**Extension Assignment: Outcomes 7 to 10**

**Biology 11 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_**

**Value = \_\_\_\_\_\_\_\_\_/25**

**Directions:** Complete the below questions on your own paper making sure to number each question and make them easy to read. When you are done, hand your work including this sheet into the inbox for marking.

1. Explain how Cystic Fibrosis affects the cell’s membranes. Explain what side effects the mutation in the membrane causes a CF person to have. **(2)**

1. Create a diagram showing ATP and ADP that explains how energy is used from ATP. **(2)**
2. Explain how chlorophyll contributes to the process of photosynthesis. Where is this substance found (be specific)? **(2)**
3. What are NADP+ and NAD+ and what do they do in the processes of photosynthesis and cellular respiration? **(1)**
4. Explain what happens during the 2 stages of photosynthesis: light dependent reactions and Calvin cycle. Give as much detail as you can. **(4)**
5. What are 3 factors that could affect the rate at which photosynthesis occurs? **(3)**
6. Explain what happens during the 3 stages of photosynthesis: glycolysis, Krebs cycle and electron transport chain. **(6)**
7. What is the advantage of cells using 3 steps to break bonds and create energy? Why not do it all at once? **(1)**
8. How efficient is the overall process in creating energy, how much of the potential energy in glucose is lost? Where does the ‘lost’ energy from glucose go? **(2)**
9. Explain how fermentation works and what substances can be produced from it. **(2)**