Study Guide Lab Exam 2

1. This lab exam covers Exercises 7 – 12.

2. Study the quiz exams on skeleton and muscles.

3. Study the study guides on bones, axial skeleton and Appendicular skeleton; and muscles.

4. Study the lecture exam 2.

5. Following muscle relationships are important:
   a. Elbow / forearm
      i. biceps brachii: flexor and supinator of elbow; brachialis and brachioradialis act as synergists for elbow flexion; triceps brachii: antagonist to biceps brachii and acts as elbow extensor.
   b. Arm / shoulder
      i. Pectoralis major: arm / shoulder flexer brings it forward; Latissimus dorsi: is antagonist and acts as extensor.
      ii. Deltoid: is prime mover for arm abduction; pectoralis major and latissimus dorsi are antagonists and act as Adductors for arm / shoulder.
   c. Hip / thigh
      i. Rectus femoris: is flexor and Gluteus maximus is extensor.
      ii. Gluteus medius is Abductor and Adductor longus (groups) is adductor.
   d. Knee / leg
      i. Quadriceps Femoris includes Rectus femoris, vastus medialis, vastus intermedius and vastus lateralis. Rectus femoris is prime mover for knee extension and vastus muscles are its synergists because they help rectus femoris in extending the leg/ knee.
      ii. Hamstring muscles include Biceps femoris and 2 other muscles (semimembranosus and semitendinosus). Biceps femoris is prime mover and others are synergists for knee flexion.
      iii. Sartorius and Gluteus maximus act as rotators of thigh.
   e. Ankle / foot
      i. Gastrocnemius and Soleus contract and cause Plantar flexion; Tibialis anterior is the antagonist and causes dorsiflexion of ankle.
   f. Neck
      i. Sternocleidomastoid both contract and cause neck flexion; contraction of single sternocleidomastoid causes rotation of neck on that side.
      ii. Trapezius contracts and causes extension and hyperextension of neck.
g. **Back or Spine**

   i. Rectus Abdominis is flexor and Erector Spinae group is extensor.

6. Study these muscles with their actions but if we marked other muscles I can ask a question about it.

7. Now you are familiar with the lab examination method.

8. There will be 31 stations with 1 or 2 questions on a card on each station.

9. Most will have a bone or a muscle marked with a sticky note. You need to identify the part. In case os a bone I can ask you to identify left or right side of bone. I can ask you to name a specific bone process in it. I can ask about articulation of the bone to other bones. Most question will be the ones we covered in class repeatedly.

10. I can ask you about origins and insertions of Biceps brachii and triceps brachii. You need to tell me the names of bones on which the muscle is inserted or originated. You do not need to identify the particular process of the bone. You will tell me biceps brachii has 2 origins on Scapula and one insertion on radius. Triceps brachii has 2 origins on humerus and 1 on scapula and is inserted on ulna.

11. There will be some mcq or completion questions also on some stations.

12. You do not need a scantron for this test. I will provide the sheets. You will attempt it with a pen.