D
- 2-C 12-D 22-A
- 3-D 13-C 23-A
- 4-C 14-C 24-B
- 5-D 15-D 25-B
- 6-A 16-C 26-A
- 7-D 17-A 27-C
- 8-D 18-D 28-B
- 9-A 19-B 29-B
- 10-A 20-D 30-B

Prepared by Saeed MDCAAT

0341-87-29745

Huzefa Saeed