



Centre Number

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Candidate Number

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General Certificate of Secondary Education
2018

Physical Education

Paper 1

MV18**[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 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 at the end of each question 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 mark for each]

1. _____
2. _____

- (b) Name **one** condition people could develop if they neglect their mental health. [1 mark]

- 2 Use **two** of the terms below to help you complete the statements that follow. [1 mark for each]

physically unhealthy

physically healthy

physically fit

peak physical fitness

1. _____ means exercising to keep the body in reasonable working order.

2. _____ means training the body to be in the best possible shape.

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

Motivation is _____

- (b) Extrinsic motivation could be used to encourage a young person to follow an active, healthy lifestyle. Give **three** examples of **extrinsic** motivation.
[1 mark for each]

1. _____

2. _____

3. _____

- 4 Use **Table 1** below to identify differences between public and private sector sport facilities. [6 marks]

Table 1

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

- 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 mark]

- 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 mark]

- 7 (a) Which of the following components of diet might a marathon runner adjust to improve performance leading up to the event? [1 mark]

vitamins

proteins

fats

carbohydrates

minerals

dietary fibre

The component of diet is _____

- (b) Explain the changes to diet the athlete would make in the week leading up to the marathon. [3 marks]

- 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 mark for each]

1. _____

2. _____

- 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.
[2 marks for each]

1. _____

2. _____

3. _____

- 10 (a)** Explain what **muscular speed** enables a person's muscles to do. [1 mark]

Muscular speed enables a person's muscles to

- (b)** Age is a factor which may determine a person's **muscular speed**. State **two** other physical factors. [1 mark for each]

1.

2.

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

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

(b) Explain your choice. [2 marks]

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

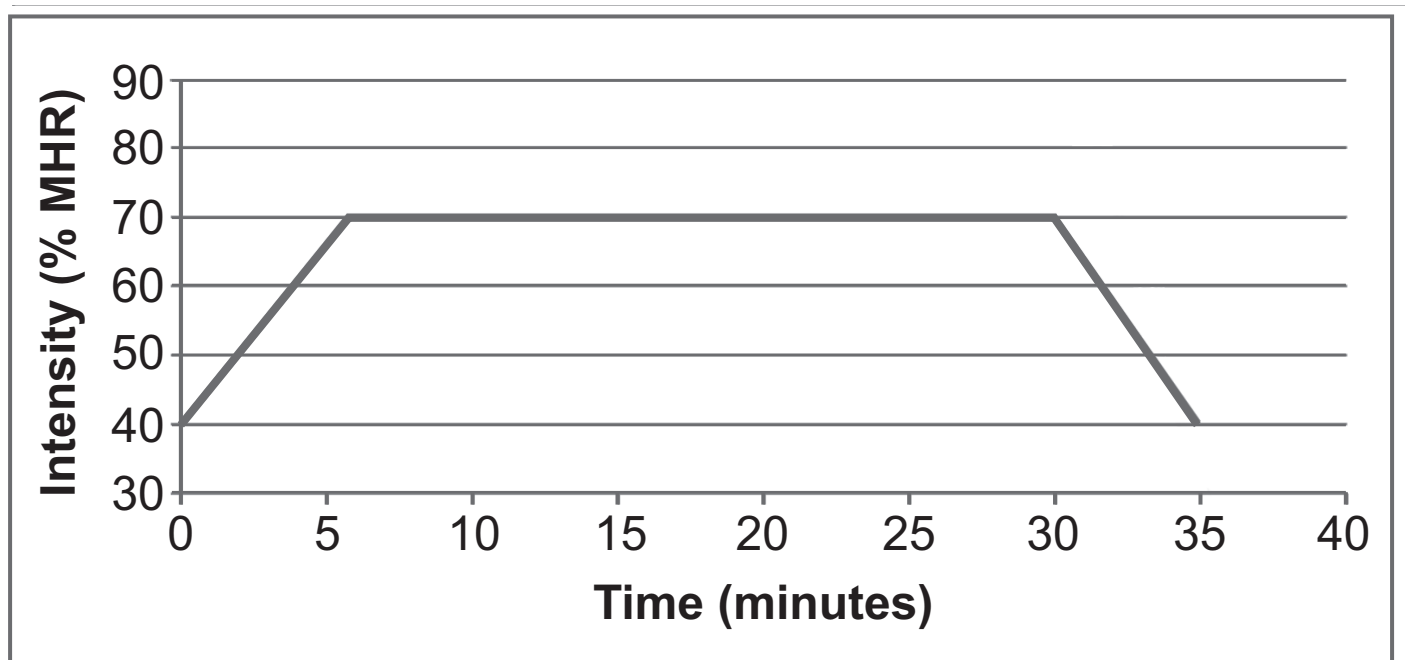


Fig. 1

(a) Name the **training method** being used by the athlete in the session. [1 mark]

The training method is _____

(b) Use **specific** evidence from **Fig. 1** to justify your choice.
[3 marks]

(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 marks]

- 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. [1 mark]

The training method is _____

- (b)** The component of physical fitness which this training session is most likely to improve is **anaerobic** fitness. [2 marks]

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

- (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. [3 marks]

Table 3

| | |
|------------------|-------|
| Distance | 400 m |
| Time | |
| Repetitions | |
| Recovery between | |

