

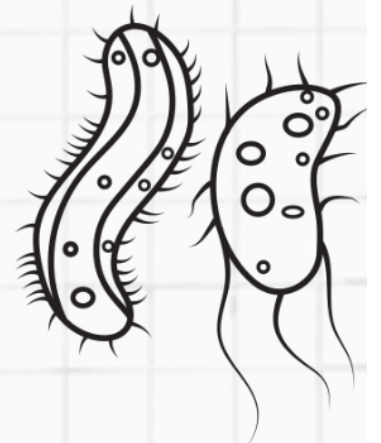
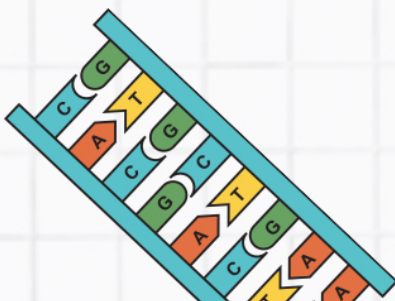


BIOLOGY 105

PAST PAPERS – FIRST EXAM

Chapter no: 8

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Sara lafi



سنوات شابتر 8

00 : 24 : 21

Question 17 / 40

Oxygen crosses a plasma membrane by

1. passive transport.
2. phagocytosis.
3. osmosis.
4. active transport.

Next

Ans:1

01 : 15 : 12

Question 11 / 60

Glycoproteins and cholesterol are the major structural components of the cell membrane.

1. True
2. False

Next

Ans:2

00 : 24 : 5

Question 53 / 60

Plasma membranes are selectively permeable, regulating the

1. Cell's molecular traffic
2. Cytoskeleton support
3. Extracellular matrix support
4. None of the above

Ans:1

01 : 09 : 14

Question 16 / 60

Which of the following characterizes the sodium-potassium pump?

- Potassium ions are pumped into a cell against their concentration gradient.
- A carrier protein undergoes change in the shape.
- Sodium ions are pumped out of a cell against their concentration gradient.
- A and B
- A, B, and C

Next

Ans:5

01 : 01 : 26
Question 8 / 60

Oxygen crosses a plasma membrane by pinocytosis.

1. True
2. False

Ans:2

00 : 31 : 46

Question 24 / 60

Whether a molecule can cross the plasma membrane depends upon:

1. the size of the molecule.
2. the chemical properties of the molecule.
3. the charge of the molecule.
4. All of the choices are correct.

Ans:4

Question 52 / 60

peripheral proteins are found within the lipids of the membrane.

1. True
2. False

Ans:2

00 : 29 : 42

Question 18 / 40

Phagocytosis is a process by which materials are taken into cells.

1. True
2. False

Previous

Next

Ans:1

Membranes rich in unsaturated fatty acids are less fluid than those rich in saturated fatty acids?

- T
- F

Ans:F

Question 19 / 40

Diffusion requires energy.

1. True
2. False

Ans:2

00 : 40 : 54

Question 10 / 40

A phospholipid molecule has a head and two tails. The tails are found at the surface of the membrane.

1. True
2. False

Previous

Next

Ans:2

00 : 47 : 25

Question 6 / 40

In a hypotonic solution an animal cell will lose water.

1. True
2. False

Ans:2

00 : 17 : 20

Question 29 / 40

Cells lacking coated pits would most likely be

1. deficient in receptor-mediated endocytosis.
2. involved in steroid synthesis.
3. unable to actively transport ions into the cell.
4. unable to adapt to the cold.

Ans:1

00 : 21 : 17

Question 26 / 40

Which statement is **NOT** true about the proteins in the plasma membrane?

1. Proteins may be attached to the inner surface of the plasma membrane.
2. Some peripheral proteins are connected to cytoskeletal filaments.
3. Integral proteins are responsible for membrane functions.
4. Glycoproteins contain carbohydrate chains that are oriented (projected) toward the inner surface of the membrane.

Next

Ans:4

00 : 15 : 17

Question 31 / 40

A 10% glucose solution is placed in the tube. The tube is placed in a beaker that contains a 5% glucose solution. Where is the highest concentration of water found?

1. In the 10% solution
2. In the 5% solution
3. The concentration of water is the same in both solutions.
4. None of the answers.

