



General Certificate of Secondary Education  
2018

Centre Number

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Candidate Number

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# Physical Education

Paper 1



[G9741]

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**FRIDAY 18 MAY, AFTERNOON**

## TIME

1 hour 30 minutes.

## INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

**You must answer the questions in the spaces provided.**

**Do not write outside the boxed area on each page or on blank pages.**

Complete in black ink only. **Do not write with a gel pen.**

Answer **all** questions.

## INFORMATION FOR CANDIDATES

The total mark for this paper is **100**.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

Quality of written communication will be assessed in questions **9, 19** and **21(b)**.



1 (a) To be completely healthy people should maintain their physical, social and mental well-being.

Name **two** activities a person could do to develop good mental health.

1. \_\_\_\_\_ [1]

2. \_\_\_\_\_ [1]

(b) Name **one** condition people could develop if they neglect their mental health.

\_\_\_\_\_ [1]

2 Use **two** of the terms below to help you complete the statements that follow.

**physically unhealthy**

**physically healthy**

**physically fit**

**peak physical fitness**

1. \_\_\_\_\_ means exercising to keep the body in reasonable working order. [1]

2. \_\_\_\_\_ means training the body to be in the best possible shape. [1]





3 (a) Motivation can impact on a person's participation in physical activities and sport. What is motivation?

Motivation is \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [1]

(b) Extrinsic motivation could be used to encourage a young person to follow an active, healthy lifestyle. Give **three** examples of **extrinsic** motivation.

1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [1]

2. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [1]

3. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [1]

[Turn over

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\*28G974103\*

- 4 Use **Table 1** below to identify differences between public and private sector sport facilities.

**Table 1**

	<b>Public Sector</b>	<b>Private Sector</b>
<b>Owned by:</b>		
<b>Funded by:</b>		
<b>Purpose:</b>		

[6]



5 A healthy, balanced diet should include the following components:

**vitamins**                      **proteins**                      **fats**                      **carbohydrates**

**minerals**                      **water**                      **dietary fibre**

Select the component which should form **10–15%** of a balanced diet.

\_\_\_\_\_ [1]

6 Fats are an important component of a healthy balanced diet as they provide a secondary source for energy production.

State **one** other function of fats in a diet.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [1]

[Turn over

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7 (a) Which of the following components of diet might a marathon runner adjust to improve performance leading up to the event?

- vitamins
- proteins
- fats
- carbohydrates
- minerals
- dietary fibre

The component of diet is \_\_\_\_\_ [1]

(b) Explain the changes to diet the athlete would make in the week leading up to the marathon.

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8 Drinking alcohol before performing in a physical activity can negatively affect a sport performer's coordination.

State **two** other effects that alcohol could have on performance.

1. \_\_\_\_\_ [1]

2. \_\_\_\_\_ [1]





9 An individual may take part in non-competitive physical activities as part of leisure time. Other than an improvement to physical fitness, state and explain **three** further benefits of taking part in a non-competitive physical activity.

1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [2]

2. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [2]

3. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [2]

[Turn over

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10 (a) Explain what **muscular speed** enables a person's muscles to do.

Muscular speed enables a person's muscles to \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [1]

(b) Age is a factor which may determine a person's **muscular speed**. State **two** other physical factors.

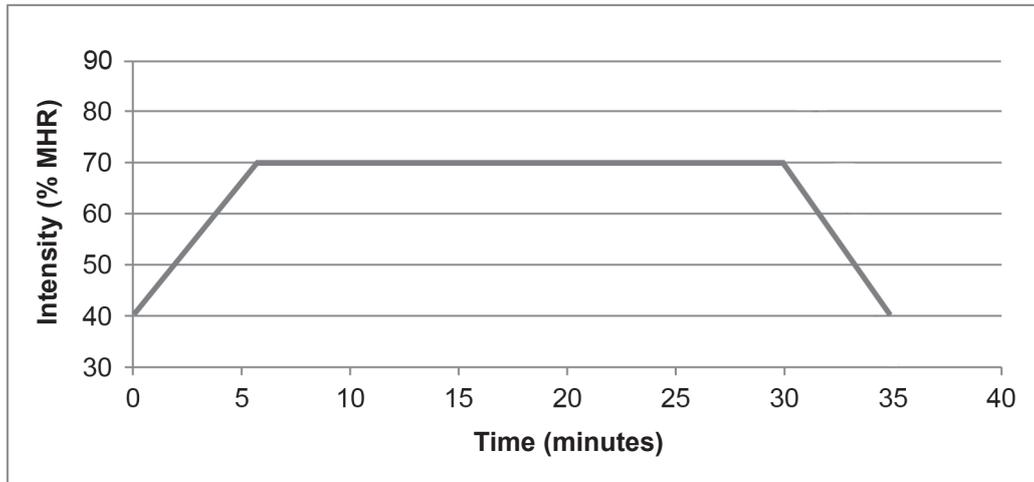
1. \_\_\_\_\_  
\_\_\_\_\_ [1]

2. \_\_\_\_\_  
\_\_\_\_\_ [1]





- 12 Study **Fig. 1** which shows the performance of an athlete and then answer the questions that follow.