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

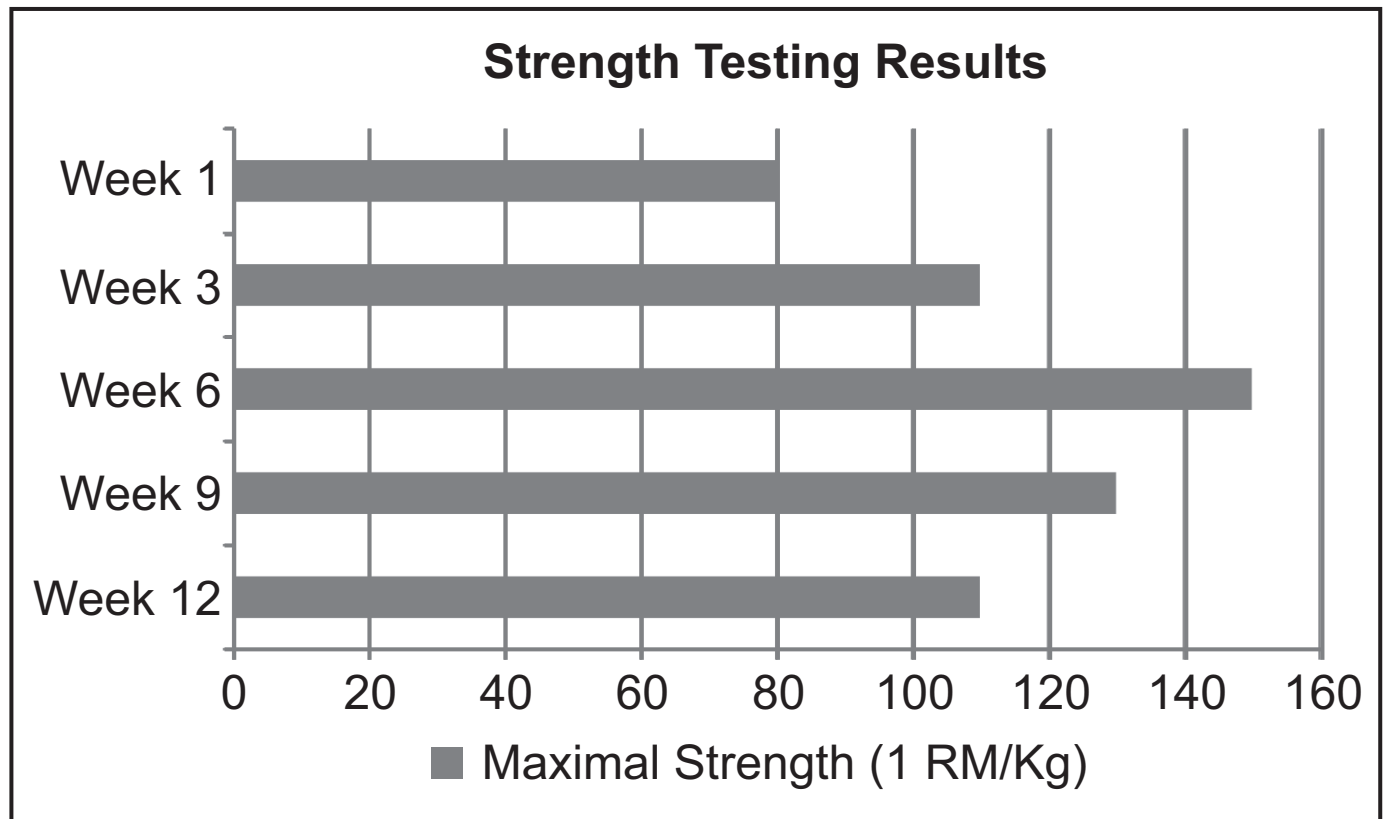


Fig. 2

(a) Which principle of training has the athlete displayed from **weeks 6–12**? [1 mark]

(b) Use **specific** evidence from **Fig. 2** to justify your choice. [2 marks]

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

- 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.

16 State **two** benefits of **planning recovery periods** and **rest days** into a training programme to improve performance.
[1 mark for each]

1. _____

2. _____

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.
[1 mark]

150 BPM

70 BPM

90 BPM

Table 4

| Resting heart rate | Working heart rate | Heart rate during recovery |
|--------------------|--------------------|----------------------------|
| | | |

(b) Explain why you placed the value in **Table 4** as **working heart rate**. [1 mark]

(c) Explain why you placed the value in **Table 4** as **recovery heart rate**. [2 marks]

(d) State what **change** to **resting heart rate** a person would expect if aerobic exercise was effective. [1 mark]

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

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**. [2 marks for each]

1. _____

2. _____

3. _____

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 mark for each]

1. _____

2. _____

3. _____

4. _____

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 mark for each]

1. _____

2. _____

(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. [2 marks for each]

PHASE 1. _____

PHASE 2. _____

PHASE 3. _____

(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 mark]

(ii) State **two** reasons for including **pulse lowering activities** in the **cool-down**. [1 mark for each]

1.

2.

- 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. [2 marks for each]

1. _____

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 marks]

- (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 marks]

(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.

[2 marks for each]

1. _____

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.
[1 mark]

Table 7

| Phase of the training programme | Repetition Maximum |
|---------------------------------|--------------------|
| Weeks 1–3 | |

- (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 marks]

- (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. [1 mark]

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 | |

(iv) Explain why you chose the option given for **repetitions** as most suitable for **weeks 1–3** of this person's weights programme. [2 marks]

THIS IS THE END OF THE QUESTION PAPER

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| For Examiner's use only | |
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| Question Number | Marks |
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