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**PHYSICAL EDUCATION**

**9396/13**

Paper 1

**October/November 2014**

**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.



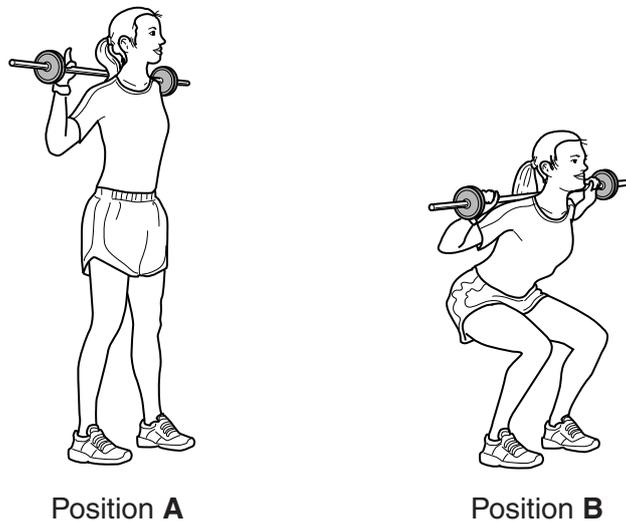
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This document consists of **4** printed pages and **1** insert.

Answer **all** questions.

**Section A: Applied Anatomy and Physiology**

- 1 (a) Fig. 1 shows a performer completing the downward phase of a squat.



**Fig. 1**

- (i) Identify the items 1–5 in the table below to describe a movement analysis of the knee and ankle joints as the performer completes the downward phase of a squat, moving from position **A** to position **B**. Your analysis should include the type of muscle contraction, the type of movement occurring and the agonist muscles involved in this movement.

	<b>type of muscle contraction</b>	<b>type of movement occurring</b>	<b>agonist muscle</b>
knee joint	1	2	3
ankle joint		4	5

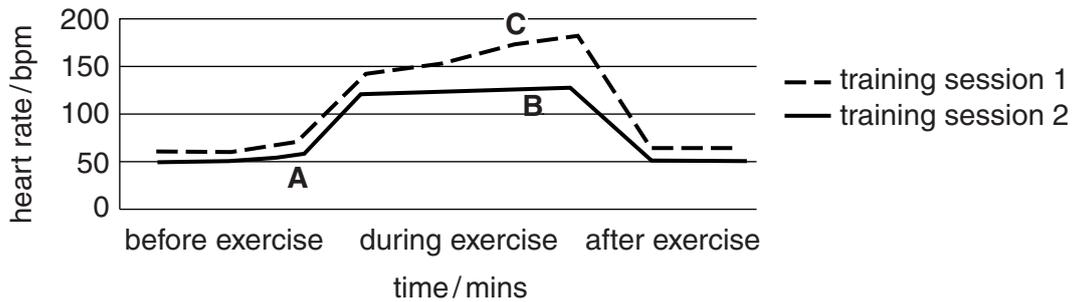
[5]

- (ii) Name the bones that articulate at the hip joint and at the knee joint. [2]
- (iii) Name the type of synovial joint working at the hip **and** explain the features of a synovial joint that allow movement to occur. [5]

- (b) During exercise the heart rate of a performer will increase.

- (i) Describe the route of blood from the right ventricle, through the chambers and valves of the heart, to the left ventricle **and** explain what happens at each stage. [4]

- (ii) Fig. 2 shows the changes in heart rate of a performer before, during and after exercise, for two separate training sessions.



**Fig. 2**

Using the information in Fig. 2, identify **and** explain the changes taking place at point **A** and the difference between points **B** and **C**. [6]

- (c) The respiratory system undergoes a number of changes during exercise.
- (i) Define the terms *tidal volume* and *minute ventilation* **and** outline how they change during exercise. [4]
- (ii) Explain how the respiratory rate of a performer is controlled during exercise. [4]

[Total: 30]

### Section B: Acquiring, Developing and Performing Movement Skills

- 2 (a) Explain the difference between gross motor abilities and psychomotor abilities. [2]
- (b) Skills can be classified using various continua.

One event in athletics is the triple jump. Classify the triple jump using each of the four continua below **and** justify your answer for each classification.

- open and closed
- discrete, serial and continuous
- externally and internally paced
- high and low organisation [4]

- (c) Outline the *theory of operant conditioning* **and** explain the advantages of using this approach to develop skilful performers. [6]
- (d) During the development of skills a performer will progress through various phases of learning. Name the final phase of learning **and** explain how the coach can maximise learning during this phase. [4]

- (e) Feedback is important in the development of skills.  
Using practical examples, explain what is meant by the terms *intrinsic* and *extrinsic feedback*. [2]
- (f) Motivation is used to develop persistence and maintain a performer's effort levels.  
Define the term *extrinsic motivation* **and** outline the possible disadvantages of using extrinsic motivation. [4]
- (g) Performers often have to complete a variety of skills.  
Using a practical example, explain the term *closed loop control*. [4]
- (h) The response time of a performer is an important factor that allows skills to be completed successfully.  
Identify the strategies a coach could use to improve the response time of a performer. [4]

[Total: 30]

### Section C – Contemporary Studies in Physical Education and Sport

- 3 (a) The majority of people are introduced to a range of sporting activities through physical education programmes.
- (i) What are the aims of physical education? Use examples to support your answer. [4]
- (ii) Outdoor education introduces children to situations involving an element of danger.  
Explain what is meant by *subjective* and *objective danger*. [4]
- (iii) How does the concept of physical education differ from physical recreation? [5]
- (b) (i) Using examples, identify how sport and politics have been linked. [6]
- (ii) How can sporting authorities attempt to reduce the number of sport performers using drugs? [4]
- (c) (i) Explain the terms *equal opportunities* and *esteem* in relation to sport participation. [2]
- (ii) How can National Governing Bodies encourage mass participation in their sport? [5]

[Total: 30]

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