**1.** What is indicated by the letters X, Y and Z?



|  |  |  |  |
| --- | --- | --- | --- |
|  | **X** | **Y** | **Z** |
| A. | sarcomere | myosin filaments | actin filaments |
| B. | sarcomere | actin filaments | myosin filaments |
| C. | dark band | myosin filaments | actin filaments |
| D. | dark band | actin filaments | myosin filaments |

(Total 1 mark)

**2.** (a) Label the parts of the following micrograph of the striated muscle.



[Coen A.C. Ottenheijm, Leo M.A. Heunks and Richard P.N. Dekhuijzen(2008) Diaphragm adaptations in patients with COPD. \_Respiratory Research\_, 9(12), doi:10.1186/1465-9921-9-12. © 2008 Ottenheijm \_et al.\_; licensee BioMed Central Ltd.]

I. ..................................................................................................................................

II. .................................................................................................................................

III. ................................................................................................................................

(3)

(Total 4 marks)

**3.** What does label X indicate?



A. Sarcolemma

B. Sarcomere

C. Sarcoplasmic reticulum

D. Endoplasmic reticulum

(Total 1 mark)

**4.** What structure within muscle tissue is surround by membrane and has multiple nuclei?

A. Muscle bundle

B. Muscle fibre

C. Myofibril

D. Sarcomere

(Total 1 mark)

**5.** (a) Draw a labelled diagram to show the structure of a skeletal muscle sarcomere.

(3)

(b) Outline the role of myoglobin in muscle fibres.

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(2)

(Total 5 marks)