This is a Class 1 exam

Lebanon Evangelical School
for Boys and Girls
Loueizeh - Baabda

Stage Exam 04

12FEB2024

Do NOT write in this box. Your MARK will be placed here.

Subject :	Life Science
Class :	8A, 8B, 8C and 8E
Teacher :	Hazar Al Gharib
Duration :	1 hour

Please write your answers on a separate sheet of paper NOT on the question sheet.

Your name :		*Time taken to complete exam*
Your Class :		
Exam Room :		
How many sheets, including cover sheet :		

- Do not open this paper until the teacher in charge instructs you to do so.
- The most important thing to remember in taking an exam is NEVER PANIC.
- If you are caught cheating in this exam, you will be awarded zero for ALL exams that are taken on this day.

I- Identify the letter of the choice that best completes or answers the statement. (1pt. each)

1. Which of the following is false?

A. The nucleus controls all activities in the cell
B. The nucleus carries DNA
C. The plant cell has no nucleus
D. The nuclear membrane connects with the endoplasmic reticulum

2. Cells extract energy from their food by means of _____.

A. chlorophyll
B. photosynthesis
C. cellular respiration
D. osmosis

3. Which is false?

A. Vacuoles sometimes store wastes
B. Plant cells have one large vacuole
C. Animal cells have more than one vacuole
D. Vacuoles are used to break down worn-out organelles

4. Glycolysis is the first step of:

A. photosynthesis
B. lactic acid fermentation
C. cellular respiration
D. alcohol fermentation

5. Is hen's egg a single cell?

A. No
B. Yes
C. Can't say
D. None of these

6. "That only certain things may enter or exit the cell, whereas others are not permitted to cross the cell membrane" is the best definition for what word?

A. Selective transport
B. Cell membrane
C. Selective permeability
D. Active transport

7. What are three types of passive transport?

A. Simple diffusion, facilitated diffusion, and pumps
B. Endocytosis, exocytosis, and pumps
C. Exocytosis, endocytosis, and osmosis
D. Simple diffusion, facilitated diffusion, and osmosis

8. When does active transport occur?

A. When energy is needed to feed the cell
B. When no energy is needed to help substances move
C. When energy is needed to move substances across the cell membrane
D. When energy is needed to make the cell move

9. When substances are too big to move across the cell membrane with carrier proteins, what assists them?

A. Phospholipids
B. Vacuoles
C. Proteins stored in the cell membrane
D. Vesicles

10. Cellular respiration releases energy from glucose to build _____.

A. AMP (adenosine monophosphate)
B. ADP (adenosine diphosphate)
C. ATP (adenosine triphosphate)
D. None of the above

II- Indicate whether the sentence or statement is true or false. If false, change the word or phrase to make the sentence or statement true. (1pt. each)

