This is a Class 1 exam

Lebanon Evangelical School
for Boys and Girls
Loueizeh - Baabda

Stage Exam 04

27MAR2023

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

Subject :	Science	
Class :	6A, 6B, 6C and 6E	
Teacher :	Mrs. Aya Al-Mawla	
Duration :	1 hour	
Answer on a SEPARATE 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- ***Choose*** *the correct answer for each of the following questions.* *(12marks)*

1- What are the three basic needs of all living things?
   - A- Food, air, and water
   - B- Food, sunlight and a place to live in
   - C- Energy, water, and a place to live in
   - D- Water, air, and sunlight

2- Which of the following can be related to the number of cells in an organism?
   - A- Growth
   - B- Reproduction
   - C- Levels of organization
   - D- All of the above

3- What is the change in an organism's surrounding called?
   - A- Response to the environment
   - B- Reproduction
   - C- Habit
   - D- Stimulus

4- An organism that obtains energy by feeding on other organisms is called a(n):
   - A- Autotroph
   - B- Heterotroph
   - C- Omnotroph
   - D- None of the above

5- Organisms that grow by the size of their cells and not by the number of cells are mostly:
   - A- Unicellular organisms
   - B- Multicellular organisms
   - C- Bicellular organisms
   - D- None of the above

6- Which of the following definitions is the best to define sexual reproduction?
   - A- One cell splitting into new organisms carrying the same features of the mother cell
   - B- Two cells dividing to form four new cells
   - C- One reproductive cell inheriting genetic information
   - D- Two reproductive cells of opposite genders joining to produce a new organism

7- Which of the following molecules store energy?
   - A- DNA
   - B- ATP
   - C- RNA
   - D- None of the above

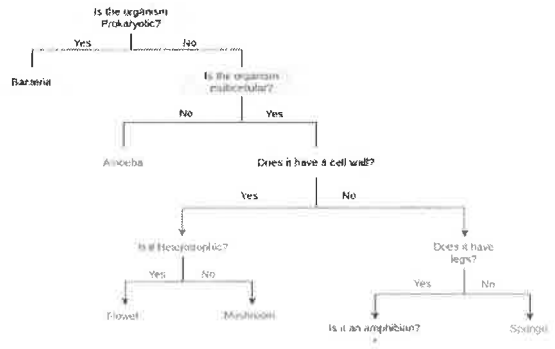
8- What is the cell wall made of?
   - A- Carbohydrates
   - B- Lipids
   - C- Proteins
   - D- Nucleic acids

9- Which taxon is used as the *first word* in the binomial nomenclature of an organism?
   - A- Genus
   - B- Species
   - C- Class
   - D- Family

10- Which of the following is **not** an example of using energy?
   A- Autotrophs using sunlight
   B- Heterotrophs consuming food
   C- DNA sequence present in the nucleus
   D- All of the above

11- Which of the following is an example of a response to a stimulus?
   A- One cell dividing to reproduce
   B- An organism changing throughout its lifetime
   C- Humming birds migrating to the south during winter
   D- None of the above

12- The adjacent diagram shows a series of questions describing an organism. What does this diagram represent?
   A- Taxonomy Classification
   B- Dichotomous Key
   C- Species Chart
   D- Levels of Organization



II- ***Complete*** *the following statements with the appropriate scientific terms.* *(10marks)*

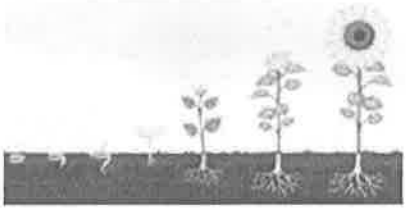
All cells have four different types of *macromolecules* such as __(1)__which are used for energy, __(2)__ and __(3)__which are used for the membranes and structures, in addition to nucleic acids which make up the __(4)__. Not all cells are similar in their structures. Cells that do not have membrane-bound organelles are called __(5)__cells. On the other hand, cells that have membrane-bound organelles are called __(6)__ cells; the *genetic materials* of such cells are located in an organelle called the __(7)__. Most of *eukaryotes* are __(8)__organisms when it comes to the number of cells, and they have *levels of organization* where groups of cells form __(9)__, that also combine to form __(10)__, that will eventually form the organ systems of the living creature.

III- ***Name*** *the cell part or organelle that corresponds to the given description.* *(6marks)*

1- A jelly like liquid that fills up any cell.
2- An organelle that receives proteins, packages them, and prepares for their distribution.
3- An autotrophic organelle that converts sunlight's energy into chemical energy.
4- The power house of a eukaryotic cell.
5- Folded membranes that represent a highway for proteins in the cell, and can be covered with ribosomes.
6- A structure that controls what comes into and out of a cell.

