Name:_____ Date:_____

Chapter 10 Review

1. Explain the relationship between the light reactions and the Calvin cycle in photoautotrophs (organisms that produce their own food from light energy).

2. Compare the electron transport chain of the mitochondrion with the electron transport chain of the chloroplast. Provide at least three differences.

3. Why are plants green in color?

4. Compare and contrast cyclic and non-cyclic photophosphorylation. Include the products of each and the fates of those products.

5. Why is water necessary for photosynthesis?

6. Why is oxygen produced during the light reactions?

7. What happens during the Calvin cycle? How does the Calvin cycle depend on the Light reactions?

8. Explain the function of Ribulose BisPhosphate Carboxylase (aka Rubisco) in the Calvin Cycle.

9. What is G3P?

10. Looking at the net equation for photosynthesis of one molecule of glucose, what molecules are oxidized, and what molecules are reduced?

11. Describe/sketch the starting materials, end products and eventual fates of all of the molecules used and produced in the light reactions of photosynthesis and in the Calvin cycle.