**Cells, Part 1 Study Guide**

1. How do you calculate the **total** power magnification on a compound microscope?
2. What type of cell is below? How can you tell?
3. Label the organelles and their functions in the box below:

|  |  |  |
| --- | --- | --- |
| Letter | Name | Function |
| A |  |  |
| B |  | photosynthesis |
| C |  |  |
| D |  |  |
| E |  |  |
| F |  |  |



B

A

C

D

E

F

1. Which organelle transforms sunlight into food/glucose?
2. What happens to a plant cell when placed in a salt solution?
3. Label the following structures of a plasma (cell) membrane): 
4. Why is the plasma membrane a fluid mosaic model?
5. Which part of the plasma membrane is hydrophobic? What does this mean?
6. Explain what selectively (semi) permeable means?
7. What is the primary building block (macromolecule) of the cell membrane?
8. What type of cell is below?
9. Label organelles and their functions in the box below:

|  |  |  |
| --- | --- | --- |
| Letter | Name | Function |
| A |  |  |
| B |  |  |
| C |  | Makes proteins |
| D |  |  |
| E |  |  |
| F |  |  |

E

D

F

C

B

A



1. If this cell did not have any of organelle “D”, what would happen to the cell and why?
2. Define osmosis.
3. What is the primary difference between active and passive transport?
4. Over time, what will happen to the water molecules in the container? 

**Review BioChemistry and Intro to Biology/Classification:**

1. What are the 4 macromolecules?
2. What is stored in nucleic acids?
3. What is the difference between the independent and dependent variables?
4. Put the following in order of smallest structure to largest structure: tissue, cells, organ systems, organs, organellles
5. What is glycogen?