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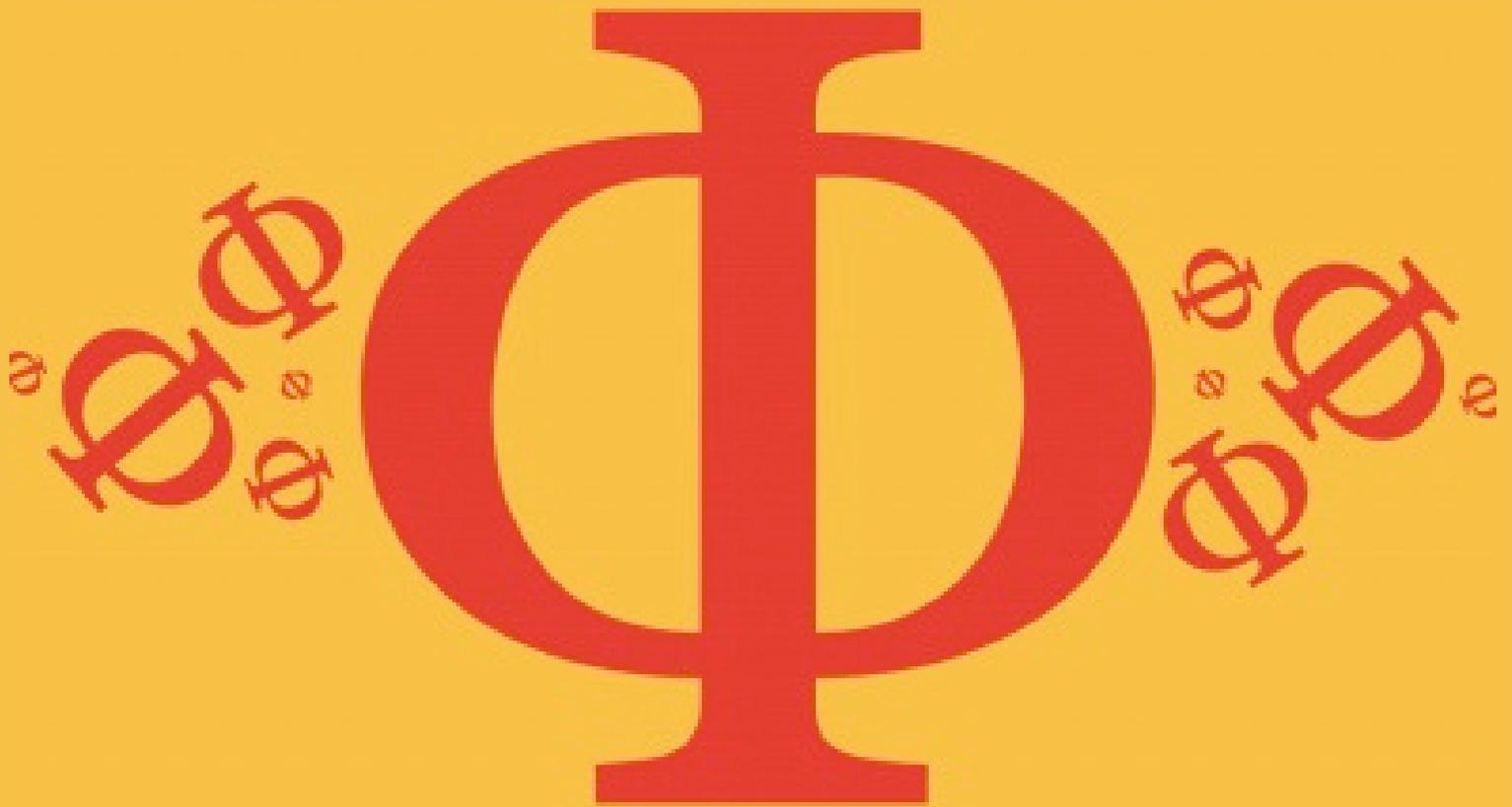
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## **11.2 Movement**

Easy



# **BIOLOGY**

## **IB HL**



EXAM PAPERS PRACTICE

# 11.2 Movement

## Question Paper

Course	DP IB Biology
Section	11. Animal Physiology (HL Only)
Topic	11.2 Movement
Difficulty	Easy