Next

Ans:2

Question 5 / 40

The membrane is a mosaic of protein molecules embedded in a fluid layer of phospholipids.

1. True
2. False

Next

Ans:1

Question 9 / 40

An organism with a cell wall would have the most difficulty doing which process?

1. osmosis
2. diffusion
3. phagocytosis
4. active transport

Ans:3

Question 23 / 40

The membrane activity most nearly opposite to exocytosis is:

1. osmosis.
2. active transport.
3. facilitated diffusion.
4. phagocytosis.

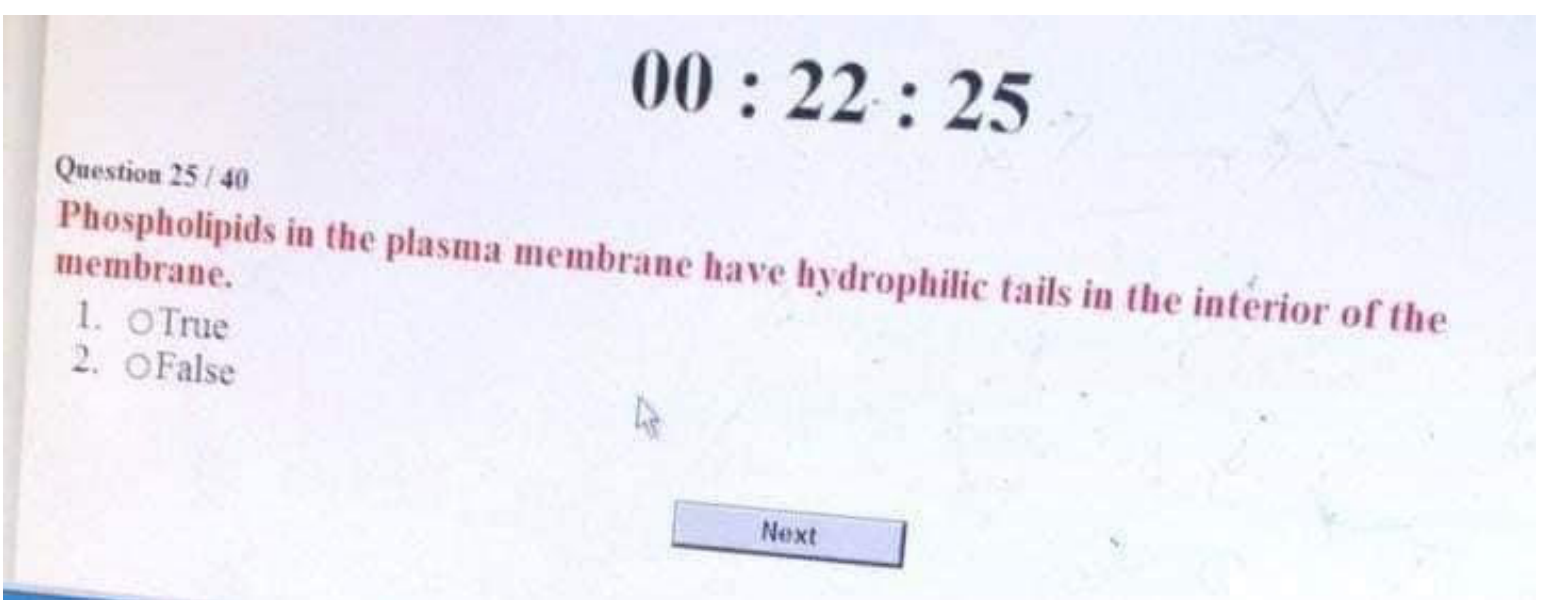
Next

Ans:4

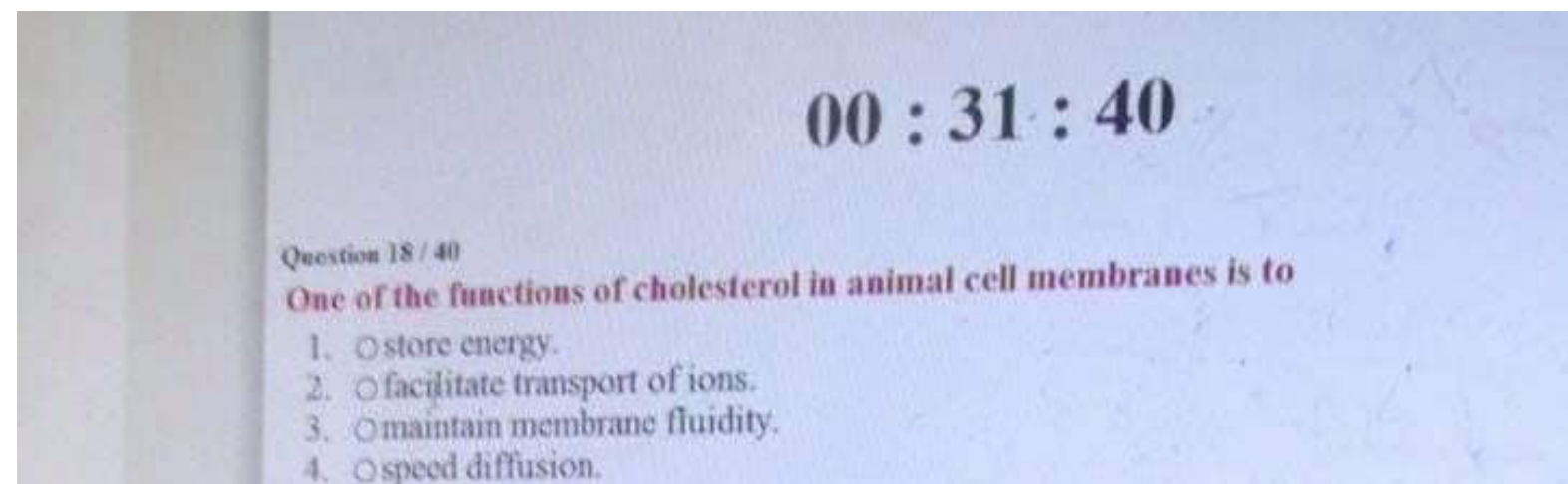
potassium ions pumped out the cell and sodium ions pumped into the cell against their gradient using sodium--potassium pump:

- T
- F

Ans:2



Ans:3



Ans:3

تَوِير



الجامعة الهاشمية
The Hashemite University

"وما نقاتل الناس بعدد ولا قوة ولا كثرة،
ما نقاتلهم إلا بهذا الدين الذي أكرمنا الله به؛ فانطلقوا فإنما هي إحدى الحسينين:

إما ظهور وإما شهادة".

عبد الله بن رواحة بين يدي غزوة مؤتة
من عقيدة الجهاد عند المسلمين ❤️



اللهم نصرك اللهم نصرك لاهلنا في غزة ، فلتغمروا أهل غزة بالدعاء، واللهم صبرًا وجبرًا ونصرًا 🇸🇪

1

White blood cells engulf bacteria .4
🔊 * ?through what process
(1 نقطة)

exocytosis

phagocytosis

pinocytosis

osmosis

2

Cholesterol enters cells through .2
🔊 * .receptor-mediated endocytosis
(1 نقطة)

True

False

