

Key

Name _____

Period _____ Date _____

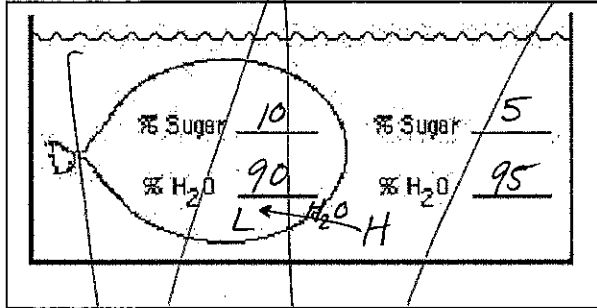
Cell Processes Review

1. When is your test? MONDAY 11/23 When is this review due? FRIDAY 11/20
 .. If you are going to be absent, when should you take the test? FRIDAY 11/20 review due? Thursday 11/19

Passive & Active Transport If the statement is true, write the word TRUE. If it is false, change the underlined word to make the statement true.

3. True If a membrane is selectively permeable, it lets some but not all substances pass through.
 4. False Diffusion is the process by which molecules move from an area of high concentration to low concentration.
 5. False The process by which water moves across a selectively permeable membrane is called osmosis.
 6. False Diffusion and osmosis are both types of active transport.
 7. False Active transport requires energy.

8. A bag with a 10% sugar solution is placed in a container with a 5% sugar solution. Work the OSMOSIS problem. Fill in the % blanks. Write the HIGH and LOW and draw the ARROW.



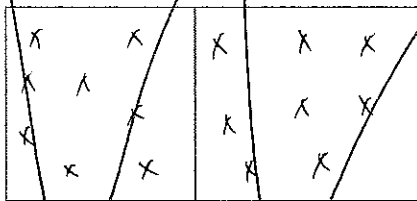
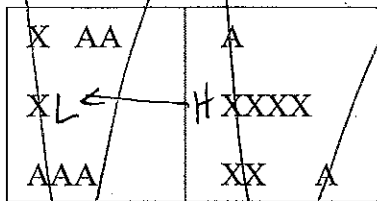
The bag will swell

MATCHING

- C 9. Turgor
B 10. Plasmolysis
D 11. Exocytosis
A 12. Endocytosis

- A. the cell membrane folds inward surrounding material outside the cell to bring it in
 B. the shrinkage of a cell due to loss of water
 C. the "filled" state of a plant cell
 D. packages of materials inside the cell fuse with the cell membrane to release the contents outside the cell

13. Diffusion Problem. The membrane is permeable to X.



Chemistry

- A 14. The small number that comes after an element that indicates how many atoms are present
C 15. The molecules that start off a chemical reaction. They come before the arrow.
B 16. The large number that is in front of the molecule and indicates how many molecules are present
D 17. The molecules that are produced in a chemical reaction. They come after the arrow.

- A. Subscripts
 B. Coefficients
 C. Reactants
 D. Products

18. In $3PO_4$ What is the coefficient? 3 subscript? 4 # Phosphorous? 3 #Oxygen? 12

19. In $2C_6H_{12}O_6$ What is the coefficient? 2 subscript? 6, 12 #Carbon? 12 # Hydrogen? 24 # Oxygen? 12

20. In $N_2 + 3F_2 \rightarrow 2NF_3$ What are the reactants? N_2 & $3F_2$ products? $2NF_3$

Photosynthesis

21. Where does photosynthesis occur in the cell? chloroplast

C 22. H_2O is a reactant of photosynthesis. It enters the leaf through this part of the plant

D 23. The light energy that is a reactant of photosynthesis

A 24. The pigment that is present in chloroplasts that captures the sunlight

B 25. The underside of a leaf that allows CO_2 to enter plant cells

E 26. The "food" that plants make. Chemical formula is: $C_6H_{12}O_6$

- | |
|----------------|
| A. Chlorophyll |
| B. Stomata |
| C. Roots |
| D. Sunlight |
| E. Glucose |

17. What is the chemical equation of photosynthesis? $6CO_2 + 6H_2O + \text{Sunlight} \rightarrow C_6H_{12}O_6 + 6O_2$

18. What are the 3 reactants of photosynthesis? $6CO_2 + 6H_2O + \text{Sunlight}$

19. What are the 2 products of photosynthesis? $C_6H_{12}O_6 + 6O_2$

Cellular Respiration

20-21. What are the two organelles that cellular respiration occurs in the cell? cytoplasm and mitochondria

D 22. The breaking down of glucose in the presence of oxygen to make ATP

A 23. The first step of cellular respiration which occurs in the cytoplasm

B 24. Cellular energy that we get by breaking down glucose

C 25. The second step of cellular respiration occurring in the mitochondria

- | |
|-------------------------|
| A. Glycolysis |
| B. ATP |
| C. Krebs Cycle |
| D. Cellular Respiration |

26. True or False Cellular Respiration can only occur in animal cells

27. How many ATP are made in cellular respiration in total? 38

28. What is the chemical equation of cellular respiration? $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O + 38 \text{ ATP}$

29. What are the 2 reactants of cellular respiration? $C_6H_{12}O_6 + 6O_2$

30. What are the 3 products of cellular respiration? $6CO_2 + 6H_2O + 38 \text{ ATP}$

Photosynthesis vs. Cellular Respiration Comparison

31. The reactants of Photosynthesis are the products of Cellular Respiration. What are they? CO_2 & H_2O

32. The products of Photosynthesis are the reactants of cellular respiration. What are they? $C_6H_{12}O_6$ & O_2

33. True or False: The chemical equations of Photosynthesis and Cellular Respiration are opposites (except sunlight and ATP).

34. In the M&M activity, were the number of Carbons, Hydrogens, and Oxygens the same on the reactants side as on the products side? yes. Which law does this prove? Law of Conservation of Mass

35. What gets released as waste in Photosynthesis that is a reactant in Cellular Respiration? O_2

Fermentation

36. Fermentation: the process that breaks down $C_6H_{12}O_6$ (glucose) without oxygen

37. Where does fermentation take place? cytoplasm How much ATP is made? 2

38. Fermentation is just like the 1st step of cellular respiration which is called glycolysis

39. What is the chemical equation of lactic acid fermentation: $C_6H_{12}O_6 \rightarrow 6CO_2 + \text{lactic acid} + 2 \text{ ATP}$

40. What is the chemical equation of alcoholic fermentation: $C_6H_{12}O_6 \rightarrow 6CO_2 + \text{alcohol acid} + 2 \text{ ATP}$

41. What type of fermentation involves yeast? alcohol fermentation muscles? lactic acid fermentation