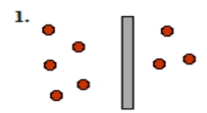
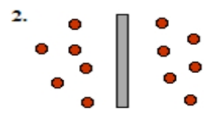
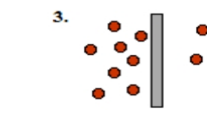


Osmosis and Diffusion Practice Name: _____

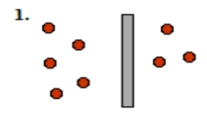
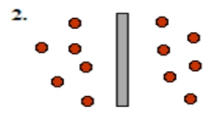
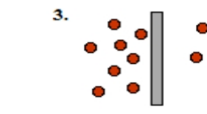
I. Based on what you've learned, **in your own words**, answer the following questions regarding movement of materials through a cell membrane. **DO NOT COPY and PASTE!!!**

1. What does semi-permeable mean? **
2. What is the net movement of molecules from high to low concentrations? **
3. What is the term for the diffusion of water? **
4. What does dynamic equilibrium mean? **
5. What is a hypertonic solution? **
6. What is a hypotonic solution? **
7. What is an isotonic solution? **

II. Observe the diagrams in the table below. Assume that the dots are dissolved particles on either side of the cell membrane. They are like **oxygen** molecules that can go across the membrane. Do the following situations represent concentration gradients? If so, in which direction would **diffusion** occur?

| | | | | | |
|-------------------------------------|---|-------------------------------------|---|-------------------------------------|---|
| 1. |  | 2. |  | 3. |  |
| gradient? Yes or No | ** | gradient? Yes or No | ** | gradient? Yes or No? | ** |
| movement left, right, or none | ** | movement left, right, or none | ** | movement left, right, or none | ** |

III. Observe the diagrams in the table below. Assume that the dots are dissolved particles (like **protein** or **carbohydrate** molecules) on either side of the cell membrane. Do the following situations represent concentration gradients? If so, in which direction would **osmosis** occur?

| | | | | | |
|-------------------------------------|---|-------------------------------------|---|-------------------------------------|---|
| 1. |  | 2. |  | 3. |  |
| gradient? Yes or No | ** | gradient? Yes or No | ** | gradient? Yes or No? | ** |
| movement left, right, or none | ** | movement left, right, or none | ** | movement left, right, or none | ** |