

**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
AS GCE**

G451/01

PHYSICAL EDUCATION

An Introduction to Physical Education

THURSDAY 23 MAY 2013: Morning

**DURATION: 2 hours
plus your additional time allowance**

MODIFIED ENLARGED

Candidate forename		Candidate surname	
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Centre number						Candidate number				
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Candidates answer on the Question Paper.

OCR SUPPLIED MATERIALS:

None

OTHER MATERIALS REQUIRED:

None

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. HB pencil may be used for graphs and diagrams only.**
- **Answer ALL parts of the question in each of Sections A, B and C.**
- **Read each question carefully. Make sure you know what you have to do before starting your answer.**
- **Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).**

INFORMATION FOR CANDIDATES

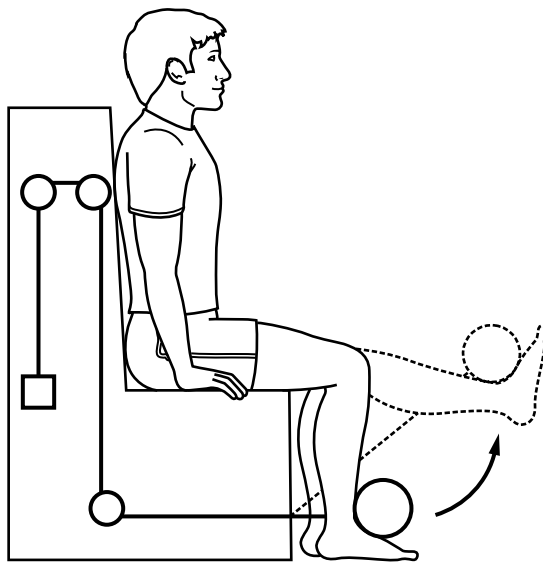
- **The number of marks is given in brackets [] at the end of each question or part question.**
- **The total number of marks for this paper is 90.**
- **The quality of your written communication will be assessed in questions that are indicated accordingly (*).**
- **Any blank pages are indicated.**

SECTION A – ANATOMY AND PHYSIOLOGY

Answer ALL parts of the question

- 1 (a) Fig. 1 shows a person using a resistance machine to increase leg strength.

FIG. 1



Complete the table below for the knee joint moving in the direction of the arrow. [4]

JOINT	SYNOVIAL JOINT TYPE	MOVEMENT	AGONIST	ANTAGONIST
Knee				

(b) Gravity is one mechanism of venous return which aids the flow of blood back to the heart.

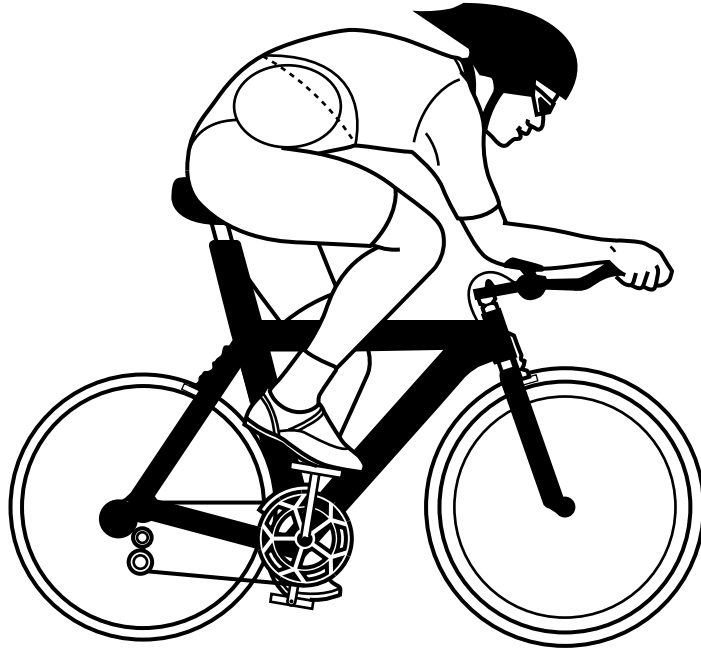
(i) Identify THREE other mechanisms of venous return.

[3]

(ii) Explain how an increase in venous return during exercise affects the quality of an athlete's performance.

[3]

FIG. 2



(c) Fig. 2 shows a cyclist in a race.

(i) Describe TWO types of motion produced when cycling.

[2]

(ii) Define Newton's second AND third Laws of Motion.

[2]

(iii) Using a practical example from Physical Education or sport explain Newton's third Law of Motion.

[1]

- (d) Government guidelines suggest that adults should undertake 30 minutes of moderate aerobic activity five times per week.**

Explain how following a programme of aerobic exercise can help prevent coronary heart disease.

[5]

(e)* Explain the effect of altitude on the respiratory system.

Discuss the influence of altitude on the performance of different intensities of physical activity. [10]

[illegible]

[illegible]

[illegible]

SECTION B – ACQUIRING MOVEMENT SKILLS

Answer ALL parts of the question

- 2 (a) Explain how different factors affect response time in performing practical activities.**

[4]

(b) Describe FOUR different motivational strategies that might encourage disaffected young people to participate in a balanced, active and healthy lifestyle.

[4]

(c) Identify Thorndike's THREE laws.

Describe how each law affects the stimulus-response bond (S-R bond).

[6]

(d) Fig. 3 is based on Welford's information processing model.

FIG. 3 AN INFORMATION PROCESSING MODEL

**INPUT FROM
DISPLAY**



**SENSE
ORGANS**



**PERCEPTUAL
MECHANISM**



**EFFECTOR
MECHANISM**



**MUSCULAR
SYSTEM**



RESPONSE

[illegible]

(e)* Evaluate critically the use of different types of guidance on the effective performance of movement skills, AND on increasing participation in a balanced, active and healthy lifestyle. [10]

[illegible]

[illegible]

[illegible]

SECTION C – SOCIO-CULTURAL STUDIES RELATING TO PARTICIPATION IN PHYSICAL ACTIVITY

Answer ALL parts of the question

- 3 (a) Describe benefits to UK SOCIETY of London having hosted the Olympic Games in 2012.**

[illegible]

(b) Outline possible barriers to participation in physical activity faced by young people.

[4]

(c) American Football is a highly commercialised game in the USA.

(i) Outline the origins of American Football.

[3]

(ii) Describe factors which make American Football a contemporary commercial success in the USA.

[3]

(d) Explain how modern technology can impact on performance in sport. Use a DIFFERENT example of modern technology to support EACH of your points.

[5]

(e)* Violence by players and spectators is a contemporary sporting issue.

Describe the causes of violence in sport.

Evaluate possible solutions to violence in sport.

[10]

[illegible]

[illegible]

[illegible]

END OF QUESTION PAPER

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