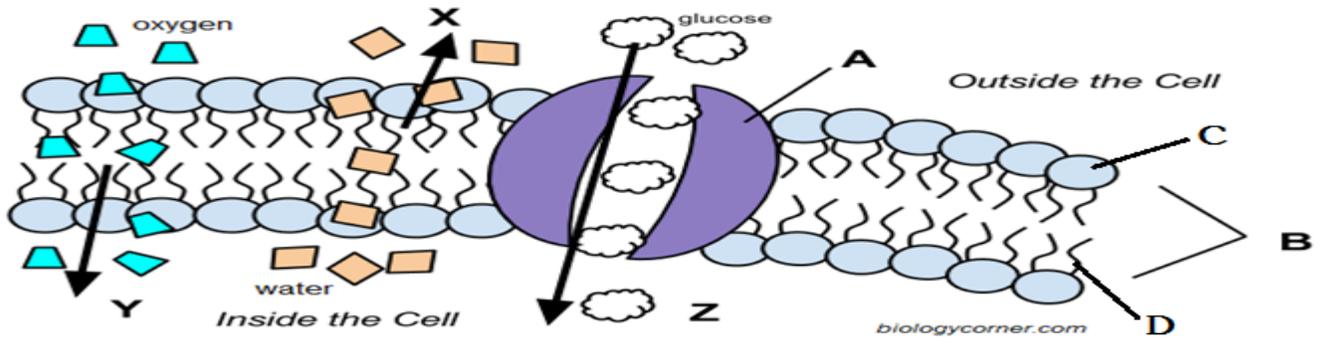


**Evidence 4: Homeostasis**

**Option 1: Worksheet**

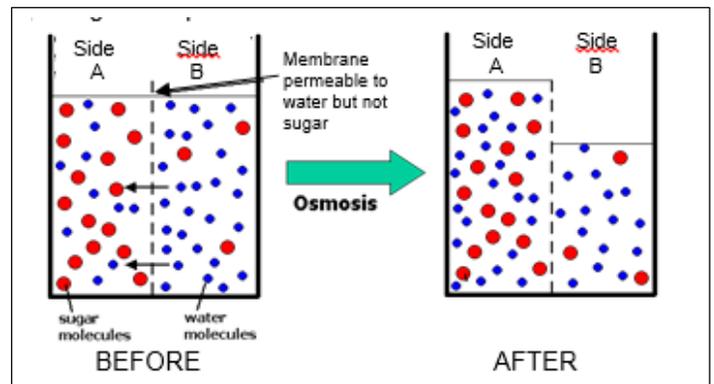
**Directions: Use the picture of the cell membrane to answer questions 1-13**



Match the structure/process to the letter. You can use the letters more than once:

- |                               |                                 |
|-------------------------------|---------------------------------|
| 1. Phospholipid bilayer _____ | 5. Hydrophobic Fatty acid _____ |
| 2. Osmosis _____              | 6. Plasma Membrane _____        |
| 3. Channel protein _____      | 7. Polar Head _____             |
| 4. Hydrophilic Head _____     | 8. Non-polar tail _____         |
9. This cell would be in a [ hypertonic / hypotonic / isotonic ] solution.
10. The cell membrane can be described as [semi-permeable / impermeable ]
11. There is more glucose [ inside / outside ] the cell. (Hint: Look at the direction it is moving)
12. Over time, this cell will [ shrink / swell ]
13. Water will continue to move [into / out of ] the cell until the cell is at [equilibrium / unbalanced]
14. Osmosis is \_\_\_\_\_.

Describe what is happening in this picture.



15.

Beaker #2 is filled with water (□). Inside of this beaker is a cell, Molecule B (◆), Molecule C (♥), and Molecule D (★). The cell membrane is permeable to Molecule C (♥) and D (★) but not permeable to Molecule B (◆).

