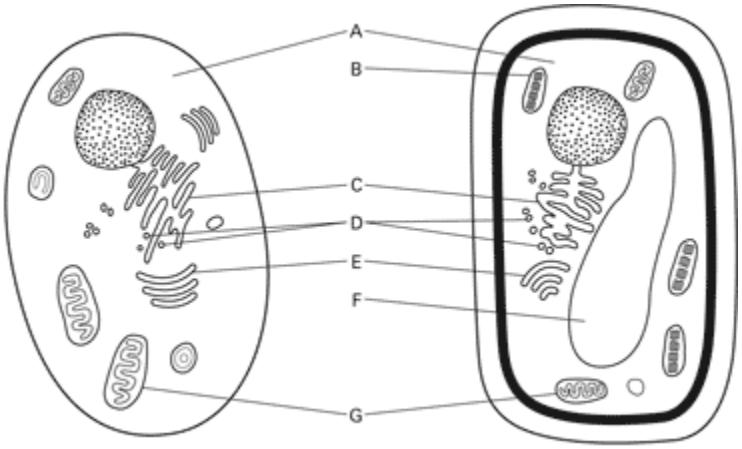
Name _____ Date _____ Period _____

Unit 3 Study Guide

BIOLOGY: UNIT 3 (CELL ENERGY)

Directions: Answer the following questions using your notes and chapter 4 in your textbook. The test will be 40 multiple choice questions covering this material.

1. Answer the following questions using the diagram to the right



a. What is the name of structure **G** and what process takes place there?

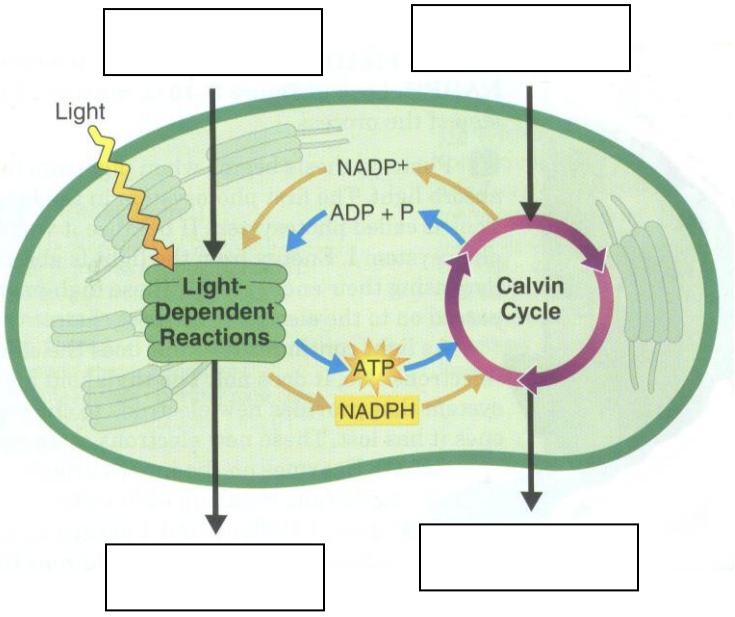
b. What is the name of structure **B** and what process takes place there

c. What is the name of structure **F** and what is the function of this structure?

2. Complete the chart:

Cell structure	Process	Function	Equation
	Cellular respiration		
chloroplast			

3. Label the diagram to the right showing molecules that enter each stage of photosynthesis and what molecules are produced.



4. What is another name for the Calvin Cycle?

5. Where does the light dependent reaction take place?

6. Where does the light **independent reaction** (**Calvin Cycle**) take place?

7. What **energy molecule** enters into the process of **cellular respiration** (the Krebs cycle)?

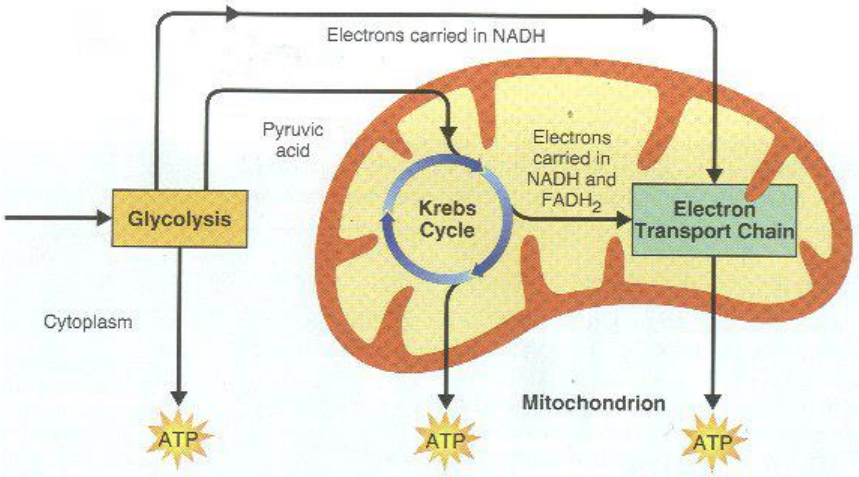
8. Where is the **energy** stored in molecules such as **glucose** or **ATP**?

