Membrane Transport Review Worksheet

Passive and Active Transport

*Complete the table by writing **YES** or **NO** in each square.*

	Active Transport	Facilitated Diffusion	Simple Diffusion
1. Requires energy input			
2. Moves molecules against their concentration			
3. Requires a membrane protein			
4. Sodium-Potassium pump is an example			

Answer the following questions on the lines provided.

5. Name a substance that can diffuse across the cell membrane.

_____

6. Name a substance that is too large to diffuse across the cell membrane.

_____

7. What prevents charged molecules from diffusing across the cell membrane?

_____

_____

8. How is facilitated transport similar to simple diffusion?

_____

_____

9. How does facilitated transport differ from simple diffusion?

_____

_____

Endocytosis and Exocytosis

Define the following terms on the line provided.

10. Exocytosis

_____

11. Endocytosis

_____

12. Phagocytosis

_____

Answer the following questions on the lines provided.

13. Describe how endocytosis and exocytosis are similar.

_____

_____

14. Describe how endocytosis and exocytosis are differ.

_____

_____

15. What is a vesicle?

_____

_____

16. The term phagocyte literally means “cell eater”. Explain why some white blood cells are called phagocytes.

_____

_____

17. What process is an amoeba using when it engulfs a food particle?

_____

18. What is a lysosome and what is its function?

_____

_____

19. What would you expect to find in exocytotic vesicles?

_____

_____

Diffusion and Osmosis

Define the following terms on the lines provided.

20. Diffusion

_____

21. Osmosis

_____

22. Semi-Permeable Membrane

_____

Complete the table.

Type of Solution	Isotonic	Hypertonic	Hypotonic
23. Effect on cell placed in solution:	a.	b.	c.

Answer the following questions on the lines provided.

24. Freshwater protozoans, such as *Paramecia*, must constantly pump out water to keep from bursting. What does this tell you about the solute concentration in a *Paramecia* compared to the solute concentration of its environment?

_____

_____

_____

25. What would happen if you made the solute concentration outside the *Paramecium* the same as that inside it?

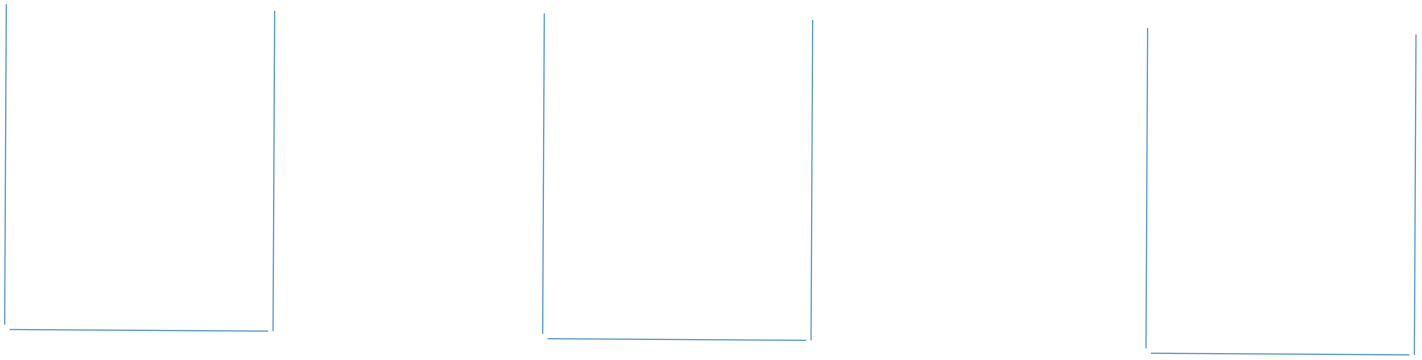
_____

_____

_____

26. In the space below, draw a picture of what would happen to a cell if placed in a beaker each of the following solutions:

Isotonic **Hypertonic** **Hypotonic**

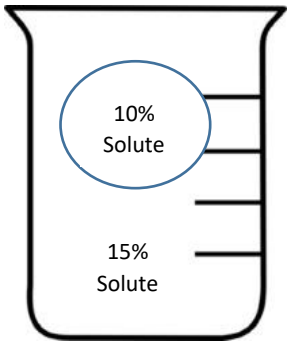


Osmosis

Fill out the beakers accordingly.

