



General Certificate of Secondary Education
2018

Centre Number

--	--	--	--	--

Candidate Number

--	--	--	--

Physical Education

Paper 1

ML

[G9741]

FRIDAY 18 MAY, AFTERNOON

TIME

1 hour 30 minutes, plus your additional time allowance.

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.

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) People should maintain their physical, social and mental well-being to be completely healthy.

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 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

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

Table 1

	Public Sector	Private Sector
Owned by:		
Funded by:		
Purpose:		

[6]

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

vitamins

proteins

fats

carbohydrates

minerals

water

dietary fibre

Which of these components 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]

- 7 (a) Look at the following components of diet.
Which component might a marathon runner adjust to improve performance leading up to an event?

vitamins

proteins

fats

carbohydrates

minerals

dietary fibre

Answer _____ [1]

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

[3]

- 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 People may take part in non-competitive physical activities during leisure time to improve their 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

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 which may determine a person's muscular speed.

1. _____

_____ [1]

2. _____

_____ [1]

11 Is **aerobic** or **anaerobic** energy production more **important** for inclusion in a **health-related** exercise programme?

(a) I would choose _____ energy production as being more important for a health-related exercise programme. [1]

(b) Explain your choice.

[2]

[Turn over

- 12 Study **Fig. 1**. It shows the performance of an athlete. Answer the questions that follow.

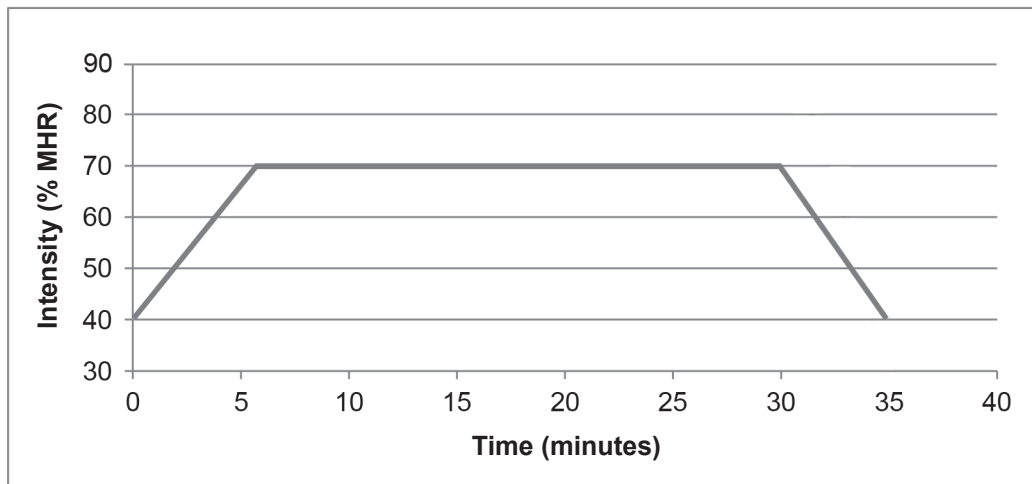


Fig. 1

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

The training method is _____ [1]

(b) Use **specific** evidence from **Fig. 1** to justify your answer.

[3]

(c) If the training method cannot be changed, explain **one** way the principle of **variety** could be applied to the athlete's training to maintain interest.

[2]

[Turn over

- 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.

_____ [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]

[Turn over

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

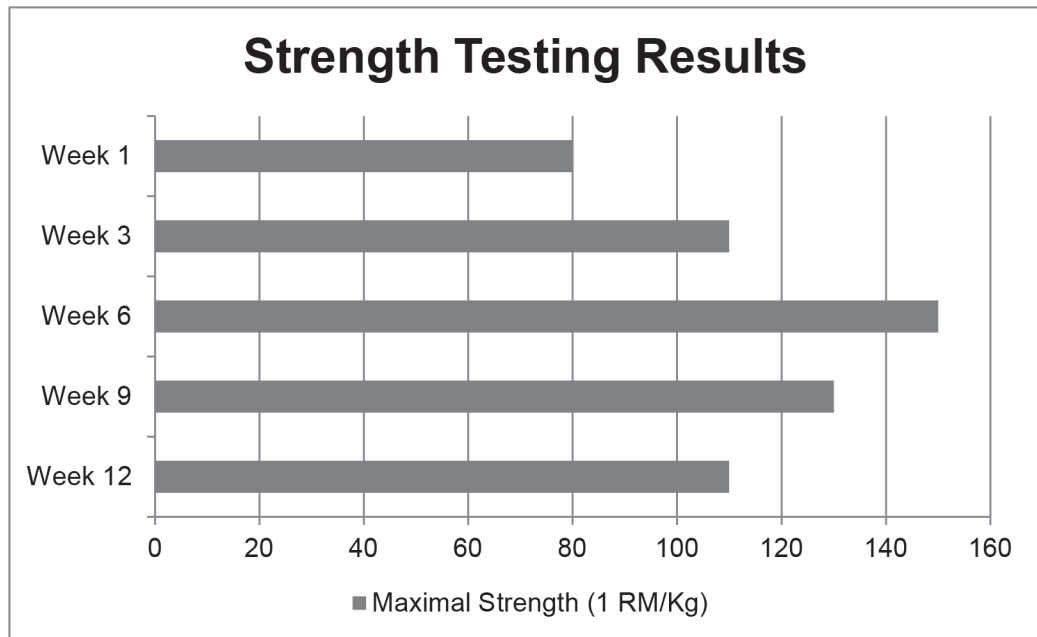


Fig. 2

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

[1]

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

[2]

15 Read the statements below and choose 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]

[Turn over

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

150 BPM

70 BPM

90 BPM

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

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**.

[1]

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

[2]

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

[1]

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

[2]

[Turn over

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]

[Turn over

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

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

(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**.

[1]

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

1.

[1]

2.

[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.

[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.

[2]

2.

[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
Repetition Maximum (RM)	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
Weeks 1–3	

[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.

[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

	Option 1	Option 2	Option 3	Option 4
Number of Repetitions	23	15	9	2

Table 9

Phase of the training programme	Repetitions
Weeks 1–3	

[1]

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

[2]

THIS IS THE END OF THE QUESTION PAPER

DO NOT WRITE ON THIS PAGE

For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
Total Marks	

Examiner Number

Permission to reproduce all copyright material has been applied for.
In some cases, efforts to contact copyright holders may have been unsuccessful and CCEA will be happy to rectify any omissions of acknowledgement in future if notified.

229863