



General Certificate of Secondary Education
2017

Centre Number

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Candidate Number

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Physical Education



[G9741]

G9741

FRIDAY 19 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 **18**, **21** and **22**.



1 Which **two** of the words below best complete this definition of physical fitness?

- accurately quickly forcefully effectively
precisely efficiently powerfully carefully

Physical fitness is the ability to perform physical tasks

_____ and _____ [2]

2 Identify **two** significant actions in a person's lifestyle that should help maintain physical well-being.

1. _____ [1]

2. _____ [1]





3 (a) Name a sport or physical activity that may interest an **extrovert**. Explain your choice.

Sport/physical activity _____ [1]

Explanation _____

_____ [2]

(b) Name a sport or physical activity that may interest an **introvert**. Explain your choice.

Sport/physical activity _____ [1]

Explanation _____

_____ [2]

[Turn over



4 Without having sponsorship, explain why being **affluent** can be a major influence in the ability of people to **participate** in and **sustain involvement** in a certain sport or physical activity.

Chosen sport/physical activity _____

Explanation _____

_____ [1]

5 (a) A person needs to eat food to maintain life. Give **one** other reason for a person needing to eat food.

_____ [1]

(b) Foods may contain the components of carbohydrates, vitamins and water. Name **three** other components that foods may contain.

1. _____ [1]

2. _____ [1]

3. _____ [1]





6 Identify **two** effects that the tar in tobacco smoke can have on the respiratory system.

1. _____

_____ [1]

2. _____

_____ [1]

7 A person's skilled performance in a badminton match would suffer as a result of fatigue from a lack of sleep. Identify **two** aspects of the performance that would be affected.

1. _____ [1]

2. _____ [1]



8 Name **one** organ of the human body that is damaged by drinking too much alcohol over a prolonged period of time.

_____ [1]

9 There is a relationship between a person's metabolism, exercising and weight control. Explain how exercise affects a person's metabolism and how this then affects weight control.

_____ [3]





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10 (a) Aerobic energy production, anaerobic energy production, flexibility, and muscular endurance are components of physical fitness. Name **two** other components of physical fitness.

1. _____ [1]

2. _____ [1]

(b) Consider the 800 m track race in athletics.

(i) State the physical demands on an elite athlete during the 800 m race.

_____ [3]

(ii) Explain when the **aerobic** and **anaerobic** energy systems would be used by an elite athlete during the 800 m race.

_____ [3]



(iii) Explain the relative importance of **flexibility** for an elite athlete during the 800 m race.

[1]

(iv) Explain the relative importance of **muscular endurance** for an elite athlete during the 800 m race.

[1]



11 (a) Illustrate with diagrams **and** instructions how a person should perform an **isotonic exercise** (with or without using equipment) that would work the biceps (front of the upper arms). [2]



(b) Illustrate with diagrams **and** instructions how a person should perform an **isometric exercise** (with or without using equipment) that would work the biceps (front of the upper arms). [2]



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- 12 Select an appropriate intensity and work time for a continuous steady pace exercise workout for a person who is unfit and just starting an exercise programme. Explain, using examples, how the intensity (% MHR) and work time (duration) would change over the exercise programme.

Intensity (% MHR) at start of exercise programme: _____ [1]

Work time (duration) at start of exercise programme: _____ [1]

Explanation of changes over the exercise programme: _____

[2]

- 13 (a) Identify **one similarity** between performing **fartlek** training and **interval** training.

[1]

- (b) Identify **one difference** between performing **fartlek** training and **interval** training.

[1]



14 Explain the **differences** in the **work times** for intervals when interval training is being used to develop **anaerobic** fitness as opposed to **aerobic** fitness.

[2]

15 Identify **two** tasks or chores that may be done at home and would count as exercise.

1. _____ [1]

2. _____ [1]

[Turn over



16 The 'FITT' principle is used to develop physical fitness. State what each of the letters stands for and explain what is meant by each of these words.

'F' stands for _____ [1]

This means _____

_____ [1]

'I' stands for _____ [1]

This means _____

_____ [1]

'T' stands for _____ [1]

This means _____

_____ [1]

'T' stands for _____ [1]

This means _____

_____ [1]

17 What is a person's pulse? How does a person know from the **resting pulse** whether their **aerobic** training programme is effective?

_____ [2]



18 Assessing and monitoring a person's level of physical fitness before, during and after their training programme can be beneficial for the person. Explain **three** different benefits.

Benefit 1 _____

_____ [2]

Benefit 2 _____

_____ [2]

Benefit 3 _____

_____ [2]

[Turn over



19 (a) What is the role or function of the respiratory system?

[2]

(b) As a result of regular and appropriate aerobic exercise, the intercostal muscles and the diaphragm become more efficient and effective.

Explain how this helps to improve aerobic performances.

This helps to improve aerobic performances because _____

[3]

(c) As a result of regular and appropriate aerobic exercise, the surface area for gaseous exchange is increased.

Explain how this happens.

This happens because _____

[1]





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20 Choose and name **three different** sports or physical activities that can have a **high risk** of injury occurring during participation. For each sport or physical activity, identify a **high-risk situation** and the possible outcome from that situation.

For each **high-risk situation** identified, explain what action should be taken when participating in the sport or physical activity to minimise the risk.

Sport or physical activity 1: _____

High-risk situation and the possible outcome from it _____

_____ [1]

Action to minimise the identified risk for sport or physical activity 1: _____

_____ [1]

Sport or physical activity 2: _____

High-risk situation and the possible outcome from it _____

_____ [1]

Action to minimise the identified risk for sport or physical activity 2: _____

_____ [1]



Sport or physical activity 3: _____

High-risk situation and the possible outcome from it _____

_____ [1]

Action to minimise the identified risk for sport or physical activity 3: _____

_____ [1]

[Turn over

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21 Analyse the following **aerobic** fitness workouts that are planned for a 20 year-old male who is physically fit from training regularly.

Identify what needs to be changed in each workout. State the changes that you would recommend for each workout and explain why your changes will make each of the workouts appropriate and effective for developing aerobic fitness.

(a) Swim 10 repetitions of 100 m with each repetition swum in 20 seconds and a rest of 2 minutes between each repetition, i.e. 100 m × 20 sec × 10 reps × 2 min recovery between reps.

[3]

(b) Steady run at 95% of MHR for 90 minutes.

[3]



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Question Number	Marks
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Examiner Number

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