9. What molecule enters **glycolysis**?

10. What molecules enter the **Krebs cycle** and what molecules are produced?

Enters-

Produced-



11. What molecules enter the **Electron Transport Chain** and which molecules are produced?

Enters-

Produced-

12. How many molecules of **ATP** are produced overall in **Cellular Respiration**? In **Glycolysis**?

13. Name three factors that affect the rate of **photosynthesis**?

a.

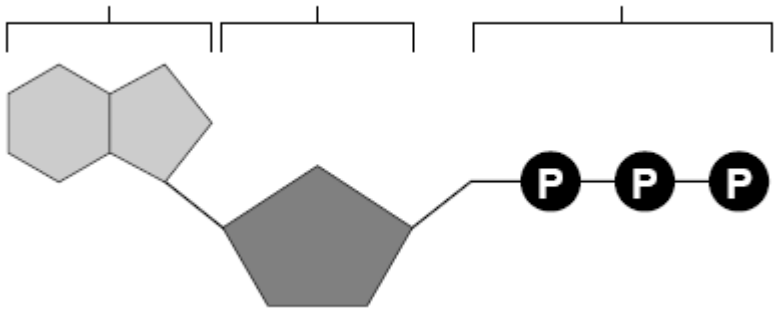
b.

c.

14. **Cellular respiration** is called an **aerobic** process because it requires _____.

15. Which type of **organic compound** found in the food we eat is most commonly broken down to make **ATP**?

16. Identify the parts of an ATP molecule below: (Label **adenine**, **ribose**, and **phosphate molecules**)



17. How are **cellular respiration** and **photosynthesis** almost opposite processes?

18. How is **energy** stored in the **ATP** molecule? How is it released?

19. Where in the **chloroplast** is **chlorophyll** found?

20. What is **chemosynthesis** and where does it occur?

21. What is the correct sequence of stages in **cellular respiration**? (3 stages)

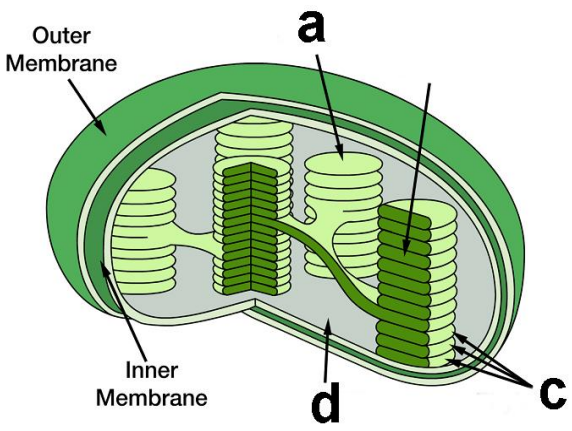
22. Organisms that cannot make their own food and must obtain energy from the foods they eat are called _____.

23. Organisms that can make their own food are called _____.

24. Which **process** is used to produce **beer** and **wine**?

25. What type of **fermentation** takes place in our **muscle cells**?

26. What are the **names** of the following structures in the diagram to the right?



a.

c.

d.

27. What are the <u>reactants</u> of **photosynthesis**?

28. What are the <u>products</u> of **photosynthesis**?

29. What are the <u>reactants</u> of **cellular respiration**?

30. What are the <u>products</u> of **cellular respiration**?

31. What **organelle** carries out the process of **photosynthesis**?

32. What **organelle** carries out **cellular respiration**?

33. Where in the **chloroplast** is **chlorophyll** found?

34. What is another name for the **Calvin cycle**?

35. <u>Where</u> does the process of **glycolysis** take place?

36. What **molecule** <u>enters</u> the process of **glycolysis**? What **molecule** is <u>produced</u>?

37. Why do most **plants** appear <u>green</u>?