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**PHYSICAL EDUCATION**

**9396/11**

Paper 1

**October/November 2016**

**2 hours 30 minutes**

No Additional Materials are required.

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**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.

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

Answer **all** questions.

**Section A: Applied anatomy and physiology**

- 1 (a) During sporting activities, a performer may use their fast oxidative-glycolytic muscle fibres.

Describe the structure **and** function of these fibres. [3]

- (b) Identify the items 1–5 in the table below to describe a movement analysis of the upward phase of a bench press from position **A** to position **B** (Fig. 1.1) for both the **elbow** and the **shoulder** joints. Your analysis should include the type of muscle contraction, the movement occurring and the main agonist muscle. [5]

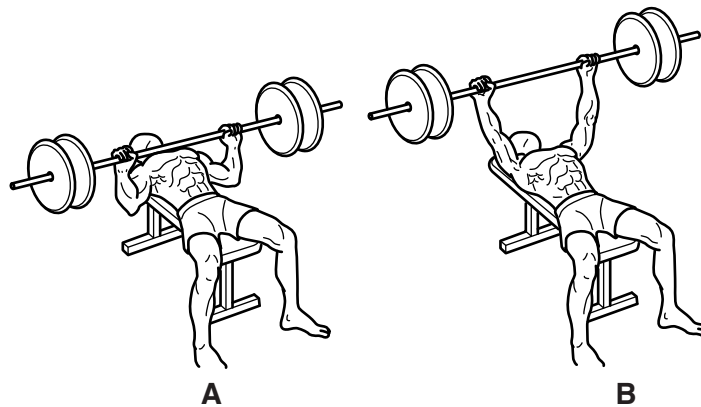


Fig. 1.1

	type of muscle contraction	movement occurring	agonist muscle
shoulder joint	1	2	3
elbow joint		4	5

- (c) Playing team games such as football, rugby or netball can put stress on the knee joint.

Explain how **four** different named structures of the knee joint provide stability. [4]

- (d) The contraction of the heart muscle is controlled to allow the efficient filling and emptying of the heart.

Describe the conduction system of the heart and its role in the cardiac cycle. [6]

- (e) During sporting activities a performer's blood pressure may increase.

Identify the factors that determine the blood pressure in arteries. [4]

- (f) Describe how structures within the lungs enable efficient gaseous exchange. [4]

- (g) Explain the effect of altitude on the respiratory system. [4]

[Total: 30]

## Section B: Acquiring, developing and performing movement skills

- 2 (a) Skilled movements are learned and efficient; they do not waste energy.

Identify **three** other characteristics of skilled movements. [3]

- (b) Fig. 2.1 shows that to learn a specific skill in sport, a performer progresses from motor abilities through fundamental motor skills to skill learning.

**motor abilities** → **fundamental motor skills** → **skill learning**

**Fig. 2.1**

Using **one** practical example, describe this progression in skill learning. [4]

- (c) Explain the cognitive theory of learning movement skills. [4]

- (d) Explain the factors that can influence the effectiveness of attention, retention and motor reproduction in observational learning. [3]

- (e) When teaching new skills, coaches will often implement the principles of Schmidt's schema theory.

Identify and explain the functions of recognition schema. [3]

- (f) (i) Using **one** practical example, explain each of the following terms:

- *reaction time*,
- *movement time*,
- *response time*. [3]

- (ii) Using a practical example, explain how the psychological refractory period can affect reaction time when performing a movement skill. [3]

- (g) Using a practical example, explain what is meant by the term *negative transfer of learning* and how you might limit its effects. [3]

- (h) The motivation to learn movement skills can be affected by drive reduction.

Explain the concept of drive reduction theory. [4]

[Total: 30]

### Section C: Contemporary studies in physical education and sport

- 3 (a) Play is a concept within physical education and sport.
- (i) Using an activity of your choice, explain **four** similarities between play and recreation. [4]
  - (ii) State **four** ways in which sport differs from play. [4]
- (b) Why do many countries invest heavily to achieve Olympic success? [4]
- (c) (i) Outline the potential benefits to an individual of continued participation in physical activity. [4]
- (ii) Participation in physical activity is dependent on leisure provision.  
Explain the terms voluntary provision and public provision. [4]
- (d) Describe the barriers which may prevent women from taking part in physical activity. [4]
- (e) Elite sport is waging a constant battle over the use of performance enhancing drugs.
- (i) Explain why some performers choose to take performance enhancing drugs. [3]
  - (ii) Describe some of the measures which have been put in place to solve this problem. [3]

[Total: 30]

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