**Photosynthesis Practice Questions (Review) IB Biology**

1. D.

2. a) Thylakoid membrane.

b) Go back and find your chromatography worksheet that has the absorption spectrum and action spectrum on it and you’ll see that the action spectrum follows (traces) the absorption spectrum (similar to multiple choice #12 later on down the packet).

c) See our notes from class as we went over this essay since it’s on the test : )

3. C. This question is tricky b/c it’s JUST talking about converting carbon dioxide into glucose; the Calvin cycle does not require any light, so those two are out; oxygen is also not part of the Calvin Cycle.

4. A. The “flow of electrons from carrier to carrier” is how the ETC transfers the energy to run the pumping of H+ into the thylakoid.

5. a) Stroma

b) Electrons that are excited by light energy are transferred to protein in the electron transport chain. These proteins transfer their energy to run the H+ (proton) pump, which pumps H+ ions into the thylakoid space inside the thylakoid, generating a greater concentration of H+ inside the thylakoid compared to outside.

c) Leaves that are closer to the outside of the tree would have greater access to light and therefore absorb more light than those leaves positioned more toward the inside of the tree where they may be shaded/covered by other leaves on the tree. Since light is used to start the process of photosynthesis, the leaves on the outside of the tree would photosynthesis at a greater rate. Also, the upper (top) portion of the leaf that is receiving the greater amount of light would have cells that photosynthesize more than those on the bottom of the leaf.

6. a) Look back to where we drew and labeled the chloroplast in your notes on one of the early days of class.

b) Look back at the table we created in class today to answer this one!

7. B.

8. C.

9. A.

10. D.

11. A. Biomass increase is just how much the plant grows in mass; much of the glucose that is made by a plant is not just used for “food” or chemical energy that is transferred into ATP…but much of the glucose is used to actually build more cell walls (cells) and other larger and new structures of the plant that would in turn make the plant larger/taller/longer/etc. Direct measurements are those directly related to the products (oxygen and glucose); indirect are those that are not as directly related to the products (biomass, size, length, etc.).

12. A.

13. I.

14. B.