

Study Guide for Module 5

1. Define the following terms:

- Sarcomere
- Neuron
- Synapse
- Neurotransmitter
- Motor unit
- All-or-none law of skeletal muscle contraction
- Subthreshold stimulus
- Threshold stimulus
- Submaximal stimulus
- Maximal stimulus
- Muscle tone

2. What are the four major functional characteristics of muscle tissue?

3. What are the three types of muscle tissue?

4. List the five structures that make up a whole muscle:

5. Draw and label the parts of a sarcomere.

6. Draw and label the parts of a neuromuscular junction.

7. What is the function of acetylcholinesterase?

8. Describe one cycle of sarcomere contraction (Sliding Filament Theory)

9. What is wrong in the sarcomere if a muscle can neither contract nor relax?

10. When a muscle fiber relaxes, does it automatically stretch back to its resting size?

11. When we breathe hard after we are finished exercising, what two things is the increased oxygen supply doing for the muscle fiber?