

Class: \_\_\_\_\_

Name: \_\_\_\_\_

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**Science 8 – Cells and Systems**  
**Living Things and The Cell**

**1) Matching:** Put the correct number on the space provided beside the proper term. *10 marks*

_____ A. Cell	1. Allowing materials to pass through.
_____ B. Diffusion	2. A group of different tissues that work together to perform a specific function.
_____ C. Organism	3. A structure within a cell that has a specific function.
_____ D. Organelle	4. The diffusion of solvent, usually water, through a selectively permeable membrane.
_____ E. Osmosis	5. The movement of particles in liquids and gasses from an area of higher concentration to an area of lower concentration.
_____ F. Tissue	6. A group of cells having the same structure and function.
_____ G. Impermeable	7. Allowing no materials to pass through.
_____ H. Organ	8. The smallest unit that perform the function of life.
_____ I. Permeable	9. A collection of parts that work together in such a way that a change in one part can result in a change in another.
_____ J. System	10. An individual form of life.

**2) Multiple Choice:** Circle the BEST response for each question. *1 mark each*

The two organelles that can only be found in a plant cells are:

- a. Vacuoles and Cell Wall
- b. Cytoplasm and Chloroplasts
- c. Chloroplasts and Cell Wall
- d. Mitochondria and Nucleus

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The three things that effects the rate of osmosis and diffusion are:

- a. Water, Sunlight, and Energy
- b. Concentration, Temperature, and Pressure
- c. Temperature, Pressure, and Sunlight
- d. Energy, Reproduction, and Produce Wastes

**3)** Name the characteristics of living things that are shown in each of these examples: *6 marks*

- a. A tree soaks up nutrients from the soil.
- b. A bird hatches from it's egg.
- c. Throwing compost on your garden and a tomato plant grows.
- d. Owl pellets laying under a tree.
- e. A dog's coat growing thicker in the winter.
- f. A cat shedding it's fur.

**4)** Name the five levels of organization in multicellular organism in order and given an example of each. *10 marks*

_____	-	_____
_____	-	_____
_____	-	_____
_____	-	_____
_____	-	_____

**5) Short Answer:** Is a rock a living thing? Give **3** reasons for your thinking. Use complete sentences. *3 marks*

**6) Short Answer:** Explain how the role of unicellular organisms are different than multicellular organisms. Use complete sentences. *2 marks.*

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**7) Fill in the Blank:** Use the word box to place the name of each organelle with its correct definition. Then label each organelle in its proper place on the below diagram. *14 marks*

\_\_\_\_\_ : Jellylike material in which other parts of the cell float.

\_\_\_\_\_ : Controls most of the cell's activities.

\_\_\_\_\_ : Releases the energy stored in food.

\_\_\_\_\_ : Captures light energy and uses it to make stored energy.

\_\_\_\_\_ : Controls what passes in and out of the cell.

\_\_\_\_\_ : Stores food and wastes that the cell cannot use right away.

\_\_\_\_\_ : Tough material that surrounds the cell and provides support.

Cell Membrane	Mitochondria	Chloroplasts	Photosynthesis
Organelle	Ribosome	Nucleus	Cytoplasm
Cell Wall	Vacuoles	Osmosis	Golgi

