**Muscle contraction**

***Activity 1- Muscle structure***

Below is a diagram of the ultrastructure of a muscle fibre.

“Skeletal Muscle" by Bruce Blaus. Wikiversity Journal of Medicine. - CC BY 3.0 via Wikimedia Commons - [http://commons.wikimedia.org/wiki/File:Blausen\_0801\_SkeletalMuscle.png#mediaviewer/](http://commons.wikimedia.org/wiki/File%3ABlausen_0801_SkeletalMuscle.png#mediaviewer/)File:Blausen\_0801\_SkeletalMuscle.png

Describe and explain the functions of each of the four parts of the muscle fibre shown in the diagram above.

………………………………………………………………………………………………………………………………………………

………………………………………………………………………………………………………………………………………………

………………………………………………………………………………………………………………………………………………

……………………………………………………………………………………………………………………………………………….

……………………………………………………………………………………………………………………………………………….

……………………………………………………………………………………………………………………………………………….

………………………………………………………………………………………………………………………………………………

………………………………………………………………………………………………………………………………………………

………………………………………………………………………………………………………………………………………………

###### *Activity 2 – Sarcomeres and muscle contractions*

The diagram below shows a sarcomere.

1. Label the light and dark bands on the diagram.

2. Explain why the bands look light, or dark on an electron microscope image.

………………………………………………………………………………………………………………………………………………………..

………………………………………………………………………………………………………………………………………………………..

………………………………………………………………………………………………………………………………………………………..

………………………………………………………………………………………………………………………………………………………..

This diagram shows a sarcomere in another muscle myofibril.

3. Distinguish between the two electron microscope images.

………………………………………………………………………………………………………………………………………………………..

………………………………………………………………………………………………………………………………………………………..