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PHYSICAL EDUCATION **0413/01**

Paper 1 Theory **For examination from 2029**

SPECIMEN PAPER **1 hour 15 minutes**

You must answer on the question paper.

No additional materials are needed.

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen. Do **not** use correction fluid or tape.
- Do **not** write on any bar codes.
- You may use a calculator.
- You should show all your working and use appropriate units.

INFORMATION

- The total mark for this paper is 70.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **14** pages. Any blank pages are indicated.

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1 Circle the **two** words from the list which are SMARTER principles of goal setting.

recorded **reliability** **repetition** **realistic** **recovery**

[2]

2 **(a)** Describe trait anxiety.

.....

..... [1]

(b) Describe cognitive state anxiety, using an example from a physical activity.

.....

.....

..... [2]

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3 The photograph shows two squash players performing in a game.



Other than cardiovascular endurance and strength, explain how **three** named components of fitness may benefit the performance of a squash player.

component 1 .....

benefit .....

.....

.....

component 2 .....

benefit .....

.....

.....

component 3 .....

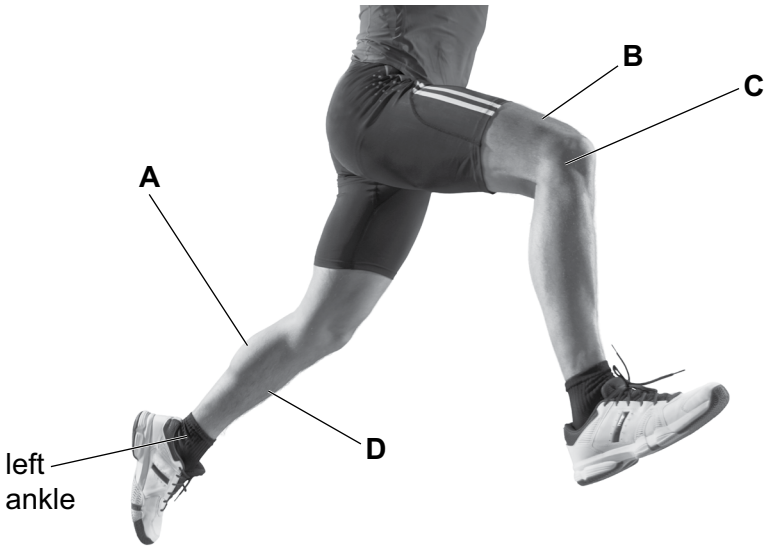
benefit .....

.....

.....

[6]

4 The photograph shows the lower body of a runner.



(a) Identify the muscles labelled **A**, **B** and **D**.

A .....

B .....

D .....

[3]

(b) Identify the type of synovial joint labelled **C**.

..... [1]

(c) Explain how muscles **A** and **D** work as an antagonistic pair when plantar flexion occurs at the runner's left ankle joint.

.....

.....

.....

..... [2]

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5 Complete the table by:

- stating the **two** missing types of performance-enhancing drug (PED)
- stating the **one** missing main effect on a performer
- describing the **two** missing benefits to performance in physical activity.

physical activity	type of PED	main effect on a performer	benefit to performance in physical activity
boxing	diuretics	lose weight	greater strength to weight ratio
shot put	anabolic steroids	increase muscle mass	
sprinting		increase alertness	
golf	beta blockers		to stay calm when putting
rugby		mask pain	to continue playing when injured

[5]

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6 **(a)** A runner uses aerobic respiration to release energy for most of a cross-country race.

(i) State the equation for aerobic respiration.

[1]

(ii) Outline why aerobic respiration is used for most of a cross-country race.

.....

..... [2]

(b) The respiratory system moves air in and out of the lungs.

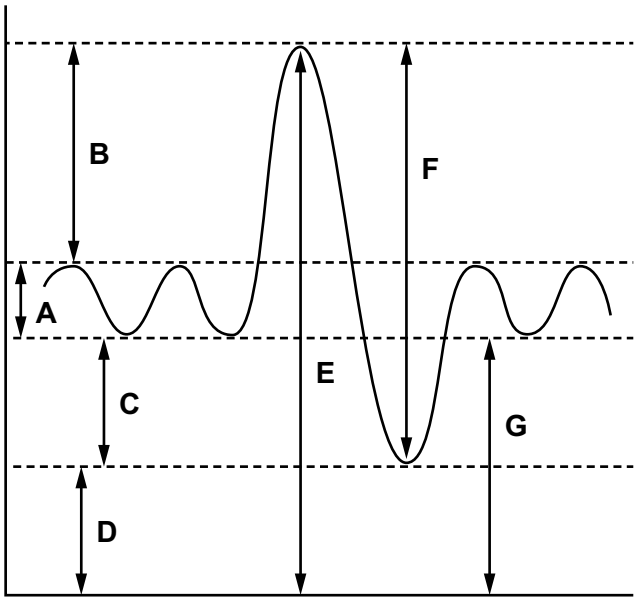
Other than an increase in gaseous exchange, describe **two** effects that starting to run has on the respiratory system.