27. For each solution, label the cell and the solution either as *hypertonic, hypotonic or isotonic*. Then indicated with arrows the *direction* in which water will move via osmosis.

A.



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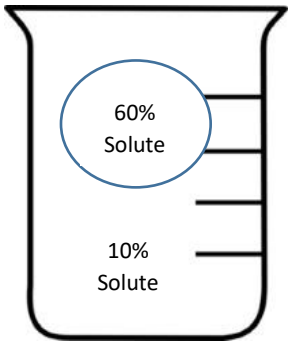

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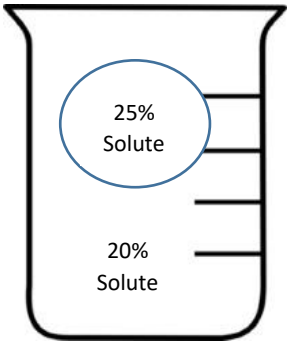
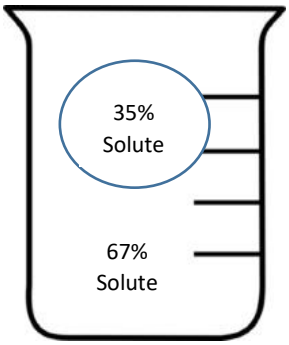
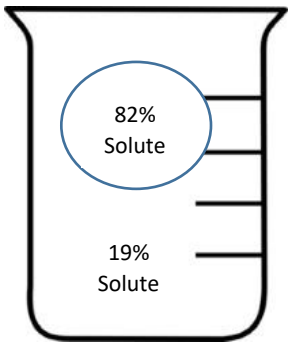


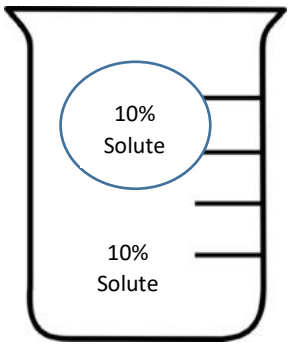
D.



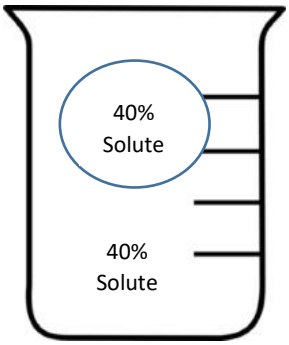
E.



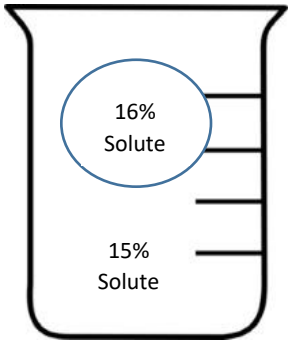
F.



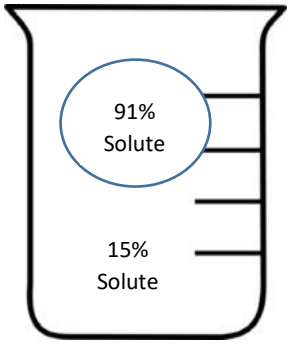
G.



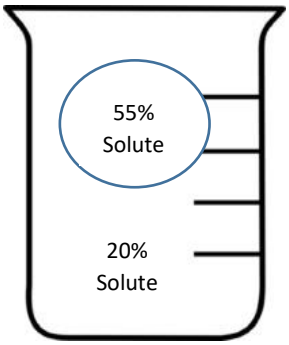
H.



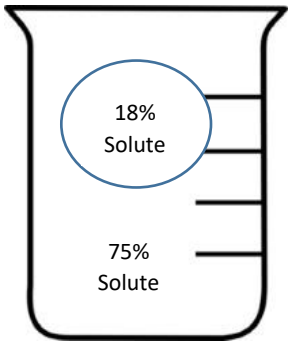
I.



J.



K.



L.