
PHYSICAL EDUCATION

9396/12

Paper 1

October/November 2015

2 hours 30 minutes

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

An answer booklet is provided inside this question paper. You should follow the instructions on the front cover of the answer booklet. If you need additional answer paper ask the invigilator for a continuation booklet.

Answer **all** questions.

Electronic calculators may be used.

You may lose marks if you do not show your working or if you do not use appropriate units.

The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **4** printed pages and **1** insert.

Answer **all** questions.

Section A: Applied Anatomy and Physiology

- 1 (a) Fig. 1.1 shows a sequence of movements of a javelin thrower.

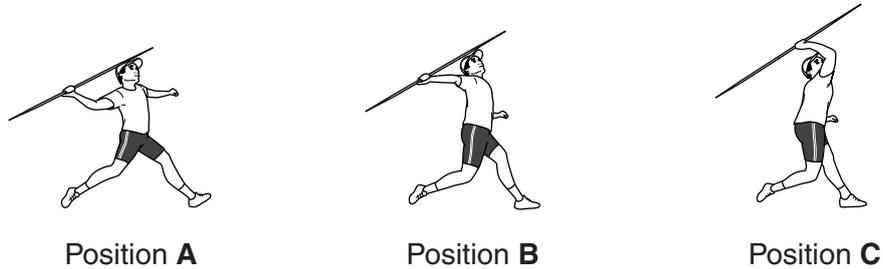


Fig. 1.1

Identify the items 1–4 in the table below to describe a movement analysis of the **shoulder** and **elbow** joints of the throwing arm as they move from position **A** to position **C**. Your analysis should include the type of movement occurring and the main agonist muscles involved in the movement.

	type of movement	main agonist
shoulder joint	1	2
elbow joint	3	4

[4]

- (b) Fig. 1.2 shows the sequence of movements during a press up/push up.

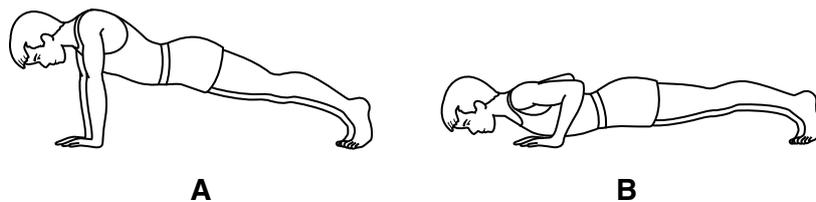


Fig. 1.2

Name and describe the different types of muscle contraction that occur during:

- (i) the downward phase from **A** to **B** [2]
- (ii) the stationary phase at **A**. [2]
- (c) (i) Define the terms *cardiac output* and *stroke volume*. [2]
- (ii) State the relationship between heart rate, cardiac output and stroke volume. [1]
- (d) Explain the mechanics of breathing which allow a performer to fill the lungs with air. [6]
- (e) State how carbon dioxide is transported in the blood. [3]

(f) Explain how oxygen is taken up by haemoglobin at the lungs and released at a muscle. [4]

(g) Fig. 1.3 shows how blood velocity and pressure vary in the blood vessels of a performer. [4]

The letters **A** to **E** represent different types of blood vessel.

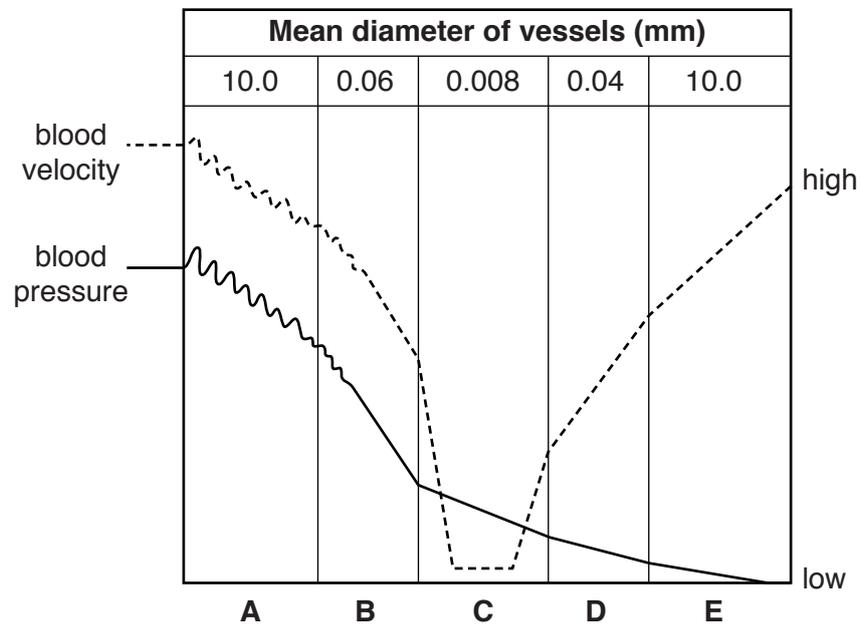


Fig. 1.3

(i) Use the graph to identify the types of blood vessel represented by **A** and **C**. [2]

(ii) Explain the variation in blood pressure and blood velocity occurring from **A** to **E**. [4]

[Total: 30]

Section B: Acquiring, Developing and Performing Movement Skills

- 2 (a) (i) Explain the difference between skill and ability. [1]
- (ii) State the characteristics of skilful performance. [3]
- (b) Explain the term *insight learning* and suggest how this approach could have a positive effect on performance. [4]
- (c) Using an appropriate example, describe the characteristics of an open loop control system. [4]
- (d) Using examples, name and describe **four** types of feedback. [4]
- (e) (i) What are the characteristics and functions of short term memory? [5]
- (ii) How can a coach ensure that important information is stored in the performer's long term memory? [4]
- (f) Describe how drive theory may be used to explain the effects of arousal on performance. [5]
- [Total: 30]

Section C: Contemporary Studies in Physical Education and Sport

- 3 (a) During leisure time, many people choose to play sports. Compare the differences between play and sport. [4]
- (b) Why is active leisure considered important for both individuals and society? [4]
- (c) Using a country of your choice, describe how potential elite performers are identified and developed. [6]
- (d) Fewer women take part in physical activity than men. Suggest ways in which more women could be encouraged to take part in physical activity. [6]
- (e) (i) Explain why major sporting events rely heavily on funding from commercial sponsorship and the media. [4]
- (ii) Discuss the impact of the media and the commercialisation of sport on spectators. [6]
- [Total: 30]

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