

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 2005

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 in the spaces provided on the Question Paper.
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.

The number of marks is given in brackets [] at the end of each question or part question.

If you have been given a label, look at the details. If any details are incorrect or missing, please fill in your correct details in the space given at the top of this page.

Stick your personal label here, if provided.

FOR EXAMINER'S USE

Section A	
B1	
B2	
B3	
Total	

This document consists of **12** printed pages.

Section A

For
Examiner's
Use

Answer **all** questions in this section.

- 1 Name **one** function of the skeleton.
.....[1]
- 2 Give **one** definition of 'social well being'.
.....[1]
- 3 What type of muscle tissue would produce better results in long endurance activities?
.....[1]
- 4 Name **one** advantage of Isotonic Training.
.....[1]
- 5 Identify a physical recreation activity aimed specifically at encouraging more participation by women.
.....[1]
- 6 When learning a new skill give **two** means by which you can gain information relating to the skill/activity you are involved in.
.....
.....[2]
- 7 There are six components of Skill Related Fitness: give **two** of them.
.....
.....[2]

- 8 The RICE method of treatment is used when dealing with soft tissue injuries. Name two typical causes of such injuries.

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

- 9 In the illustration of the javelin thrower, describe **two** ways in which the tendons in the arm help the throwing movement.



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.....[2]

- 10 Name **two** training principles that you would employ to improve performance.

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.....[2]

- 11 Describe how sports facilities available in an urban area differ from those in a rural area.

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.....[2]

12 In what ways can television companies affect the popularity of sport?

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.....[3]

[Total: 20]

Section B

Answer **all** questions in this section.

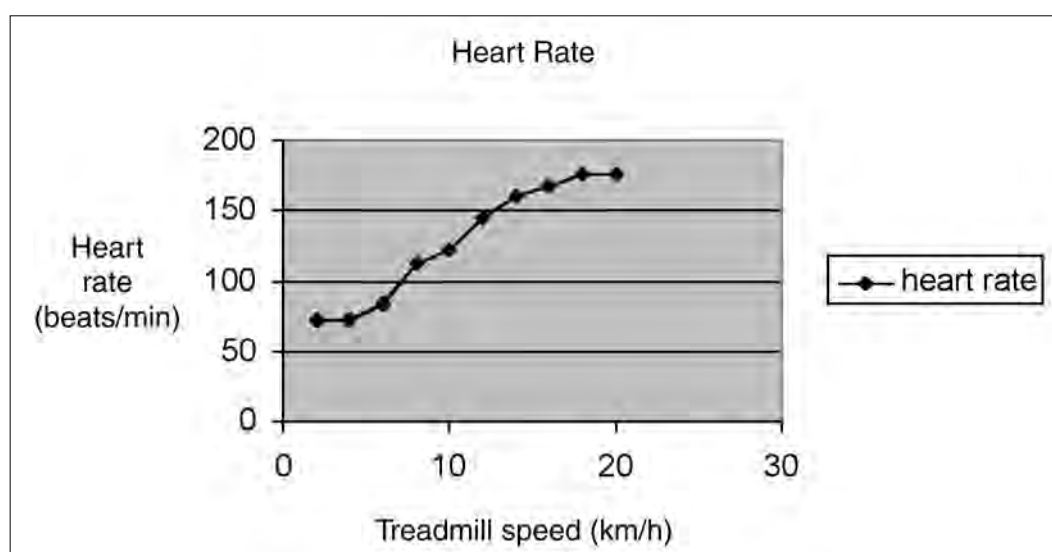
Factors Affecting Performance

B1 (a) What effect does adrenalin have on the body?

.....[1]

(b) Below are charts showing the heart rate of a person running on a treadmill. The heart rate increases as the speed of the treadmill increases, then the rate of increase slows, despite the participant continuing to run. Explain why this might happen.

Treadmill speed (km/h)	2	4	6	8	10	12	14	16	18	20
Heart rate (beats/min)	72	72	85	112	122	144	158	174	178	178



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.....[2]

- (c) Tom produces outstanding performances when training but fails to reproduce this when participating in a competition. Give **two** reasons why Tom may be finding it difficult to perform at his best in a competition.

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.....[2]

- (d) (i) Give an example of a type of synovial joint and its location.

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- (ii) Describe the role of the synovial membrane.

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- (iii) What is the role of synovial fluid?

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.....[3]

- (e) (i) Describe **three** long term effects of exercise on the respiratory system.

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.....[3]

- (ii) How does testing and measuring help to improve performance?

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.....[2]

- (f) Athletes can only perform at their best for a limited period of time during the season. Describe the type of preparation programme that would need to take place the months before a major championship to allow an athlete to peak at the right time.

[7]

[Total: 20]

Health, Safety and Training

B2 (a) Name the element in a diet that will enable the body to repair muscle tissue.

.....[1]

(b) Describe **two** measures that a participant might take in order to keep safe from injury during an activity, apart from following the rules. Apply your answer to a named physical activity.

Activity

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.....[2]

(c) After a period of exercise, Lactic Acid can build up in the muscles. What are the physical effects the performer would experience from this build-up of Lactic Acid?

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.....[2]

(d) Stephen is preparing for a sprinting event. Choose **one** type of training and describe the benefits that he would gain from it.

Training

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.....[3]

(e) After a long-term training programme, a performer's heart will become stronger and larger.

(i) Name **one** other effect that long term training will have on the performer's heart.

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.....[1]

(ii) Describe **one** way in which the heart rate could be used to measure any improvement.

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.....[1]

(iii) If the performer was a 15 year old athlete, how could you estimate the maximum heart rate of the performer?

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.....[1]

(iv) To ensure that the performer is working at an appropriate level of intensity, how could you use his/her heart rate to help plan a training programme? Use a performer who is starting a training programme to illustrate your answer.

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.....[2]

(f) Two performers participate in different activities using different energy systems to perform effectively.

(i) Describe the key features of the different activities that they participate in.

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.....[2]

(ii) Describe the differences between the two energy systems used.

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.....[5]

Reasons and Opportunities for Participation

B3 (a) Give **one** example of how health care has helped improve recreational opportunities for people.

.....[1]

(b) Name **one** voluntary organisation and describe why it might meet the needs of the local community better than a large private company.

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

(c) Apart from keeping fit give **two** different reasons why an adult might take part in physical activity.

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.....[2]

(d) (i) Give an alternative means of financial support for a young elite performer who does not wish to become professional in his/her sport, but wants to continue to participate at the highest level.

.....[1]

(ii) What could be the benefits of this alternative for the performer?

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

- (e) A 16 year old performer is seeking to perform at the highest level. Describe a variety of ways for him/her to achieve this aim.

.....[5

- (f)** Local clubs have a key role in enabling people to participate in their chosen sport/activity. To enable the club to function properly it will have an organising committee.

- (i) Describe **two** key roles on such a committee.

Role

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Role

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[2]

- (ii) How might the club go about raising money and how could this differ from a private sports organisation?

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.....[4]

- (iii) Apart from raising money, name **one** aim the club might have, to ensure that it continues to prosper.

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.....[1]

[Total: 20]