**11. The Muscular System homework**

Name and date submitted (3 pts):

Instructions: Create space in the document below and respond to all questions. Turn in your completed work by the due date.

(25 questions, 100 points)

Muscle attachment sites

1. Ordinarily, the attachment point of a muscle to the stationary bone is called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. The attachment point of a muscle to the movable bone is called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. T/F: Tendons connect muscle-to-bone.
4. T/F: Ligaments connect bone-to-bone.

Levers and leverage

1. In producing movements, bones act as \_\_\_\_\_\_\_\_\_\_\_, and joints function as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. When the forearm is raised, what joint functions as the fulcrum?
3. An example of a first-class lever is the head resting on the vertebral column. In this example
	1. What is the fulcrum (use correct anatomical terms)
	2. What is the effort
	3. What is the load
4. An example of a second-class lever is when you stand up on your toes. In this example
	1. What is the fulcrum (use correct anatomical terms)
	2. What is the effort
	3. What is the load
5. An example of a third-class lever is the bones of the arm and forearm. In this example
	1. What is the fulcrum (use correct anatomical terms)
	2. What is the effort
	3. What is the load

Coordination among muscles

1. Describe the functions of the ‘prime mover’ and ‘antagonist’ muscles, and use an example, in 2-3 well written, complete sentences.
2. Likewise, describe the function of a ‘synergist’ muscle, and use an example.
3. Likewise, describe the function of a ‘fixator’ muscle, and use an example.

Benefits of stretching exercises

1. Name and describe four (4) benefits of stretching
	* 1.
		2.
		3.
		4.

How skeletal muscles are named

1. Select 10 muscles in Figure 11.3 and identify the features on which their names are based. Use Table 11.2 as a key.
	1. Example: Biceps brachii Biceps = having 2 points of origin, brachii = arm

Principal skeletal muscles

1. Exhibit 11.1 – Muscles of facial expression: Describe the origin, action, and innervation of
	1. Orbicularis oris
	2. Buccinator
	3. Orbicularis oculi
2. Exhibit 11.2 – Muscles that move the eyeballs:
	1. Which muscles contract and relax in each eye as you gaze to your left without moving your head? Contract \_\_\_\_\_\_\_\_\_\_\_\_ Relax \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. Describe the causes and symptoms of strabismus, using correct anatomical terms.
3. Exhibit 11.3 – Muscles the move the jaw: What would happen if you lost tone in the masseter and temporalis muscles?
4. Exhibit 11.6 – Muscles of the neck: What muscles to you contract to signify “yes” and “no”? (you may need to use the Internet for this)
5. Exhibit 11.7 – Muscles of the abdomen:
	1. Which muscles do you contract when you forcefully exhale to blow out candles on a birthday cake?
	2. Describe the causes and symptoms of a hernia, using correct anatomical terms.
6. Exhibit 11.11 – Muscles of the chest that move the shoulder girdle: What muscles are used to
	1. Raise your shoulders
	2. Join your hands behind your back
	3. Join your hands in front of your chest
7. Exhibit 11.12 – Muscles of the chest that move the humerus: Why are the two muscles that cross the shoulder joint called the axial muscles, and the seven others called scapular muscles?
8. Exhibit 11.13 – Muscles of the arm that move the forearm: Flex your arm….
	1. Which group of muscles is contracting?
	2. Which group of muscles must relax so that you can flex your arm?
9. Exhibit 11.16 – Muscles of the neck and back:
	1. What is the largest muscle group of the back? E\_\_\_\_\_\_\_\_\_\_ S\_\_\_\_\_\_\_\_\_\_\_
	2. Describe the causes and symptoms of back injury, using correct anatomical terms.
10. Exhibit 11.17 – Muscles that move the femur (thigh bone):
	1. What is the origin of most muscles that move the femur?
	2. Describe the causes and symptoms of a groin pull, using correct anatomical terms.
11. Exhibit 11.18 – Muscles that move the tibia and fibula (leg bones):
	1. The quadriceps femoris (“Quads”) is the largest muscle group in the body. The muscle group is comprised of four separate muscles:
		1.
		2.
		3.
		4.
	2. Describe the causes and symptoms of a pulled hamstring, using correct anatomical terms.
	3. Describe the causes and symptoms of a charley horse, using correct anatomical terms.