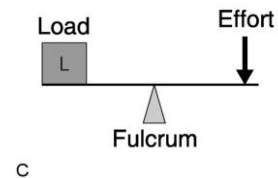
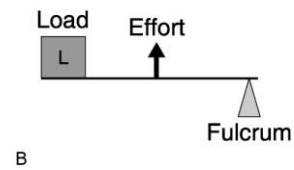
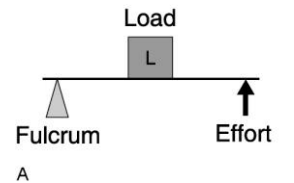


HANDOUT

Chapter 10 - The Muscular System

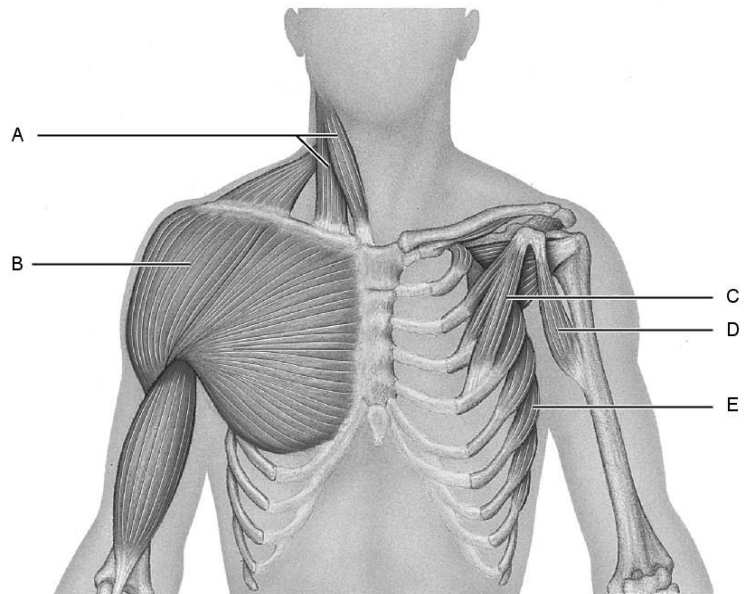
Match the following to the corresponding levers systems to the type of lever shown on the right:

- 1) Second-class lever.
- 2) Humerus—ulna joint.
- 3) Tibia—calcaneus joint.
- 4) Atlanto-occipital joint.
- 5) First-class lever.
- 6) The action of lifting a shovel of snow.



Match the following muscles to the corresponding muscle in the diagram on the right:

- 7) Deltoid
- 8) Serratus anterior.
- 9) Sternocleidomastoid
- 10) Pectoralis minor.
- 11) Coracobrachialis.



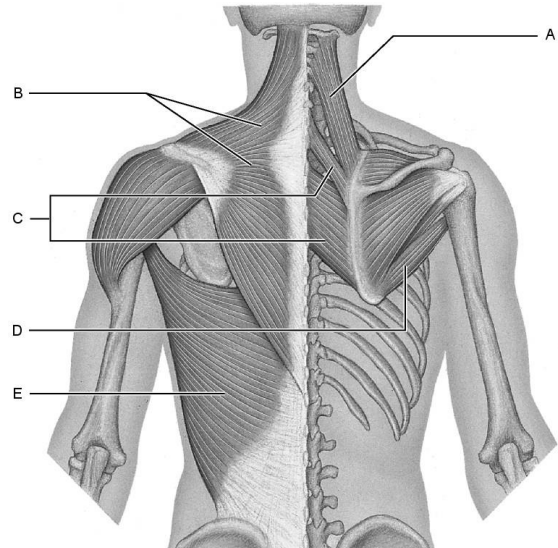
ANP1106 Study Group #4

Week of Feb. 9th – 13th, 2015

Study Group Leaders: Sadad, Rizwan & Julie

Match the following muscles to the corresponding muscle in the diagram on the right:

- 12) Trapezius muscle.
- 13) Teres major muscle.
- 14) The latissimus dorsi.
- 15) Rotates scapula.
- 16) Retract scapula.
- 17) Levator scapulae.