3

In a hypotonic solution an animal cell will .3

 * .shrivel (shrink)


(نقطة 1)

True

False

4

In each time, the sodium - potassium .20

 * pumps transfer

(نقطة 1)

Two potassium ions in and
two sodium ions out

Two sodium ions in and two
potassium ions out

Three sodium ions out and
two potassium ions in

Three potassium ions in and
two sodium ions out

5

Water passes quickly through cell .27



* membranes because

(1 نقطة)

.the bilayer is hydrophilic

it moves through hydrophobic .channels

it is a small, polar, charged .molecule

it moves through aquaporins .in the membrane

6 All of the following processes take material into cells except :-

- 1.Pinocytosis
- 2.Endocytosis
- 3.Exocytosis
- 4.Active transport

Answer : exocytosis

7

What is one of the functions of cholesterol in animal cell membranes

(1 نقطة)

facilitates transport of ions

stores energy

maintains membrane fluidity

speeds diffusion

8

Question 4 / 50

The sodium-potassium pump is called an electrogenic pump because it _____.

- pumps hydrogen ions into the cell.
- ionizes sodium and potassium.
- generates membrane potential.
- pumps equal quantities of Na^+ and K^+ across the membrane.

Answer : generates membrane potential

9

An organism with a cell wall would have the most difficulty doing which process?