1. Glycolysis is the first step of cellular respiration that doesn't require oxygen.

2. Photosynthesis requires food energy to proceed.

3. Carrier proteins form pores through the cell membrane.

4. The volume of a cell grows slower than its surface area.

5. Some bacteria and fungi help produce cheese, yogurt, and sour cream using lactic-acid fermentation.

6. Chemical reactions of photosynthesis occur in the mitochondria.

III. Put the right term for each given definition. (1pt. each)

1. It is a reaction that cells use to obtain energy from food when oxygen levels are low.

2. It is a flexible covering that protects the inside of a cell from the environment outside it.

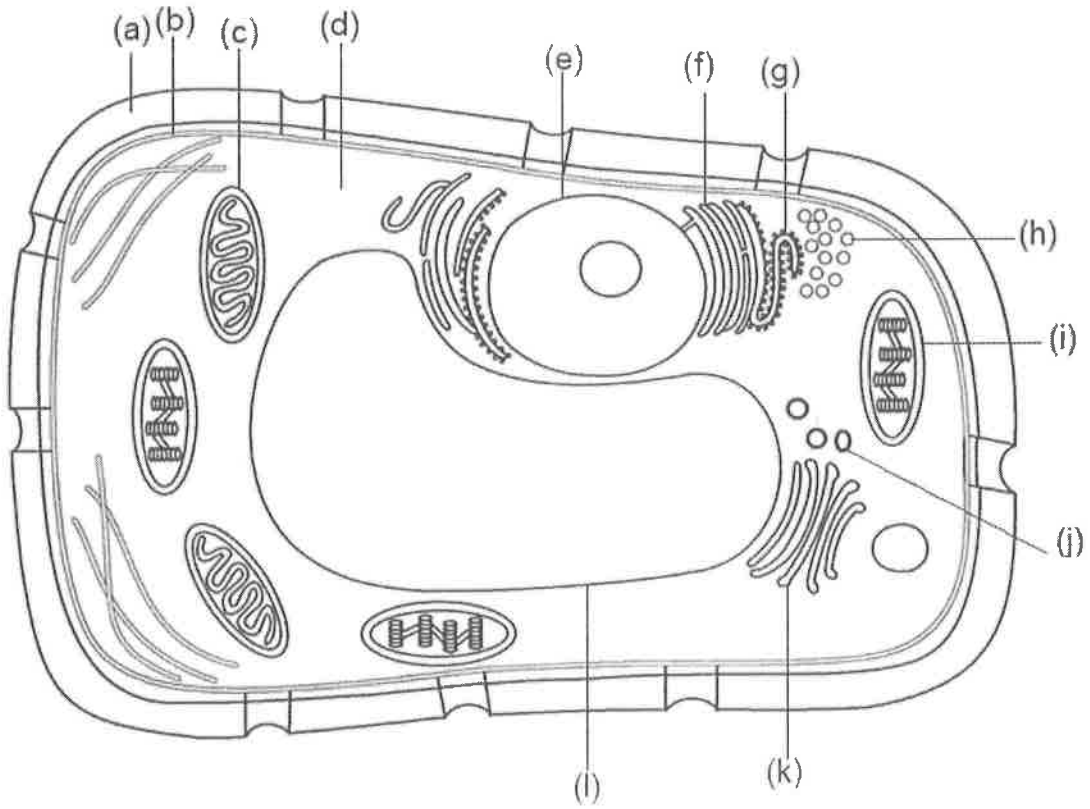
3. They are structures found in eukaryotic cells, with specialized functions, and most of which are surrounded by membranes.

4. It is the movement of molecules through a cell membrane using transport proteins.

5. It is the process during which a cell's vesicles release their contents outside the cell.

6. It is the powerhouse in eukaryotic cells.

IV- The figure below shows a CELL. (1pt. each)



1. Label the figure (from a to l).

2. Indicate whether the cell shown in the figure is an animal or plant cell. Justify your answer by giving three reasons.

3. Fill in the table with the appropriate information (from 1 to 10).

Fill in the blank with the letter of the cell's structure that matches with its function.	Is it found in animal cells, plant cells, or both?
Prepares and packages proteins 1. _____	2. _____
Stores water and other substances 3. _____	4. _____
Site of protein production 5. _____	6. _____
Transport substances in the cell 7. _____	8. _____
Makes lipids 9. _____	10. _____

V- Figures 1 and 2 show two different processes of material moving into and out of the cell. Observe the figures to fill in the blanks. (1 pt. each)

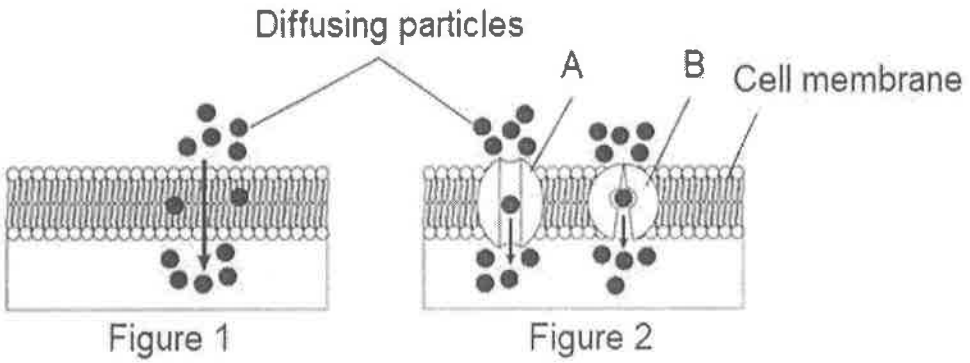


Figure 1 shows 1. _____ _____, the process by which molecules move from a region of 2. _____ concentration to region of 3. _____ concentration. This process continues through the cell membrane until the concentration of the particles is the 4. _____ on both sides of the membrane.

Figure 2 shows 5. _____ _____, where particles pass through the cell membrane using 6. _____ _____. Type A is called 7. _____ _____, and forms 8. _____ through the membrane, while type B is called 9. _____ _____, and carries 10. _____ molecules. Both processes do not require the cell to use 11. _____. Thus, they are two types of 12. _____ _____.

