

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

# Worksheet: Cell Test Review

## HONORS BIOLOGY

**Directions:** Answer the following questions using your notes and chapters 3 in your textbook. The test will be 50 multiple choice questions covering this material.

### CELL STRUCTURES AND FUNCTION

1. What **cell organelles/structures** are involved with protein production, packaging, transporting, and excretion from the cell?

2. Why is the cell membrane often described as a “**mosaic**”? (*What is it made up of*)

5. Why is the cell membrane referred to as “**semipermeable**” or “**selectively permeable**”?

6. Name 3 important functions of the **microtubules**.

7. What **organelles** are found in animal cells but not in plant cells?

8. What **organelles** are found in plant cells but not animal cells?

9. Why is the significance of having **unsaturated fats** instead of saturated fats making up the cell membrane?

10. What is the difference between **prokaryotic** and **eukaryotic** cells?

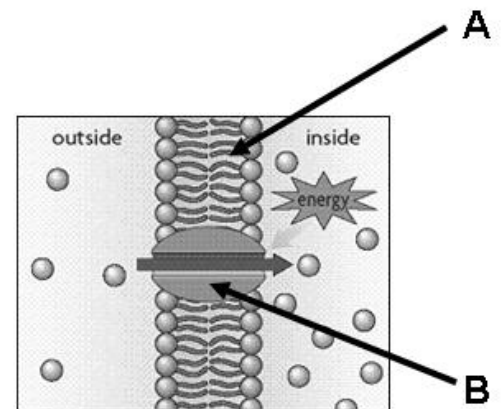
11. What is the **Endosymbiotic Theory**?

## CELL TRANSPORT

1. The diagram to the right shows a typical cell membrane.  
a. What type of **molecules** make up the cell membrane (**part A**)?

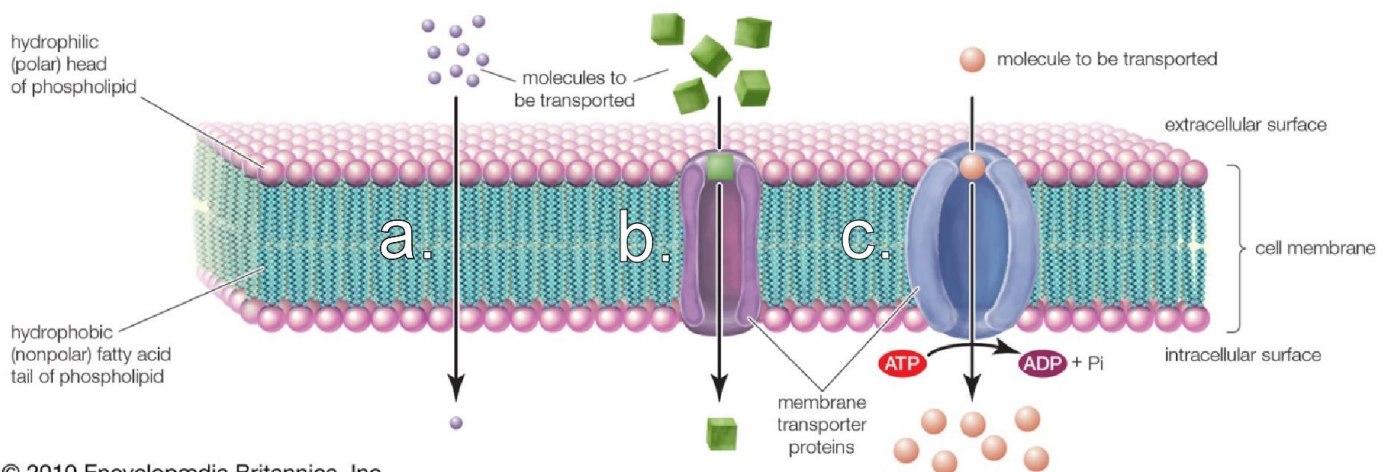
b. What type of organic compound makes up the channels in the cell membrane (**Part B**)?

c. What type of **cell transport** is demonstrated in the diagram and why?