**Fig. 1**

- (a) Name the **training method** being used by the athlete in the session.

The training method is \_\_\_\_\_ [1]





- 13 Study the training session in **Table 2** below and then answer the questions that follow.

**Table 2**

Distance	100 m
Time	14 seconds
Repetitions	4
Recovery between	56 seconds

- (a) Name the **training method** being used by the athlete in the session.

The training method is \_\_\_\_\_ [1]

- (b) The component of physical fitness which this training session is most likely to improve is **anaerobic** fitness.

Use **specific** evidence from **Table 2** to justify this.

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[2]



(c) Using the same training method complete **Table 3** below by planning the **time**, **repetitions** and **recovery** for a training session to develop **aerobic** fitness.

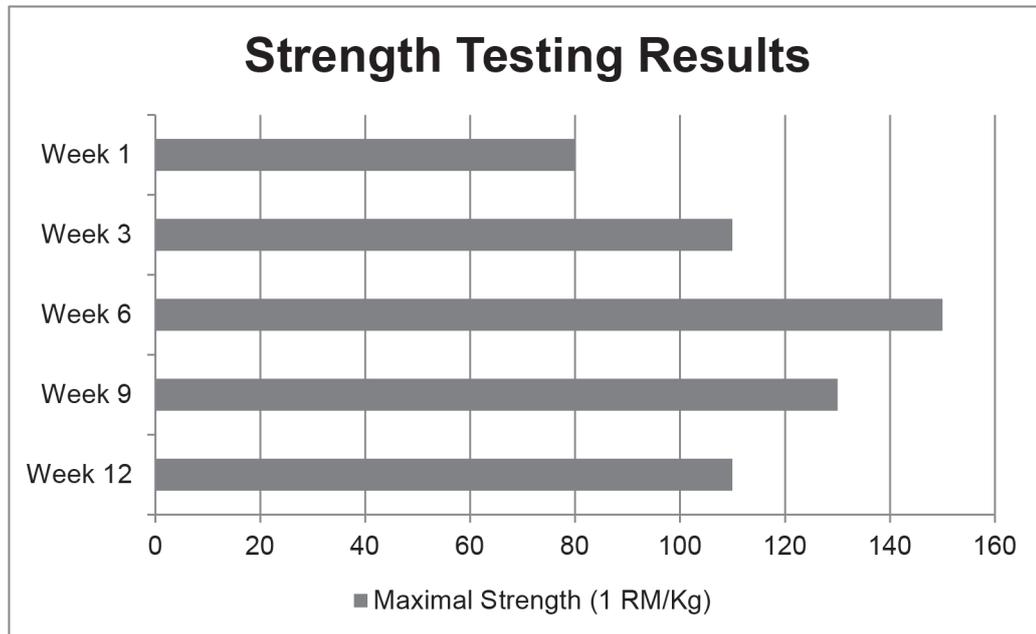
**Table 3**

Distance	400 m
Time	
Repetitions	
Recovery between	

[3]



- 14 Study **Fig. 2** which shows the performance of an athlete and then answer the questions that follow.



**Fig. 2**

- (a) Which principle of training has the athlete displayed from **weeks 6–12**?

\_\_\_\_\_ [1]

- (b) Use **specific** evidence from **Fig. 2** to justify your choice.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ [2]



15 Read the statements below and select the **one** which best demonstrates the training principle of **specificity**.

- A. Lifting heavy weights to increase aerobic performance
- B. Doing press-ups to reduce waistline size
- C. Power walking to improve arm strength
- D. Doing sit-ups to increase abdominal strength

\_\_\_\_\_ best demonstrates the principle of specificity. [1]

16 State **two** benefits of **planning recovery periods** and **rest days** into a training programme to improve performance.

1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [1]

2. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [1]

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17 As part of an exercise programme a person may measure heart rate to monitor fitness levels. Below are three different heart rate values.

(a) Place the heart rate values into **Table 4** to show a person's resting, working and recovery heart rate.

150 BPM

70 BPM

90 BPM

Table 4

Resting heart rate	Working heart rate	Heart rate during recovery

[1]

(b) Explain why you placed the value in **Table 4** as **working heart rate**.