VI- Observe the figure below to answer the following questions. (1pt. each)

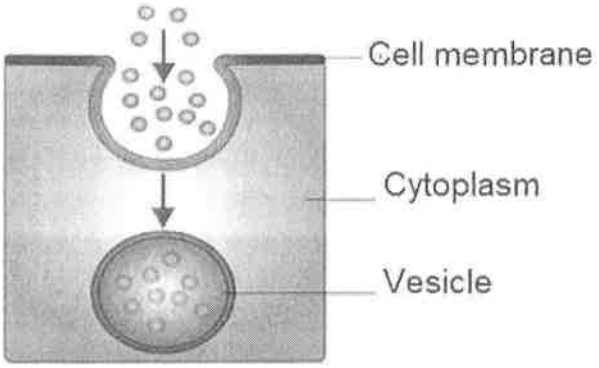
1. Name the process revealed in the figure.

2. Define this process.

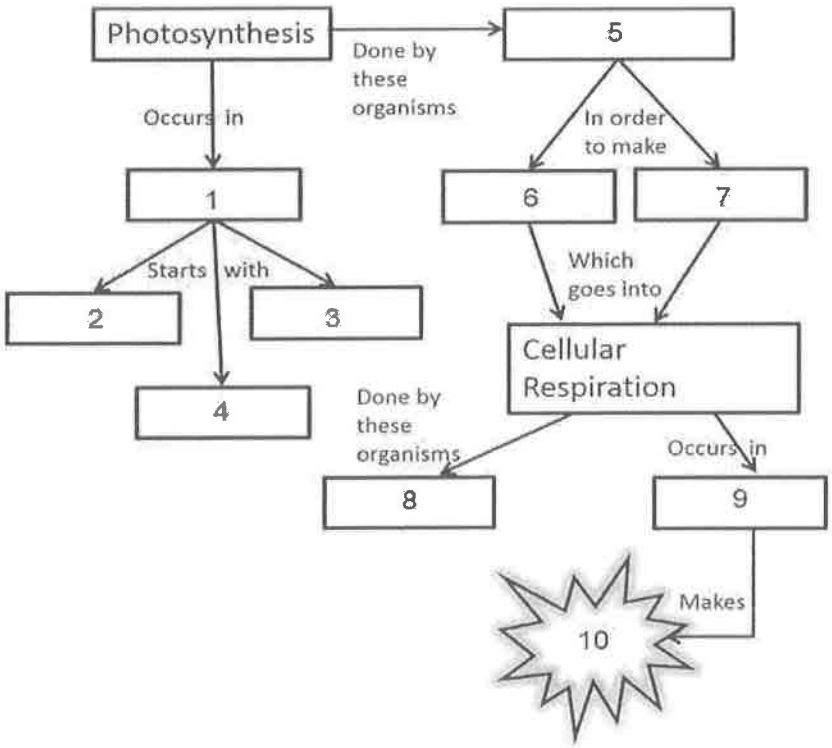
3. When do cells use this process?

4. Why isn't the vesicle in the figure labeled as a secretory vesicle.

5. Does this process require energy? Explain.



VII- Label the figure below (from 1 to 10). (1pt. each)



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I. 1. C 2. C 3. D 4. C
5. B 6. C 7. D 8. C
9. D 10. C (10)

II. 1. True
2. False, Sunlight energy
3. False, channel proteins
4. False, faster
5. True
6. False, chloroplasts (10)

III. 1. fermentation
2. Cell membrane
3. Organelles
4. Active transport/facilitated diffusion
5. Exocytosis (6)
6. Mitochondria

IV. 1. a. Cell wall
b. Cell membrane
c. mitochondrion
d. cytoplasm
e. nucleus
f. SER
g. RER
h. ribosome
i. chloroplast
j. secretory vesicle
k. golgi complex
l. large vacuole. (12)

2. It is a plant cell because it has a cell wall, chloroplasts, and a large central vacuole. (2)

3. 1. → k 2. Both 3. → L 4. Plant Cells
5. → g 6. Both 7. → j 8. Both
9. → f 10. Both

(10)

V. 1. Simple diffusion
2. high
3. low
4. same (equal)
5. facilitated diffusion
6. Transport proteins
7. Channel proteins
8. Pores
9. Carrier proteins
10. Large
11. Energy
12. Passive Transport

(12)

VI. 1. Endocytosis
2. It is the process during which a cell takes in a substance by surrounding it with the cell membrane.
3. When substances are too large to enter a cell membrane by diffusion or by using active transport.
4. because secretory vesicles contain substances to be released outside the cell, not entering the cell.
5. Yes, because it is an active transport process.

(5)

VII. 1. Chloroplasts
2. Sunlight
3. CO_2
4. H_2O
5. mainly plants
6. glucose
7. O_2
8. mainly plants and animals
9. mitochondria
10. ATP.

(10)