

**Thursday 26 January 2012 – 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:**

- 16 page Answer Booklet  
(sent with general stationery)

**Other materials required:**

None

**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.

**Section A**

Candidates must answer at least one question from Section A.

**Historical studies (Option A1)**

- 1 (a) Nineteenth century public schools went through three developmental stages of athleticism.  
Describe stage one and give **one** reason for the transition to stage two. [5]
- (b) Explain the influence of both the university 'melting pot' and Oxbridge graduates on the development of rational recreation from 1850 to 1900. [5]
- (c) How successful was lawn tennis as a vehicle for the emancipation of women in the late nineteenth century?  
Explain **one** way that tennis in the UK today attempts to be an inclusive game. [5]
- (d)\* Physical Education in state schools has changed considerably since 1933.  
Explain why the 1933 syllabus was replaced by the 1950s approach.  
Critically evaluate whether the National Curriculum for Physical Education in schools today is better than the 1950s approach. [20]

[Total: 35]

**Section A****Comparative Studies (Option A2)**

- 2 (a) Explain the popularity of Australian Rules Football in Australia. Give **one** reason why the game is much less popular in the UK. [5]
- (b) Compare the provision for elite sports performers in the UK and in Australia. [5]
- (c) Physical Education is valued in many schools in the UK and in the USA.  
Compare Physical Education in the UK and the USA. [5]
- (d)\* Compare the cultural factors that influence sporting excellence in the UK and the USA. [20]

**[Total: 35]**

## Section B

## Sports Psychology (Option B1)

- 3 (a) Personality characteristics are often linked to performance in sport. Fig. 1 represents a trait approach to personality.

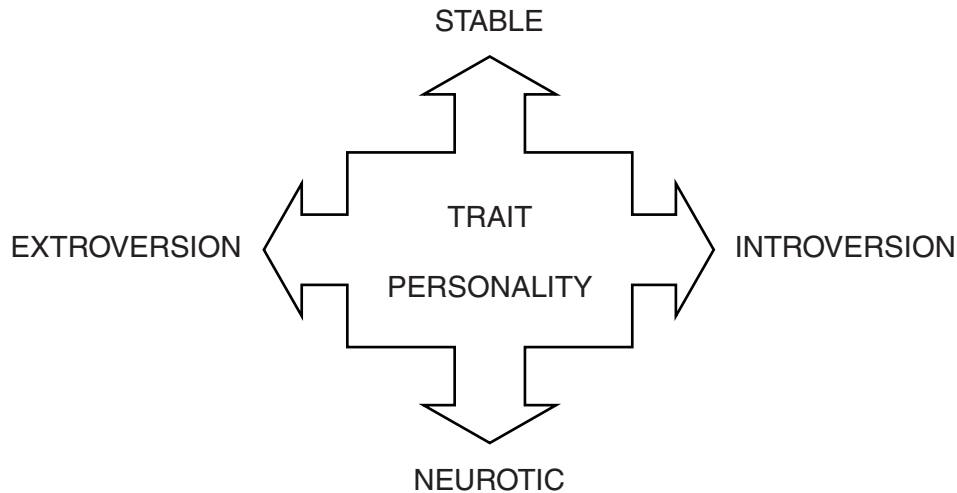


Fig. 1

Describe the characteristics of both extrovert and neurotic personalities.

Use practical examples from sport to describe the characteristics of Type A and Type B trait personalities. [4]

- (b) Describe Nideffer's attentional styles of broad, narrow, external and internal.

Using practical examples, explain how broad **and** internal attentional styles might be used in different sports' situations. [6]

- (c) When individuals join a sports team or a social group, their behaviour related to lifestyle can change.

Explain the possible effects of a group on the behaviour related to lifestyle of group members. [5]

- (d)\* Some sports' psychologists state that '*good leaders in sport are born and not made*'.

Critically evaluate the trait, social learning and interactionist theories of leadership.

Describe how autocratic **and** democratic leadership styles might affect lifestyle behaviour. [20]

[Total: 35]

**Section B****Biomechanics (Option B2)**

- 4 (a) A gymnast performs a somersault rotating through 6 radians in 0.5 seconds.

Identify the axis of rotation through which the gymnast turns and calculate the average angular velocity of the somersault. [3]

- (b) Sketch a force/time graph which shows both the effect of hitting a hockey ball with **and** without a follow through.

Explain the effects on the hockey ball when hit using a follow through. [6]

- (c) Explain how a lift force is imparted to a discus during flight and describe its effects on the flight path of the discus. [6]

- (d)\* Using free body diagrams, analyse the concepts of balanced and unbalanced forces in both horizontal and vertical directions in sport. [20]

**[Total: 35]**

**Section B****Exercise and Sport Physiology (Option B3)**

- 5 (a) Describe how the lactic acid energy system provides energy for the body during high intensity activity. [4]
- (b) Calculate the Body Mass Index (BMI) of an 80 kg adult who is 2.0 m tall.  
Describe **three** effects of obesity on involvement in physical activity. [5]
- (c) Excluding gender and age, identify **two** physiological factors that can affect the strength of a performer in sport.  
Discuss the use of plyometrics training as a method of developing dynamic strength. [6]
- (d)\* Critically evaluate ergogenic aids that performers might use in sport. [20]