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[1]

(c) Explain why you placed the value in **Table 4** as **recovery heart rate**.

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[2]

(d) State what **change to resting heart rate** a person would expect if aerobic exercise was effective.

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[1]



18 Describe how a test can be set up using **repetition** of a particular exercise to assess the level of **muscular fitness**.

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[2]

[Turn over

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19 State **three** physical changes that take place in the skeletal **muscles** as a result of **regular** and **appropriate aerobic** training. Explain how each of these physical changes helps to **improve performance**.

1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [2]

2. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [2]

3. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [2]



20 State **four** reasons why it is important for the health and safety of all those involved in a physical activity to abide by **rules** and **codes of behaviour**.

1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [1]

2. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [1]

3. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [1]

4. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [1]

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- 21 (a) A warm-up helps to prepare a person's body systems for the workout. Write down **two** other **purposes** for including a **warm-up** before the workout.

1. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ [1]

2. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ [1]

- (b) Study **Table 5** which outlines a **warm-up**. This was suggested as being appropriate for a **health-related** workout to develop aerobic fitness through a continuous steady paced run.

**Table 5**

<b>PHASE 1</b>	<b>Pulse-raising activity</b>	Sprint reps of 60 m, 80 m, 100 m with 30 seconds rest in between reps working at 95% MHR. Do 3 sets.
<b>PHASE 2</b>	<b>Mobility exercises</b>	Mobilise lower body joints by moving them as quickly as possible beyond their normal range of movement. Spend 30 seconds on each exercise.
<b>PHASE 3</b>	<b>Flexibility exercises</b>	Complete ballistic stretching exercises that cover the leg muscles. Spend 45 seconds on each stretching exercise.



Explain what you find **wrong** with **each** phase of the warm-up and state what you would **recommend** should be included.

PHASE 1. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ [2]

PHASE 2. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ [2]

PHASE 3. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ [2]

[Turn over

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(c) It is important to follow a physical activity workout with a cool-down.

(i) State **one** reason for including **flexibility exercises** in the **cool-down**.

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[1]

(ii) State **two** reasons for including **pulse lowering activities** in the **cool-down**.

1. \_\_\_\_\_

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[1]

2. \_\_\_\_\_

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[1]





22 (a) A person wishes to improve in the 800 m (32 lengths of a 25 m pool) freestyle performance to qualify for the regional finals in 8 weeks time by applying the principles of training.

In week one the plan is to train twice a week for 30 minutes. In each session the person will cover a distance of 800 m which includes the warm-up, workout and cool-down.

(i) State the **two** most important **components of physical fitness** that must be developed in the 8 week training programme. **Explain** each of your choices.

1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [2]

2. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [2]

(ii) Explain the **advice** you would give on the **type of exercise** that should be included in the workouts over the 8 weeks.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [2]

[Turn over



(iii) Explain the **advice** you would give the person on the **method of training** that would be most suitable to use over the 8 weeks.

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[2]

(iv) Explain **two** ways the person could apply the principle of **progressive overload** to the 8 week pool training programme to improve performance in the 800 m freestyle swimming event.

1. \_\_\_\_\_

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[2]

2. \_\_\_\_\_

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[2]



- (b) To introduce variety to the 8 week training programme, the person decided to include a **weights programme** in the gym.

Study the information below in **Table 6** and answer the questions that follow.

**Table 6**

	Option 1	Option 2	Option 3	Option 4
<b>Repetition Maximum (RM)</b>	10	25	3	16

- (i) Record in **Table 7** which of the four options given for **Repetition Maximum** is most suitable for **weeks 1–3** of this person's weights programme.

**Table 7**

Phase of the training programme	Repetition Maximum
<b>Weeks 1–3</b>	

[1]

- (ii) Explain why you chose the option given for **Repetition Maximum** as most suitable for **weeks 1–3** of this person's weights programme.

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[3]

[Turn over



- (iii) Study the information below in **Table 8**. Having selected the appropriate Repetition Maximum, record in **Table 9** which of the four options given for **repetitions** is most suitable for **weeks 1–3** of this person's weights programme.

**Table 8**

	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>	<b>Option 4</b>
<b>Number of Repetitions</b>	23	15	9	2

**Table 9**

<b>Phase of the training programme</b>	<b>Repetitions</b>
<b>Weeks 1–3</b>	

[1]



(iv) Explain why you chose the option given for **repetitions** as most suitable for **weeks 1–3** of this person's weights programme.

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[2]

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**THIS IS THE END OF THE QUESTION PAPER**

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For Examiner's use only	
Question Number	Marks
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Examiner Number

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