	Highest concentration INSIDE or OUTSIDE of the cell?	Will the molecule move out of the cell, into the cell, or not move?
6. Molecule B (◆)		
7. Molecule C (♥)		
8. Molecule D (★)		



16. Below are 6 beakers with a cell inside. Look at the concentrations of water and solute in the cells and beakers. 1) Draw an arrow to show the net movement of WATER either into or out of the cell by osmosis. If water doesn't move, draw an arrow showing water moving both into and out of the cell. 2) In the box inside the beaker, label the solution as either hypertonic, hypotonic, or isotonic.

<p><b>Beaker 3</b></p>	<p><b>Beaker 4</b></p>	<p><b>Beaker 5</b></p>
<p><b>Beaker 6</b></p>	<p><b>Beaker 7</b></p>	<p><b>Beaker 8</b></p>

17. Define plasmolysis and include what type of cell it applies to.

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18. Define turgid and include what type of cell it applies to.

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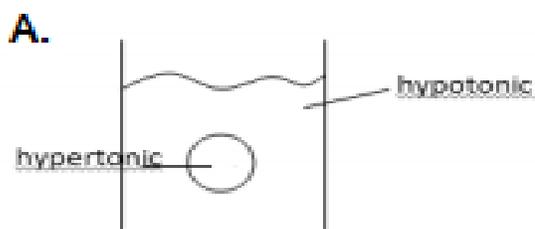
19. Define crenates and include what type of cell it applies to.

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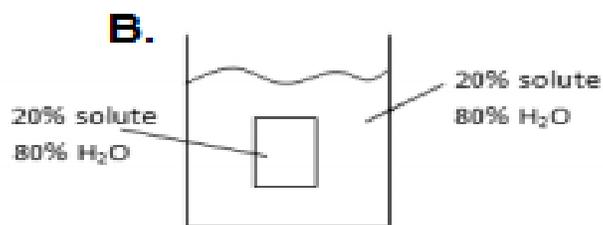
20. Define lyses of cell and include what type of cell it applies to.

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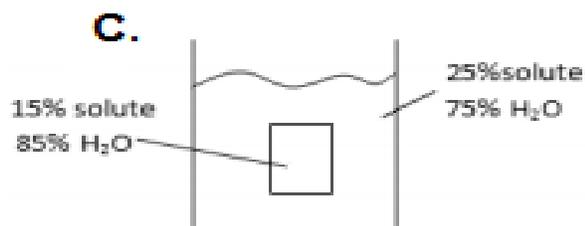
21. In each diagram below, either a plant cell (rectangle) or animal cell (round) is placed in different solutions. For each diagram indicate on the line 1) – what direction water moves (into cell, out of cell, in & out equally) 2) What happens to the cell (lysis, crenate, unchanged, plasmolysis, becomes turgid)



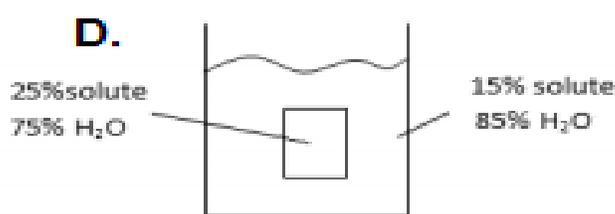
1) \_\_\_\_\_  
2) \_\_\_\_\_



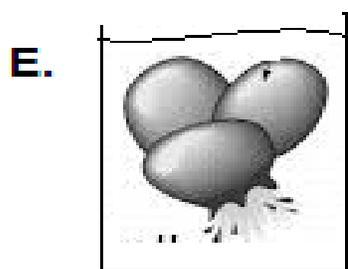
1) \_\_\_\_\_  
2) \_\_\_\_\_



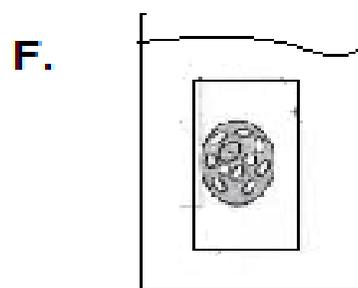
1) \_\_\_\_\_  
2) \_\_\_\_\_



1) \_\_\_\_\_  
2) \_\_\_\_\_



1) \_\_\_\_\_  
2) \_\_\_\_\_



1) \_\_\_\_\_  
2) \_\_\_\_\_