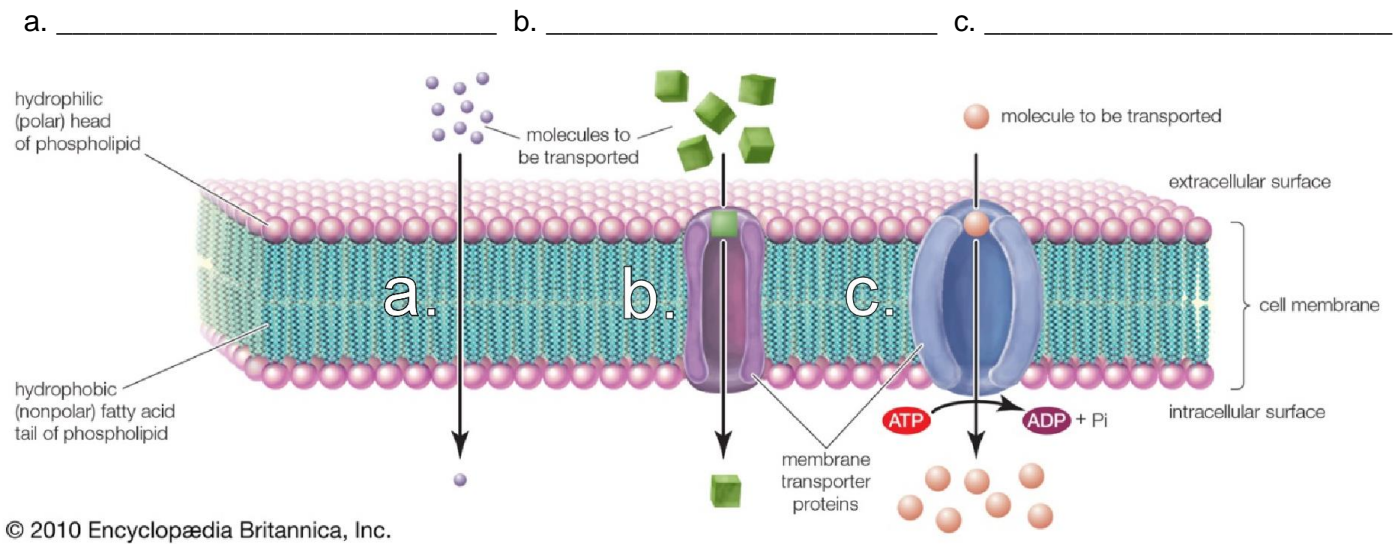


2. Label the diagram below showing the three different forms of cell transport: **facilitated diffusion**, **active transport**, and **diffusion**.

a. \_\_\_\_\_ b. \_\_\_\_\_ c. \_\_\_\_\_



3. Classify the 3 modes of cell transport seen above as either “active transport” or “passive transport”.

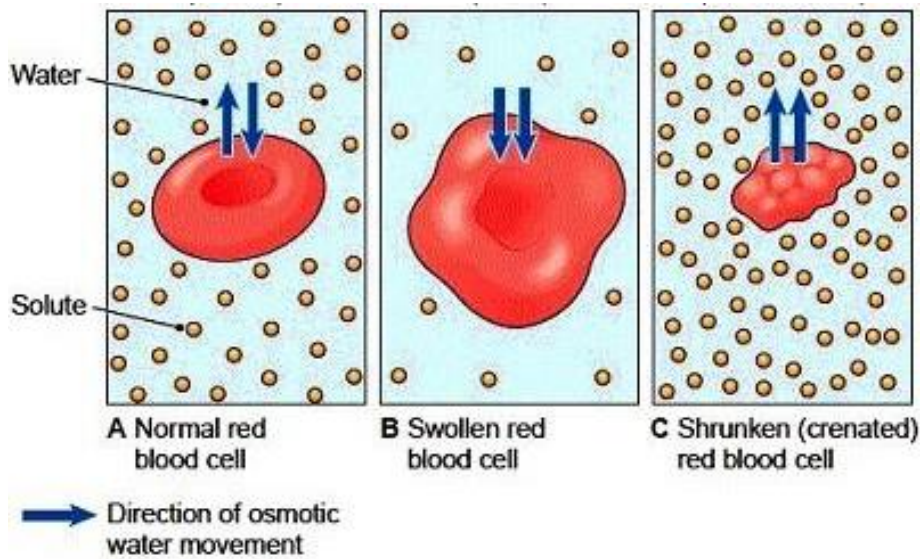


4. What is **endocytosis** and **exocytosis**? Is it active or passive transport?

5. What determines whether something will move by way of **diffusion**? (*Include the importance of the “concentration gradient”.*)

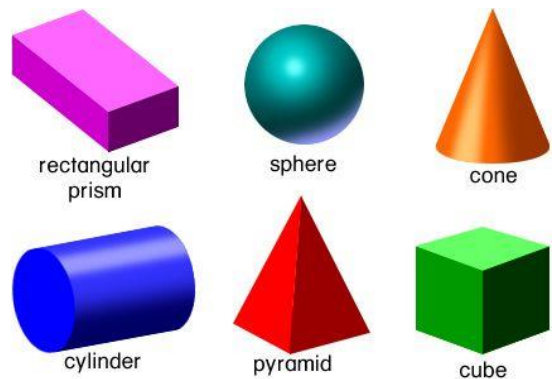
6. What is meant by the terms: **isotonic**, **hypertonic**, and **hypotonic**?

7. Which of the following images are: **isotonic**, **hypertonic**, and **hypotonic**? Label them



8. What is the surface to volume ratio of a spherical cell with a diameter of 4 cm? (HINT: sphere surface area =  $4\pi r^2$  and sphere volume =  $\frac{4}{3}\pi r^3$ )

9. Which of the following **cell shapes** would be ideal for long cells such as skeletal muscle cells? Why? (Hint: surface area to volume ratio)



10. Which **cell shape** would be good for cells like fat cells or skin cells?