

Centre Number	Candidate Number	Name
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UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
International General Certificate of Secondary Education

**PHYSICAL EDUCATION**

**0413/01**

Paper 1

May/June 2006

**2 hours**

Candidates answer on the Question Paper.  
No Additional Materials are required.

**READ THESE INSTRUCTIONS FIRST**

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 a soft pencil for any diagrams, graphs or rough working.  
Do not use staples, paper clips, highlighters, glue or correction fluid.

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.

FOR EXAMINER'S USE	
<b>SECTION A</b>	
<b>B1</b>	
<b>B2</b>	
<b>B3</b>	
<b>TOTAL</b>	

This document consists of **10** printed pages and **2** blank pages.

**Section A**

Answer **all** questions in this section.

1 Define the term *fitness*.

..... [1]

2 Give **one** reason why it is important for a sport to attract media attention.

.....  
..... [1]

3 When exercising, the body's temperature will increase. Describe **one** way in which the body controls this.

.....  
..... [1]

4 Give an example of a pivot joint.

..... [1]

5 Give **one** psychological benefit that participating in exercise could have on an individual.

..... [1]

6 Apart from an individual's interest in a particular sport or activity, give **two** factors that will affect what people choose to do in their leisure time.

.....  
..... [2]

7 Name **two** different activities in which participants may feel the need to take an illegal diuretic substance.

.....  
..... [2]

8 Give **two** reasons why it is important to have a balanced diet.

.....  
..... [2]

9 There have been a number of campaigns to encourage women to participate in sport. Describe **two** of the problems that these campaigns have tried to overcome.

.....  
.....  
..... [2]

10 The body will respond to arousal by producing adrenalin. Describe **two** other physiological responses that the body will make when aroused.

.....  
..... [2]

11 Name **two** situations that could result in injury during an indoor sports activity.

.....  
.....  
..... [2]

12 Highly paid professional sportsmen and women can now take part in the Olympic Games. Give **three** reasons why they participate for a medal rather than money.

.....  
.....  
.....  
..... [3]

[Total: 20]

**Section B**

Answer **all** questions in this section.

**Factors Affecting Performance**

**B1 (a)** Give an example of an exercise that would help develop the efficiency of the latissimus dorsi muscle.

..... [1]

**(b)** Apart from providing support and movement, name **two** other functions of the skeleton.

.....  
..... [2]

**(c)** The information processing model has an input and an output. What is meant by the terms *input* and *output*?

.....  
.....  
..... [2]

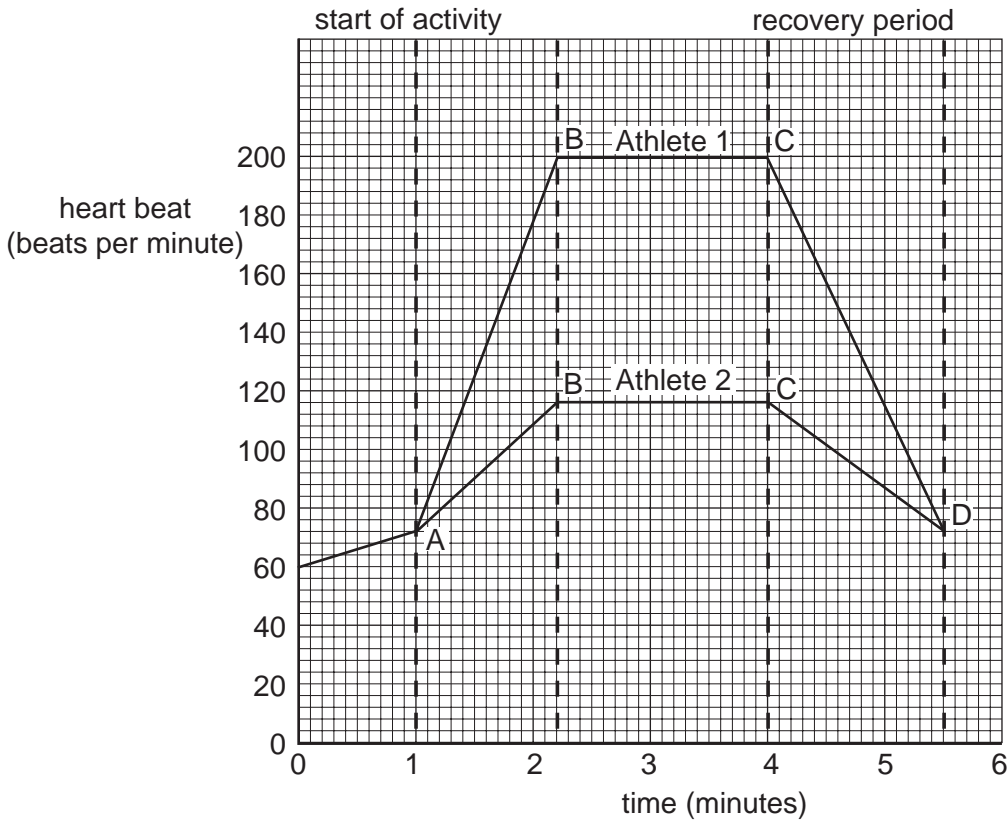
**(d)** Timing and co-ordination are elements of skill related fitness. Name **one** other element and describe a test to measure it.