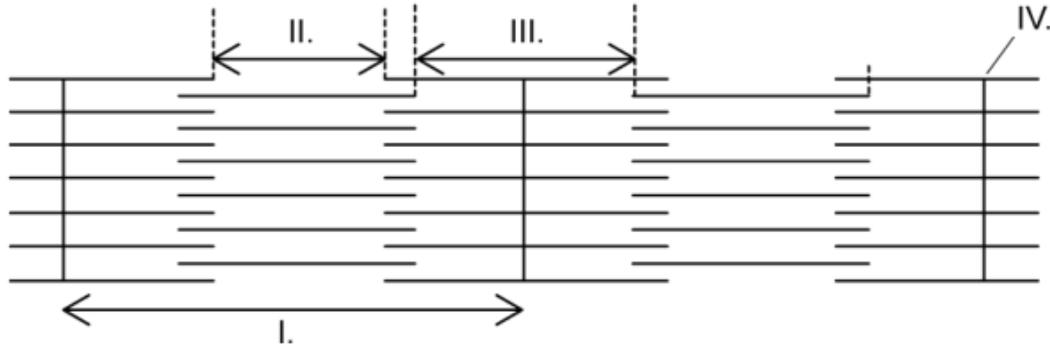
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**Time allowed:** 10  
**Score:** /5  
**Percentage:** /100



### Question 1

Which row correctly identifies the features of the myofibril shown in the diagram.



	I.	II.	III.	IV.
A	Z-line	Sarcomere	A-band	H-zone
B	H-zone	A-band	Z-line	I-band
C	Sarcomere	H-zone	I-band	Z-line
D	Sarcomere	I-band	A-band	Z-line

[1 mark]

### Question 2

Which of the following explains the use of fluorescence to study muscle contraction?

- I. Fluorescent proteins can be injected into the muscles of organisms easily
- II. Fluorescent dyes can be attached to myosin fibres to demonstrate sliding filament theory
- III. Aequorin proteins bind to calcium ions and so are more visible during muscle contraction

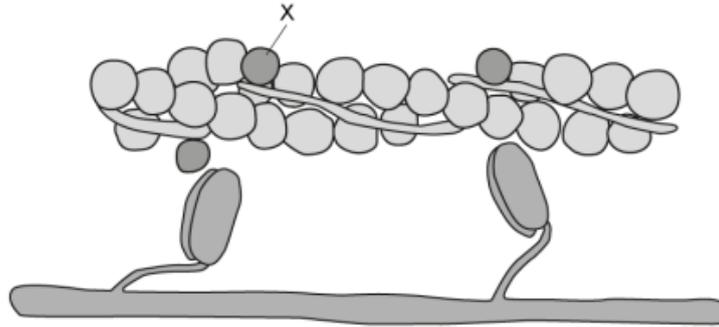
- A. I and III
- B. I and II
- C. I, II and III
- D. II only

[1 mark]



### Question 3

Which of the given options accurately identifies molecule X and describes its function?



- A. X is troponin which provides binding sites for calcium ions
- B. X actin which provides binding sites for myosin allowing cross-bridges to form
- C. X is tropomyosin which changes shape to expose binding sites on actin filaments
- D. X is ATP hydrolase enzyme used to release energy through hydrolysis of ATP to ADP and inorganic phosphate

[1 mark]



### Question 4

Identify which of the following joints allows abduction and adduction movement.

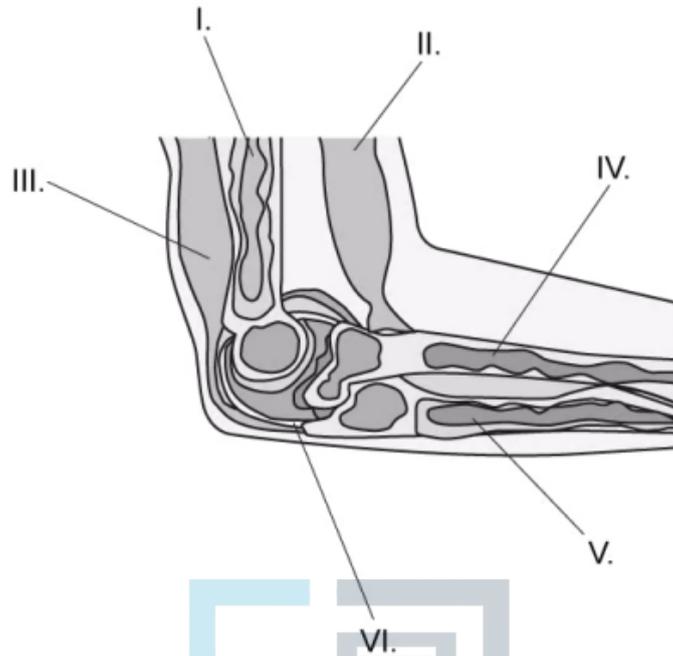
- A. Shoulder
- B. Knuckle
- C. Knee
- D. Elbow

[1 mark]



Question 5

The diagram shows the structures in a human elbow.



Which numbers represent a pair of antagonistic muscles?

- A. I and II
- B. V and IV
- C. VI and II
- D. II and III

[1 mark]