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**PHYSICAL EDUCATION**

**9396/31**

Paper 3

**October/November 2014**

**2 hours 30 minutes**

Additional Materials: Answer Booklet/Paper

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**READ THESE INSTRUCTIONS FIRST**

If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet.

Write your Centre number, candidate number and name on all the work you hand in.

Write in dark blue or black pen.

You may use an HB pencil for any diagrams or graphs.

Do not use staples, paper clips, glue or correction fluid.

**DO NOT WRITE IN ANY BARCODES.**

Answer **all** questions.

At the end of the examination, fasten all your work securely together.

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.

Answer **all** questions.

### Section A: Exercise and Sport Physiology

1 (a) During sporting events performers require energy.

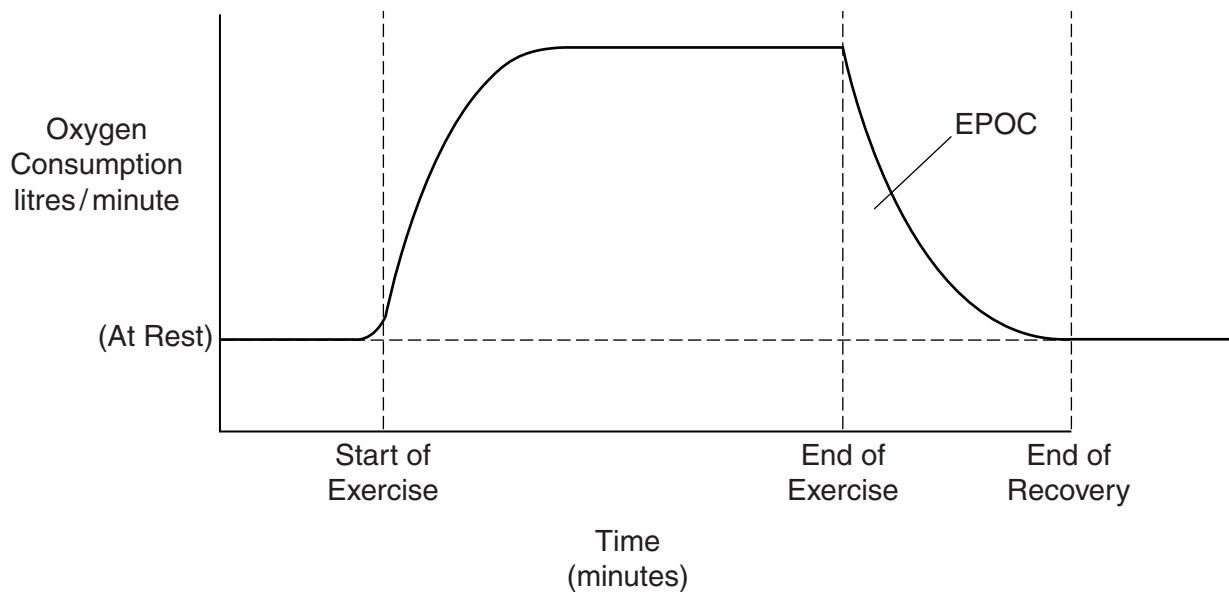
(i) What is meant by the terms *energy* and *kinetic energy*? [2]

(ii) Explain how carbohydrates and fats are used in the aerobic energy system. [6]

(b) The  $VO_2$  max can be defined as ‘the maximum amount of oxygen that can be taken in and utilised in a minute.’

Explain the factors that contribute to a performer’s  $VO_2$  max. [4]

(c) Fig. 1 shows a performer’s oxygen consumption before, during and after exercise.



**Fig. 1**

A performer will experience Excess Post-exercise Oxygen Consumption (EPOC).

Using Fig. 1, explain the physiological processes that occur during EPOC. [6]

(d) To improve aerobic capacity a performer may complete a continuous training programme.

(i) Outline how to calculate the correct training zone to ensure training is effective. [3]

(ii) Describe the long term physiological adaptations that may occur to the cardio-vascular system following an effective continuous training programme. [5]

(e) Explain why blood doping may increase the aerobic capacity of a performer. [4]

[Total: 30]

**Section B: Psychology of Sport Performance**

- 2 (a) Successful performers and teams display a positive attitude.
- (i) Using a practical example, identify and describe the components of an attitude. [3]
  - (ii) Explain how a coach could change a negative attitude of a team using persuasive communication. [3]
- (b) Elite performers aim to control arousal levels to optimise performance.
- Using a practical example, describe the characteristics of the peak flow experience. [3]
- (c) Name and describe **one** cognitive stress management technique. [3]
- (d) The positive effect of an audience on performance is known as social facilitation.
- (i) Suggest reasons why home-field advantage often helps the performance of a team. [4]
  - (ii) Outline strategies a coach could use to overcome the effects of social inhibition. [5]
- (e) Successful teams have high levels of cohesion.
- (i) Explain the term *cohesive group* and suggest reasons for its importance for team success. [4]
  - (ii) Suggest strategies a coach could use to develop a cohesive team. [5]

[Total: 30]

**Section C: Olympic Games: a Global Perspective**

- 3 (a) The Olympic Games began as an ancient festival in Greece and have become a global spectacle in the modern era.
- (i) What are the similarities and differences between the modern Olympic Games and the ancient Olympic Games? [6]
  - (ii) Discuss the impact to a city, such as London, of hosting the Olympic Games. [5]
  - (iii) Outline the role of the International Olympic Committee and suggest some of the problems this organisation has encountered. [6]
- (b) The modern Olympic Games were established as an amateur competition.
- (i) What is meant by the traditional definition of *amateurism*? [3]
  - (ii) How has commercialisation positively influenced the Olympic Games? [6]
- (c) The Paralympic Games have continued to expand with London 2012 attracting record audiences.
- Explain why the Paralympic Games were established. [4]

[Total: 30]

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