IV- ***Indicate*** *the characteristic of living things shown in each of the following diagrams.* *(5 marks)*
(For each diagram, there is one characteristic out of the six main characteristics shown. You can't use the same characteristic twice)

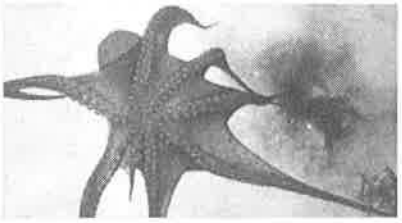
1-



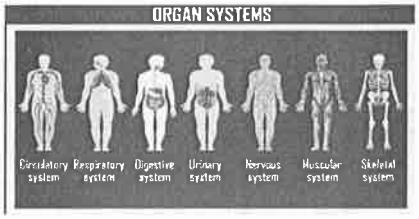
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3-



4-

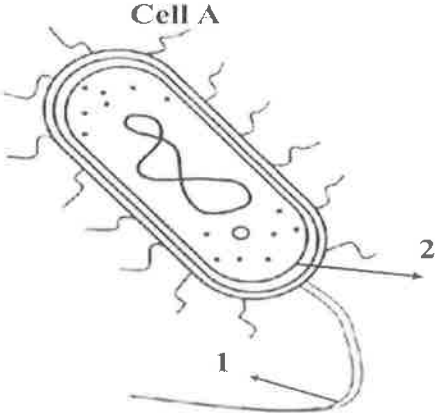


5-

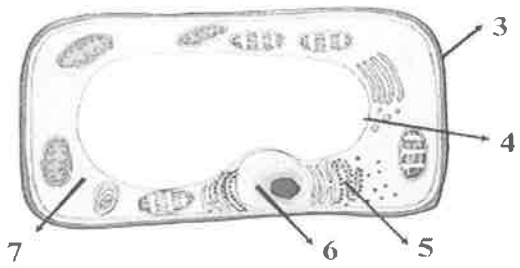


V- ***Indicate*** *the type of cells* ***A*** *and* ***B****, then* ***label*** *the cell parts* ***1,2,3,4,5,6,*** *and****7*** *(9marks)*

Cell A



Cell B



VI- ***Answer*** *the following questions.* *(5marks)*

1- **Name** the specific environment where an organism lives.
2- **Distinguish** between the cell organelles of autotrophic *eukaryotes* and the cell organelles of heterotrophic *eukaryotes*.
3- **List** the four organelles that are involved in protein synthesis in a eukaryotic cell.
4- **Compare** and **Contrast** the outer structures of the animal cell and the plant cell.
5- Barnacles are creatures that don't change their location. They are made of cells, and are organized, they grow and develop, reproduce, use energy and respond to changes in their surroundings. Hiba argued with her science teacher that barnacles can't be considered as living things since they can't move.
Do you agree with Hiba? Justify your answer.

SE04/6ABCE/2022023/Answer key

/50

I-

1_C	5_A	9_A
2_D	6_D	10_C
3_D	7_B	11_C
4_B	8_A	12_B

(12 pts: 1 each)

II - 1- carbohydrates
2- Proteins
3- lipids
4- DNA
5- Prokaryotic
6- eukaryotic
7- nucleus
8- Multicellular
9- Tissues
10- Organs (10 pts. 1 each)

III - 1- Cytoplasm
2- golgi body
3- Chloroplast
4- Mitochondria
5- Endoplasmic reticulum
6- Cell membrane.
(6 pts: 1 each)

IV - 1- Growth and Development
2- Reproduction
3- Response to Stimuli
4- Organization
5- Use of energy
(5 pts 1 each)

V - Cell A: Bacteria Cell (1 pt.)
Cell B: Plant Cell (1 pt)

1- Flagellum
2- Cell membrane
3- Cell wall
4- Vacuole
5- Endoplasmic reticulum
6- Nucleus
7- Cytoplasm
(7 pts: 1 each)

VI - 1- Habitat (1 pt.)

2- Autotrophic eukaryotes have chloroplast whereas heterotrophic eukaryotes do not. (1 pt.)

3- • Ribosomes
• Endoplasmic Reticulum (2 pts half a pt. each)
• Golgi Body
• Vesicles

4- Both Cell have cell membrane. (1 pt)

However, plant cells have cell wall unlike the animal cell. (1 pt)

5- No. (1 pt.)
Movement is not one of the main characteristics of life.
So, even though barnacles don't move, they have the six main characteristics of life, and that makes them considered to be living things. (1 pt.)