

Photosynthesis (Ch 8) & Cellular Respiration Study Guide (Ch 9)

A) Chapter 8: pages 244-245, #1-4, #10-11, #13-14, #18-22 ANSWERS ONLY – record in the spaces provided below.

1.	10.	18	22.
2.	11.	19	
3.	13.	20	
4.	14	21	

B) Chapter 9: pages 268-269, #1-5, #12-14, #23-25 ANSWERS ONLY – record in the spaces provided below.

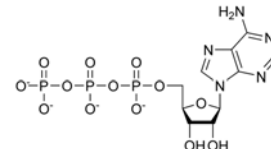
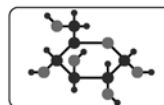
1.	5.	23
2.	12	24
3.	13	25
4.	14	

B) Please answer the questions below.

1. Using a battery analogy, explain the difference between ATP, ADP, and AMP.



2. Compare ATP and glucose in terms of energy storage capacities.



3. How do **HETEROTROPHS & AUTOTROPHS** differ in the way they obtain energy?

4. What is the role/function of chlorophyll in photosynthesis? _____

5. Write the balanced net equation for PHOTOSYNTHESIS. Include the pigment and source of energy necessary for the reaction to occur.

6 What is the main "goal" or product of photosynthesis? _____

7. After the above product is made, what is the name of the process that breaks it down? What kinds of cells perform this process?

→ Process: _____ → Cells: _____

8. Where is energy stored in ATP? _____

9. How is this energy released? _____

10. Where in the chloroplast does the:

a) LIGHT REACTION (Light dependent reaction) occur? _____

b) DARK REACTION (Light Independent reaction/Calvin Cycle)? _____



11. What are the reactants and products of the LIGHT REACTIONS (Light-dependent reactions)?

→ REACTANTS: _____

→ PRODUCTS: _____

12. What are the reactants and products of the DARK REACTIONS (Light Independent reactions/Calvin Cycle)?

→ REACTANTS: _____

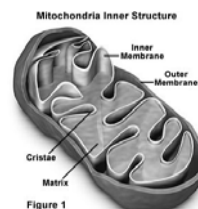
→ PRODUCTS: _____

13. a. What is the electron carrier in photosynthesis? _____

b. What is its function? _____

14. What is the **complete, balanced equation** for CELLULAR RESPIRATION (include # of ATPs).

15. List 3 ways in which the processes of **GLYCOLYSIS** and **RESPIRATION** differ.



16. What are the reactants and products of GLYCOLYSIS?

→ REACTANTS: _____

→ PRODUCTS: _____

17. What are the reactants and products of RESPIRATION (Kreb's and E.T.C.)?

→ REACTANTS: _____

→ PRODUCTS: _____

18. a. What are the 2 electron carriers in cellular respiration? _____

b. Where are they created? _____

19. Why do your muscles burn after strenuous or extended exercise?



20. The process of fermentation is: AEROBIC / ANAEROBIC. (circle one)

21. What are the 2 types of **FERMENTATION**? What is produced in each? What kind of cell / organism performs each type?

Type of Fermentation	Product?	Cell / organism?

22. What are the factors that affect the rate of photosynthesis? How do those factors affect photosynthesis?

Ways to Study/Review

1. Review all **lecture notes** and readings.
2. Answer the questions at the end of EACH section AND chapter.
3. Study with a friend (not just socialize).
4. Look over old study guides.
5. Flashcards
6. Putting lecture notes into your own words
7. Make yourself a test and take it. Also, have a friend make a test too and exchange tests.
8. Come into class with questions!
9. Review a little each day.... Do not cram the night before!



My child has studied this study guide for at least 20 minutes (2 bonus points)

(Parent/guardian signature)