Chapter 7 Cellular Respiration

1. Most energy from an original carbon glucose molecule being broken down to CO2 with net ATP -post glycolysis but before electron transport chain - is in the form of (NADH or NAD+)
2. Name the TWO types of electron carriers produced in the citric acid cycle.
3. What process in eukaryotic cells will proceed with or without O2?
4. Name the process that produces the MOST ATP when glucose is completely oxidized to CO2 and H2O.
5. What is the primary role of oxygen in cellular respiration?
6. What is the difference between catabolic and anabolic pathways?
7. Write out the formula for cellular respiration. What is oxidized? What is reduced?
8. When NAD+ gains a H atom, the molecule becomes (oxidized, reduced)
9. When an athlete exhausts his or her ATP supply, what likely happens?
10. What are ALL products produced by glycolysis?
11. List the sequence (in order) of complete oxidation process of glucose (start to finish)
12. Why is glycolysis considered to be one of the FIRST metabolic pathways to evolve?

Chapter 8 Photosynthesis

1. The process of photosynthesis most likely originated in (prokaryotes or eukaryotes)
2. Name the location of chlorophyll in autotrophic bacteria.
3. Plant photosynthesize in the (light or dark), but respire in (light or dark or both)
4. When oxygen is released due to photosynthesis, it is a direct by product of \_\_\_\_\_\_\_\_



1. What wavelength of light is the LEAST effective driving photosynthesis?
2. What colors are the MOST effective for driving photosynthesis?
3. What is the difference between autotrophs and heterotrophs? Be specific.
4. Why do the leaves of deciduous trees change colors in autumn?
5. As electrons are passed through the electron carriers with photosystem II, the lose energy. What happens to this energy?
6. In photosynthesis, chemiosmosis moves proteins from \_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
7. Name the TWO products of light reactions that are used in Calvin Cycle.
8. What is the primary function of the Calvin Cycle?