1. osmosis
2. diffusion
3. phagocytosis
4. active transport

Answer : phagocytosis

10

Question 24 / 50

All of the following are functions of integral membrane proteins EXCEPT

1. cell adhesion.
2. active transport.
3. cytoskeleton attachment.
4. protein synthesis.

Answer : protein synthesis

11

Question 25 / 50

Movement of O₂ (oxygen) into the cell requires ATP energy.

1. True
2. False

Answer : false

12

In a hypotonic solution an animal cell will

1. lyse.
2. lose water.
3. shrivel.
4. neither gain nor lose water.

Answer : lyse

13

The method of membrane transport that do NOT require protein channels or carriers is:

1. Osmosis
2. Diffusion
3. Facilitated diffusion
4. Active transport

Answer : diffusion

14

The membrane phospholipids frequently flip-flop from one side of the membrane to the other.

1. True
2. False

Answer : false

15

If a living plant were moved from freshwater to saltwater, which of the following would occur?

1. Nothing, the plant would be fine in either type of water.
2. The plant's cells would take on ions.
3. The plant's cells would take on water and will lyse.
4. The plant's cells would lose water and die because of plasmolysis.

Answer : the plant's cells would lose water, and die, because of plasmolysis

16

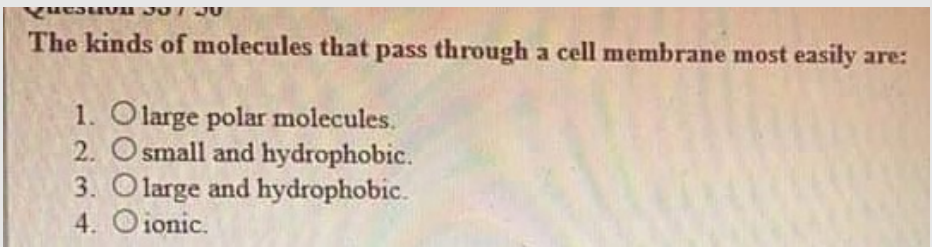
Question 40 / 50

When a cell is placed in a hypertonic solution, water leaves the cell towards the area of higher solute concentration.

1. True
2. False

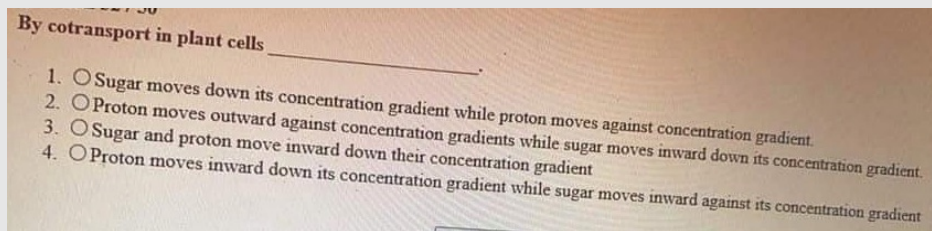
Answer : true

17



Answer : small and hydrophobic

18



Answer : 4

19

Question 39 / 50

Motor proteins provide for molecular motion in cells by interacting with what types of cellular structures?

1. sites of energy production in cellular respiration
2. membrane proteins
3. ribosomes
4. cytoskeletal structures

Answer : cytoskeletal structures

20

The presence of cholesterol in the plasma membranes of some animals

1. enables the animal to remove hydrogen atoms from saturated phospholipids.
2. enables the membrane to stay fluid more easily when cell temperature drops.
3. makes the animal more adaptive to circulatory disorders.
4. makes the membrane less flexible

Answer : enables the membrane to stay fluid more easily when cell temperature drops

21

Proteins embedded in the inside (core) region of the membrane contain _____ amino acids

1. Hydrophilic
2. Hydrophobic
3. Phosphorylated
4. None of the answers is correct

Answer : hydrophobic

22

Question 50 / 50

Which of the following factors increases the membrane fluidity?

1. a lower temperature
2. a high membrane potential
3. a greater proportion of unsaturated phospholipids
4. a high protein content in the membrane

Answer : a greater proportion of unsaturated phospholipids

23

Aquaporins are _____ that facilitates the passage of water.

1. Carrier proteins
2. Enzymes
3. Channel proteins
4. Vacuoles

Answer : Channel proteins