**Exam 2 Part A. Your Name:**

**Please TYPE your answers in an MS Word Document. When complete send your exam answers as an ATTACHMENT to an Email to Dr. Kravitz. Exam 2 Part A is due Friday February 19 by 12midnight. No late papers accepted. Also, academic honesty is totally active here. Please do your OWN work! Use AS MUCH SPACE as you wish in your answers!**

*This EXAM is open note. Please use the WEB LINK to guide your answers.*

**A. Please answer the following questions (86 pts total)**

1. What is metabolism? (3 pts)

2. What type of reactions form muscle? (3 pts)  
3. What type of reactions breakdown foodstuffs? (3 pts)  
4. Why is ATP the body’s energy molecule? (3 pts)  
5. What are the three energy systems that supply ATP? (3 pts)  
6. What does hydrolysis of ATP mean? (3 pts)  
7. ATP and CRP are referred to as what energy system? (3 pts)  
8. What are enzymes? (3 pts)   
9. What are six characteristics of enzymes? (9 pts)   
10. What is the ‘induced fit’ role of enzymes? (3 pts)  
11. Name three characteristics of coenzymes? (6 pts)  
12. What is a substrate? (3 pts)  
13. What is the muscle’s favorite carbohydrate? (3 pts)

14. Excess glucose is stored as \_\_\_\_\_\_\_? (3 pts)

15. What is glycogenolysis? (3 pts)

16. What is a metabolic pathway? (3 pts)

17. Please explain what oxidation means in metabolism? (3 pts)

18. Please explain what reduction means in metabolism? (3 pts)

19. Name 2 coenzymes of metabolism. Please explain what oxidation means in metabolism? (3 pts)

20. What are the FOUR stages of carbohydrate metabolism (8 pts)

21. At what step is the only REDOX reaction in glycolysis.? (3 pts)

22. What does allosteric mean? (3 pts)

23. Name a major allosteric enzyme in glycolysis we have discussed. What step of glycolysis does this enzyme work? (6 pts)

24. What is the chemical formula for glucose (C…H…O…)? (3 pts)

25. In glycolysis there are 3 one-way reactions. At what steps do they occur? (3 pts)

**B. Please draw and write out Glycolysis just as we did in the Youtube video. Take a PICTURE of your Glycolysis diagram and input into the MS Word document or attach to your email. (40 pts)**

**C. What is the NET Yield of Glycolysis (how many ATP, H20, Pyruvate, and NADH+H) (12 pts)**

**END**