**Exam 1 Part B. 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 1 Part B is due Friday January 29 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 August 24-August 28 LINK to guide your answers.*

**A. Please answer the following in your own words. (57 pts)**

1. What is the chemical composition of skeletal muscle? (6 pts):

2. Name at least 3 other substances in skeletal muscle. (3 pts):

3. What is another name for muscle fiber? (3 pts):

4. Is the sarcomere OVER or UNDER the endomysium? ( 3 pts):

5. In anatomy, what does ‘Gross’ structure mean (3 pts):

6. How many nuclei can a skeletal muscle fiber potentially have? (3 pts):

7. What does the term polarized mean in exercise physiology? (3 pts):

8. Why do exercise physiologists define the gel of a muscle cell as the Sarcoplasm and not Cytoplasm? (3 pts):

9. What researcher is recognized for first introducing the term ‘eXcentric’? (3 pts):

10. What does sarco mean? (3 pts):

11. What type of track activities EMPHASIZE the Type I muscle fibers? (3 pts):

12. What type of track activities EMPHASIZE the Type IIa muscle fibers? (3 pts):

13. What type of track activities EMPHASIZE the Type IIx muscle fibers? (3 pts):

14. What is the motor unit? (3 pts):

15. Explain the All-or-None response of motor units (6 pts)

16. What happens to a skeletal muscle during a concentric action? (3 pts):

17. What happens to a skeletal muscle during an eccentric action? (3 pts):

**B. Draw and label the Gross Structure of muscle. Please take a PICTURE of your diagram and input into the MS Word document or attach to your email. (15 pts)**

**C. Draw and label a sarcomere. Please take a PICTURE of your diagram and input into the MS Word document or attach to your email? (20 pts)**

**D. Answer the following questions about skeletal muscle actions within the sarcomere. Choose from the following three answers: Come Together; Move Apart; No Change (32 pts)**

1. During a concentric action what happens to the Z-lines? (4 pts)

2. During a concentric action what happens to the H-zone? (4 pts)

3. During a concentric action what happens to the A-band? (4 pts)

4. During a concentric action what happens to the I-band? (4 pts)

5. During an eccentric action what happens to the Z-lines? (4 pts)

6. During an eccentric action what happens to the H-zone? (4 pts)

7. During an eccentric action what happens to the A-band? (4 pts)

8. During an eccentric action what happens to the I-band? (4 pts)

**END**