



Monday 9 June 2014 – Afternoon

A2 GCE PHYSICAL EDUCATION

G453/01 Principles and Concepts Across Different Areas of Physical Education

Candidates answer on the Answer Booklet.

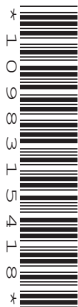
OCR supplied materials:

- 12 page Answer Booklet (OCR12)
(sent with general stationery)

Other materials required:

- Calculators may be used

Duration: 2 hours 30 minutes



INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the spaces provided on the Answer Booklet. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **three** questions, at least one of which must be from Section A.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question.
- The quality of your written communication will be assessed in questions that are indicated accordingly (*).
- The total number of marks for this paper is **105**.
- This document consists of **8** pages. Any blank pages are indicated.



**A calculator may
be used for this
paper**

SECTION A

Candidates must answer at least one question from Section A.

Historical Studies (Option A1)

- 1 (a) In the 1970s and 1980s, some teachers in state schools took industrial action.

Explain the impact of this industrial action on young people's participation in physical activity.

The National Curriculum was introduced in 1988. Outline **two** possible impacts of this curriculum on Physical Education in state schools. [5]

- (b) Compare the pre-industrial games of mob football and real tennis.

Give **two** possible reasons for limited participation in real tennis today. [6]

- (c) During the nineteenth century, social relationships in public schools changed.

Describe how these social relationships were reflected in the nature of sports and games in stage one and stage three.

Give **two** reasons for the changes in social relationships between stage one and stage three. [4]

- (d)* Discuss how different socio-cultural factors impacted on the growth and development of Association Football from 1850 to today. [20]

SECTION A

Comparative Studies (Option A2)

- 2 (a) Outline the growth and development of Association Football in Australia. [5]
- (b) Compare provision for sporting excellence in Australia with provision for sporting excellence in the UK. [5]
- (c) Describe dominant values in the USA that can impact on participation and performance in physical activity.
- Describe **two** different dominant values in the UK. [5]
- (d)* Compare American Football in the USA and Rugby Union in the UK with reference to origins and status. [20]

SECTION B

Sports Psychology (Option B1)

- 3 (a) Achievement motivation includes the need to achieve.

Describe **four** characteristics of someone with 'need to achieve' motives, giving a practical example for each. [4]

- (b) Outline the advantages and disadvantages of personality profiling in sport. [5]

- (c) Describe both cognitive and somatic anxiety management techniques that may help to control levels of anxiety in sport. [6]

- (d)* Explain why some young people have negative attitudes to sport and following a healthy lifestyle.

Describe how you might change negative attitudes into positive attitudes towards sport. [20]

SECTION B**Biomechanics (Option B2)**

- 4 (a)** A basketball player jumps vertically during a match.

Draw a free body diagram to show the vertical forces acting on the basketball player during take off.

Explain the relationship between the size of the vertical forces and their impact on the size of the resulting vertical jump. [5]

- (b)** Using examples from sport, explain how performers maximise their stability.

Using examples from sport, describe why a performer might want to minimise stability in sport. [5]

- (c)** Describe the effect of topspin on the flight path of a ball.

Explain the effect that topspin has on the bounce of a ball. [5]

- (d)*** Using practical examples, describe the use of the three axes of rotation in sport.

Explain how rotation is initiated by a performer.

Describe the angular analogue of Newton's First Law of Motion and use it to explain how a high board diver performing somersaults uses their body position to maximise performance during the following phases of the dive:

- Take off from the diving board
- During flight
- Just before entry into the water.

[20]

SECTION B

Exercise and Sport Physiology (Option B3)

- 5 (a) Using examples from a team sport, describe how players resynthesise ATP during a game using the ATP/PC system and lactic acid system. [6]
- (b) Oxygen availability and fuel availability affect ATP resynthesis.
- Describe how these factors determine which energy system is used. [4]
- (c) Explain why cooling aids are used as a method of improving performance and helping recovery.
- Give an example of **one** cooling aid. [5]
- (d)* Fig. 1 shows different physiological measurements of a hockey player five minutes after a game.

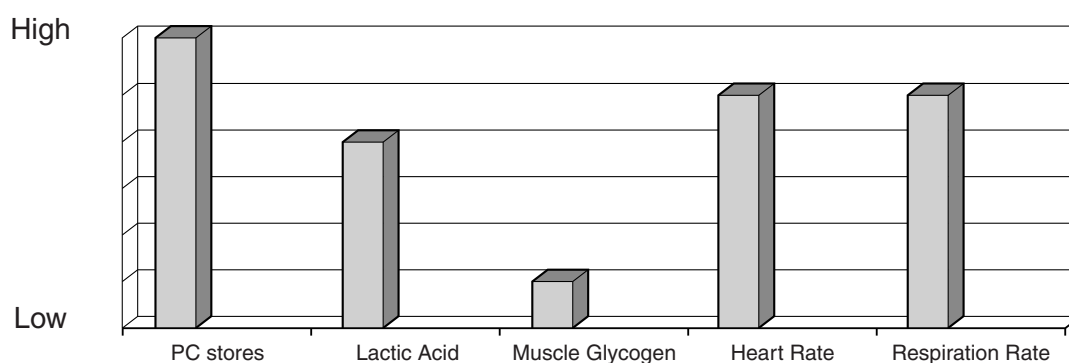


Fig. 1

Analyse the physiological measurements shown on the graph in Fig. 1 for the hockey player.

Explain how knowledge of the recovery process could help a coach to improve the hockey player's performance and recovery. [20]

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