BIOL 1 > Practice Topics *for* Essay Questions > Lecture Exam #2 (Sp2021) >> Mar.04.2021

1. Explain the difference between competitive and noncompetitive inhibitors
2. Discuss the energy yield of glycolysis from one molecule of glucose
3. Why is the decarboxylation step required between glycolysis and the citric acid cycle?
4. Oxidative Phosphorylation I: Explain the role of the electron transport chain
5. Oxidative Phosphorylation II: Discuss the mechanism of action of the ATP synthase
6. Explain the roles of the light reactions of photosynthesis
7. Compare and contrast between linear and cyclic electron flow during the light reactions
8. Discuss the function of the Calvin cycle; differentiate between Calvin and citric acid cycles
9. Elaborate on the step called reception during cell-cell communication
10. Discuss the step called transduction during cell-cell communication
11. Explain the consequences of the step called response during cell-cell communication
12. Provide a detailed discussion of the 3 stages of interphase
13. Compare and contrast the 2 stages of the mitotic phase
14. Explain the mechanism of action of the G_2 checkpoint
15. Compare and contrast between mitosis, meiosis I, and meiosis II