

Name: \_\_\_\_\_

Date: \_\_\_\_\_

# THE MUSCULAR SYSTEM

Answer the questions below!

1. List four functions of the muscular system!

- Movement
- Maintaining posture
- Stabilizing joints
- Generating heat.

2. What is a sarcomere and why is it important in muscle contraction?

A sarcomere is the basic contractile unit of a muscle fiber, where actin and myosin filaments slide past each other to shorten the muscle and produce contraction.

3. What is the sliding filament theory?

The sliding filament theory explains that during muscle contraction, actin filaments slide past myosin filaments within each sarcomere, causing the muscle fiber to shorten and generate force.

4. What is muscle tone and why is it important?

Muscle tone is the low-level, continuous contraction in muscles that helps maintain posture and keeps muscles ready for action.

5. What causes muscle fatigue?

Muscle fatigue occurs when muscle fibers can no longer contract effectively due to ATP depletion, accumulation of lactic acid, and other metabolic changes.

6. What is muscular dystrophy?

Muscular dystrophy is a genetic disorder characterized by progressive weakening and degeneration of skeletal muscles.