1 .....

2 .....
[2]

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(c) The diagram represents a spirometer trace.



(i) Select a different letter from the diagram that represents each of the following:

residual volume .....

tidal volume .....

inspiratory reserve volume .....

expiratory reserve volume. .....

[4]

(ii) Describe vital capacity.

.....

..... [1]

7 Describe how **three** named forces may act on a sprinter during a 100-metre race.

force 1 .....

description .....

.....

force 2 .....

description .....

.....

force 3 .....

description .....

.....

[6]

8 **(a)** For each of the following aspects of health and well-being, describe **one** benefit of exercise:

mental .....

.....

social. .....

.....

.....

[2]

(b) One consequence of having a sedentary lifestyle on physical health and well-being is an increased risk of unwanted weight gain.

Describe **three** other consequences.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

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9 **(a)** One main type of sponsorship is financial sponsorship.

State **two** other main types of sponsorship. Describe how each main type of sponsorship may be provided for an international sporting event, such as the Olympic Games.

main type of sponsorship 1 .....

how it may be provided .....

.....

main type of sponsorship 2 .....

how it may be provided .....

.....

[4]

(b) State **two** main types of media coverage. For each main type of media coverage, describe a different way it may benefit secondary spectators of an international sporting event.

main type of media coverage 1 .....

benefit .....

.....

.....

main type of media coverage 2 .....

benefit .....

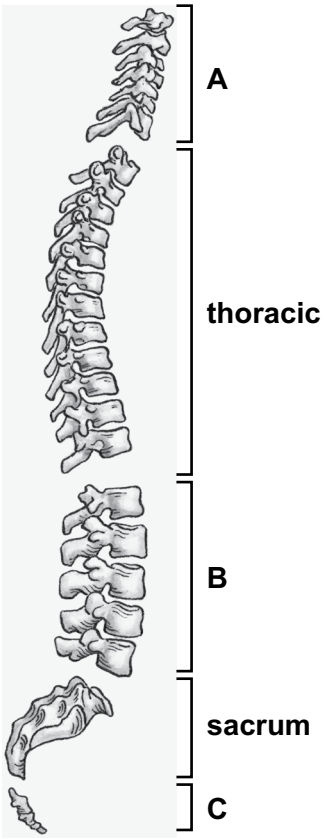
.....

.....

[4]

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10 The diagram shows regions of the vertebral column.



Identify the **three** regions labelled **A**, **B** and **C**.

A .....

B .....

C .....

[3]

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11 **(a)** Overuse injuries are one danger of overtraining.

Identify **three** other dangers of overtraining for a performer.

1 .....

2 .....

3 .....

[3]

(b) **(i)** Describe continuous training.

.....

.....

.....

.....

.....

..... [3]

(ii) Suggest a suitable method for determining the correct intensity of continuous training.

.....

..... [1]

(c) Other than reducing the risk of injury, describe **three** reasons why a performer may complete a warm-up before competing.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

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12 The photograph shows a highly skilled performer in a game of wheelchair tennis.



(a) Describe how the following characteristics of a highly skilled performance may be shown by a tennis performer:

accurate .....

.....

efficient. .....

.....

[2]

(b) Give different reasons why each of the following types of feedback are important for a performer at the cognitive stage of learning:

extrinsic feedback .....

.....

.....

knowledge of results. .....

.....

.....

[2]

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(c) Justify the placement of the skill of a tennis serve on the pacing continuum.

placement .....

justification .....

.....

[2]

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Question 10	© Ref: 85594713; Simone End / Getty Images; *Illustration of human spine, side view*; www.gettyimages.co.uk
Question 12	© Ref: 2JE861A; PjrSport / Alamy; *Zhenzhen Zhu (China) playing in the wheelchair singles at the Rothesay International, Devonshire Park, Eastbourne, 24th June 2022*; www.alamy.com

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