Match the following actions to the muscles on the right:

- 18) Flexes the wrist.
- 19) Slow-acting finger flexor.
- 20) Powerful wrist flexor that also stabilizes the wrist during finger extension.
- 21) Extends and abducts the wrist.
- 22) Extends the thumb.

A) Extensor pollicis longus and brevis
B) Flexor carpi ulnaris
C) Flexor digitorum profundus
D) Extensor carpi radialis longus and brevis

Match the following actions to the muscles on the right:

- 23) Muscle that opposes and reverses the action of another muscle.
- 24) Muscle that stabilizes the origin of another muscle.
- 25) Muscle that is primarily responsible for bringing about a particular movement.
- 26) Muscle that aids another by promoting the same movement.

A) Fixator
B) Antagonist
C) Synergist
D) Agonist

ANP1106 Study Group #4

Week of Feb. 9th – 13th, 2015

Study Group Leaders: Sadad, Rizwan & Julie

True/False Questions

- 27) A pair of tweezers is a good example of a second-class lever.
- 28) Both first- and second-class levers operate at a mechanical disadvantage.
- 29) Although all skeletal muscles have different shapes, the fascicle arrangement of each muscle is exactly the same.
- 30) Muscles are only able to pull, they never push.
- 31) Regardless of type, all levers follow the same basic principle: effort farther than load from fulcrum = mechanical advantage; effort nearer than load to fulcrum = mechanical disadvantage.
- 32) The muscle that prevents the biting of the cheek when chewing is the buccinator.
- 33) Muscles that help maintain upright posture are fixators.
- 34) Deep muscles of the thorax promote movements for breathing.
- 35) The deltoid is a prime mover of the arm that acts in adduction.
- 36) The soleus is a synergist of the gastrocnemius during plantar flexion.
- 37) Muscles that help to maintain posture are often called synergists.
- 38) In order to propel food down to the esophagus, the pharyngeal constrictor muscles are used.
- 39) The major head flexors are the sternocleidomastoid muscles, with the help of the muscles attached to the hyoid bone.
- 40) The arrangement of a muscle's fascicles determines its range of motion and power.
- 41) Muscle power does not depend on the direction of the fascicles.
- 42) The calcaneal tendon (Achilles tendon) is the largest, strongest tendon in the body.
- 43) Electromyography is the recording and interpretation of graphic records of the electrical activity of contracting muscles.
- 44) The broadest muscle of the back is the latissimus dorsi.
- 45) Muscle spasms of the back often are due to the erector spinae contraction.
- 46) Muscles connecting to the hyoid bone are important for swallowing and speech.
- 47) The muscles of facial expression insert into skin or other muscles, not bones.
- 48) Most superficial thorax muscles are extrinsic shoulder muscles.

ANP1106 Study Group #4

Week of Feb. 9th – 13th, 2015

Study Group Leaders: Sadad, Rizwan & Julie

ANSWER KEY

Chapter 10 - The Muscular System

- | | |
|-------|-----------|
| 1) A | 27) FALSE |
| 2) B | 28) FALSE |
| 3) A | 29) FALSE |
| 4) C | 30) TRUE |
| 5) C | 31) TRUE |
| 6) B | 32) TRUE |
| | 33) TRUE |
| 7) B | 34) TRUE |
| 8) E | 35) FALSE |
| 9) A | 36) TRUE |
| 10) C | 37) FALSE |
| 11) D | 38) TRUE |
| | 39) TRUE |
| 12) B | 40) TRUE |
| 13) D | 41) TRUE |
| 14) E | 42) TRUE |
| 15) B | 43) TRUE |
| 16) C | 44) TRUE |
| 17) A | 45) TRUE |
| | 46) TRUE |
| 18) B | 47) TRUE |
| 19) C | 48) TRUE |
| 20) B | |
| 21) D | |
| 22) A | |
| | |
| 23) B | |
| 24) A | |
| 25) D | |
| 26) C | |