

# OCR

Oxford Cambridge and RSA

## Friday 17 June 2016 – Morning

### A2 GCE PHYSICAL EDUCATION

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

Candidates answer on the Answer Booklet.

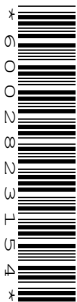
**OCR supplied materials:**

- 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 marked with an asterisk (\*).
- 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) Explain how characteristics of popular recreation affected the physical competence and health of participants and opportunities for participation. **[4]**
- (b) Describe the influence of the Clarendon Report on nineteenth century public schools.
- Explain how public schools were central to the development of team games in the mid-nineteenth century. **[6]**
- (c) Describe the objectives, content and methodology of the 1950s publications 'Moving and Growing' and 'Planning the Programme'.
- How did the building of gymnasias result in more effective participation for young people? **[5]**
- (d)\* Explain how swimming has developed from a popular recreation activity to being a rational recreation activity.
- Discuss the factors that impact on contemporary participation and performance in swimming. **[20]**

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

- 2 (a) Inter-mural and intra-mural sport are both features of high school sports programmes in the USA.

What is meant by the terms inter-mural sport and intra-mural sport?

Compare them in terms of organisation, status and ethos. [5]

- (b) Title IX has had a significant impact on sport in the USA.

Outline the aim of Title IX.

Discuss the benefits and drawbacks of Title IX in the USA today. [5]

- (c) Compare the growth and development of Rugby League in Australia and in the UK. [5]

- (d)\* Compare how schools in Australia and the UK help to prepare young people for lifelong participation in physical activity.

Critically evaluate the effectiveness of both of these systems. [20]

**SECTION B****Sports Psychology (Option B1)**

- 3 (a)** Explain why goal setting is important for sports performers. **[4]**
- (b)** The control of emotions and 'getting in the zone' can affect sports performance.
- Using practical examples, describe the peak flow experience associated with the zone of optimal functioning in sport. **[5]**
- (c)** Explain the factors that affect social facilitation and social inhibition when applied to performance in sport. **[6]**
- (d)\*** Using practical examples of sports performance and healthy lifestyle, explain and critically evaluate the theories of personality. **[20]**

## SECTION B

## Biomechanics (Option B2)

- 4 (a) Using practical examples, describe the three axes of rotation. [3]
- (b) Fig. 1 below shows the elbow joint acting as a third class lever during the holding phase of an arm curl.

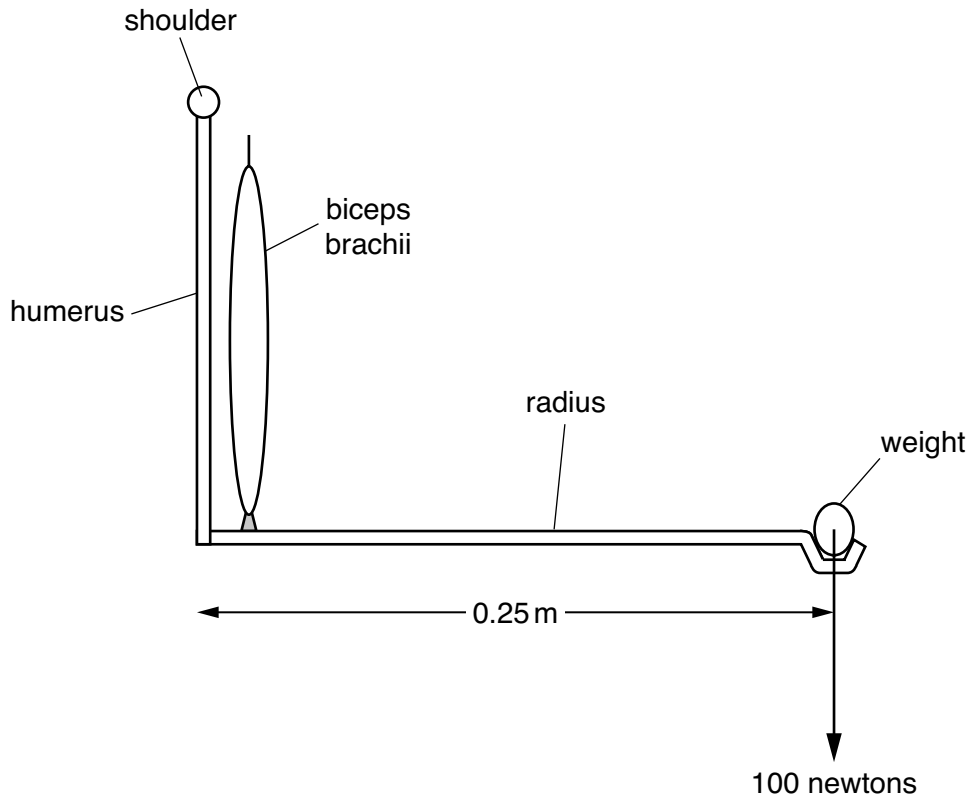


Fig. 1

Draw a diagram showing the effort arm and load arm for the lever system in Fig. 1.

Calculate the moment of force generated by the weight.

Explain **one** advantage and **one** disadvantage of this type of lever system. [6]

- (c) Describe the term friction.

Using practical examples from sport, describe how different factors can change the amount of friction generated. [6]

- (d)\* Sketch a free body diagram showing all the forces acting on a table tennis ball with backspin during flight.

Explain how backspin causes a deviation in the flight path and the bounce of a table tennis ball.

Critically evaluate the use of backspin in sport. [20]

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

- 5 (a) Explain how the majority of ATP would be resynthesised by a marathon runner. [5]
- (b) Give **one** method of flexibility training and explain the physiological adaptations that would take place following its prolonged use. [5]
- (c) Identify **two** types of ergogenic aids that would benefit an aerobic athlete and explain how they enhance performance. [5]
- (d)\* What is meant by the term body composition?

Explain how different body compositions might be of benefit in two different sports.

Critically evaluate methods of measuring body composition. [20]

**END OF QUESTION PAPER**



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