Name _____ Period _____ Date _____

EOC Review Part 2

Physical and Chemical Basis of Life

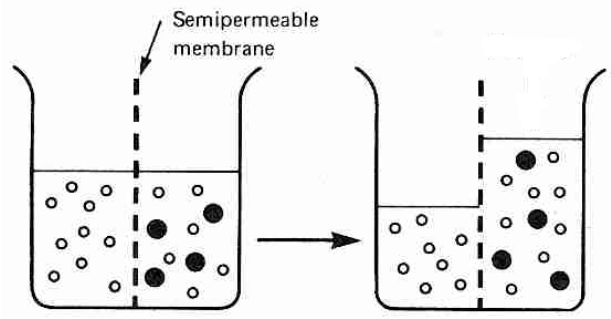
Basic chemistry

What are chemical bonds? What are the major types?

What do the lines between chemical symbols represent?

What are valence electrons and how are they involved in bonding?

Use the diagram to the right to answer the following four questions:



Why did the large dark molecules NOT move to the left?

If the dark molecule is starch, where is the starch concentration greatest *at first* (left or right)?

If the white molecule is water, where is the water concentration greatest *at first* (left or right)?

If the dark molecules could move, in what direction would they diffuse? Why?

In osmosis, water moves from an area of _____ to an area of _____ water concentration. (Fill in with the word "higher" or "lower")

Which way will water move in each of the following situations (into or out of the cell):

a. Salt inside the cell 65% and outside the cell 40%.

b. Sugar inside the cell 27% and outside 80%.

Complete the table:

	Passive Transport	**Active Transport**
Requires energy?		
Low to high concentration or high to low concentration?		
Examples		

Macromolecules

Complete the tables:

Macromolecules	Function(s)	Monomer	Examples
Carbohydrates			
Proteins			
Lipids			
Nucleic Acids			

Specific Molecule	Specific Function(s)
Glucose	
Starch	
Glycogen	
Cellulose	
Enzymes	
Insulin	
Hemoglobin	
DNA	
mRNA	

What are some of the functions of the proteins and other molecules found in the cell membrane?

What is the function of hormones?

How do hormones travel throughout a body?