*Element* .....

*Description* .....

.....  
.....  
..... [3]

- (e) The graph below shows the heart rate of two athletes performing an event over the same time period.



Athlete 1 performs at a very high level of intensity which requires him to use the maximum effort.

Athlete 2 performs below his maximum effort.

- (i) What causes the increase in heart rate before the start of the activity? (point A)

..... [1]

- (ii) There is a difference between the two athletes' heart rate at B and at C. Give **one** reason for this.

.....  
..... [1]

- (iii) The graph shows the athletes stop performing at C, after which the heart rate decreases. Explain the reason for this.

.....  
..... [1]

**(iv)** Explain why Athlete 2 could not maintain a high level of effort for a prolonged period of time.

.....  
.....  
..... [1]

**(v)** The recovery period for both athletes is the same. What does this indicate about their fitness levels?

.....  
..... [1]

**(f)** Some skills are performed in a continually changing environment.

**(i)** What are these skills called?

..... [1]

**(ii)** When learning a new skill, describe how the coach will ensure that effective learning takes place.

.....  
.....  
.....  
.....  
.....  
.....  
.....  
..... [4]

**(iii)** Explain the part memory plays when performing a skill.

.....  
.....  
..... [2]

[Total: 20]

**Health, Safety and Training**

**B2** Thomas and Stephen are both starting to train for different types of activities. Thomas is involved in an endurance activity whilst Stephen takes part in activities that require explosive strength.

**(a)** Name an activity that would typically require explosive strength.

..... [1]

**(b)** Both Thomas and Stephen use weight training as part of their training programme. What would be the difference in overload (number of repetitions and the size of the weights) needed for Thomas and Stephen to improve in their different activities?

Thomas .....

Stephen ..... [2]

**(c)** When they go to the gymnasium it is important that they warm up correctly to prevent injury. Describe **two** effects of a warm up.

.....  
..... [2]

**(d)** Both choose to use Plyometric Training in their programme.

**(i)** Describe a key feature of Plyometric Training.

..... [1]

**(ii)** Give an example of Plyometric Training.

..... [1]

**(iii)** Explain a key safety factor that you would need to apply to this type of training, particularly in the early stages, to prevent injury.

.....  
.....  
..... [2]

**(e)** Their training develops different types of muscle fibres. Name **two** types of muscle fibre and describe **one** feature of each.

.....  
.....  
.....  
..... [4]

(f) Thomas and Stephen continue to train for a substantial period of time.

(i) Name **two** long term training effects of exercise on the heart.

.....  
..... [2]

(ii) Name **two** long term training effects on the respiratory system.

.....  
..... [2]

Both students are very enthusiastic about their training but tend to overtrain.

(iii) What would be the physical signs that they are overtraining?

.....  
.....  
.....  
.....  
..... [3]

[Total: 20]



**Reasons and Opportunities for Participation in Physical Activity**

**B3 (a)** Give **one** example of a natural outdoor sport in the countryside. How has it been adapted for urban (city) areas?

.....  
..... [1]

**(b)** Schools play a very important part in promoting and encouraging sport and physical activity. Describe **two** ways in which a school can achieve this objective.

.....  
..... [2]

**(c)** If a television company decided to withdraw their coverage of an event, what negative effects could this have on the event?

.....  
.....  
..... [2]

**(d)** In many sports, ethnic minority groups are under represented. Give **three** reasons for this.

.....  
.....  
.....  
.....  
..... [3]

**(e)** It is often the media who create 'sportstars' in many different sports.

**(i)** Explain why this happens.

..... [1]

**(ii)** Give examples of the negative effects on the individual.

.....  
..... [2]

**(iii)** Give examples of the positive effects for the sport.

.....  
..... [2]

(f) A new manager of a sports centre needs to check how suitable the facilities are to allow maximum access for everyone.

(i) Identify **two** different types of physical disabilities and describe the arrangements that need to be made to ensure ease of access for everyone.

.....

.....

.....

.....

.....

.....

(ii) Apart from staging extra sessions and improving access, how could you encourage greater participation for performers with physical disabilities?

.....

.....

.....

.....

.....

.....

[7]

[Total: 20]



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