



General Certificate of Secondary Education
2025

Centre Number

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Candidate Number

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Physical Education

Paper 1

Factors Underpinning Health
and Performance



[G9771]

G9771

MONDAY 19 MAY, AFTERNOON

TIME

1 hour 15 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 for each question or part question.

Quality of written communication will be assessed in questions **7, 13(a) and 14.**



1 Read the statements below and select the **correct one** by ticking the box.

(a) The **respiratory** system consists of the:

A	alveoli, bronchioles, heart, muscles	
B	alveoli, bronchi, heart, tendons	
C	alveoli, bronchioles, bronchi, trachea	

[1]

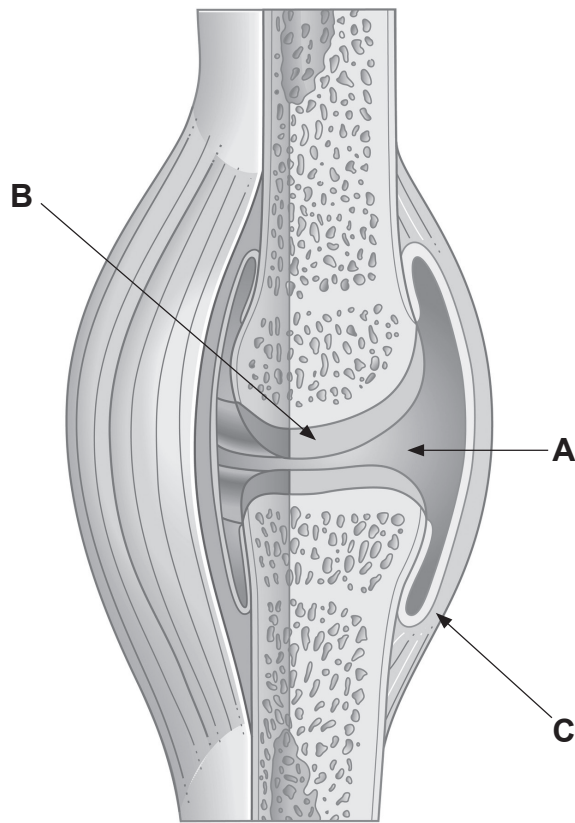
(b) An **immediate effect** of exercise is:

A	an increase in heart rate	
B	a drop in resting heart rate	
C	an increase in muscle mass	

[1]



2 Fig. 1 shows the structure of a knee joint.



Source: © Getty Images

Fig. 1

(a) Identify structures A, B and C labelled in Fig. 1.

A _____ [1]

B _____ [1]

C _____ [1]

(b) Explain how structure C provides stability for a synovial joint.

_____ [2]

[Turn over



3 Match each movement pattern by **drawing a line** to the correct definition. Flexion has been done for you.

Flexion	Movement towards the mid-line of the body
Plantar flexion	Pointing the toes downward
Abduction	The toes are brought closer to the shin.
Adduction	Movement away from the mid-line of the body
Dorsiflexion	Bending the limbs at a joint

[4]





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4 Images A, B, C and D show isotonic and isometric contractions taking place in four different activities.

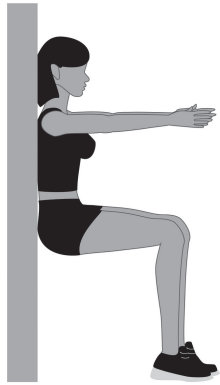


Image A
Wall sit



Image B
Running



Image C
Biceps curl



Image D
Handstand

Source: © Getty Images

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28G977106

(a) Complete **Table 1** by identifying whether the activity requires an **isotonic** or **isometric** contraction.

Table 1

Image	Type of contraction
A: Wall sit	
B: Running	
C: Biceps curl	
D: Handstand	

[4]

(b) State **one** difference between an isotonic and an isometric contraction.

[2]

[Turn over



- 5 Study **Table 2** which shows the break down of type I (slow twitch) and type II (fast twitch) muscle fibres for two athletes.

Table 2

Athlete	Type I (slow twitch) muscle fibres	Type II (fast twitch) muscle fibres
A	85%	15%
B	25%	75%

- (a) State and explain an **athletic event** most suitable for **Athlete A**.

Athletic event: _____ [1]

Explanation: _____

_____ [2]

- (b) State and explain an **athletic event** most suitable for **Athlete B**.

Athletic event: _____ [1]

Explanation: _____

_____ [2]





6 Explain how the following functions of the **nervous system** help a games player to catch a ball successfully.

Sensory function _____

[2]

Interpretative function _____

[2]

Motor function _____

[2]

[Turn over

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8 Carbohydrates are an important nutrient in a balanced diet.

(a) State **two other nutrients** and describe a different function of each one.

Nutrient 1 _____

Function _____

_____ [2]

Nutrient 2 _____

Function _____

_____ [2]

(b) Explain **two** factors that would account for individuals having different recommended calorie intake.

Factor 1 _____

_____ [2]

Factor 2 _____

_____ [2]

[Turn over

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28G977111

9 (a) Define the term **leisure**.

[1]

(b) State an example of an **active** leisure activity.

[1]

(c) State an example of a **passive** leisure activity.

[1]

10 Sport NI is the leading body for the development of sport in Northern Ireland.

State **two** aims of **Sport NI**.

1. _____

[1]

2. _____

[1]





11 State **three** ways the **public sector** can encourage participation in physical activity.

1. _____
_____ [1]

2. _____
_____ [1]

3. _____
_____ [1]

[Turn over

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12 **Table 3** shows fitness test results for a Year 12 student who is working to improve **aerobic** and **muscular endurance**.

Table 3

Fitness Test	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
12-minute Cooper run	1450 m	1500 m	1550 m	1600 m	1650 m	1700 m
Sit-up test	35 reps	33 reps	33 reps	32 reps	31 reps	30 reps

(a) Using the data in **Table 3** analyse the fitness test results over the six weeks.

12-minute Cooper run _____

_____ [2]

Sit-up test _____

_____ [2]



(b) Set a **SMART** objective to help this student improve their fitness.

[2]

(c) State **two** targets to help the person achieve the set SMART objective in (b).

1. _____

[1]

2. _____

[1]



13 A school conducted a **physical activity survey** with Year 12 students. The survey asked the following questions:

1. Is your lifestyle sedentary (sitting for long periods of time) or active?
2. How long do you exercise each day?
3. If you exercise, what intensity do you work at?

The results are shown in **Fig. 2**, **Fig. 3** and **Fig. 4**.

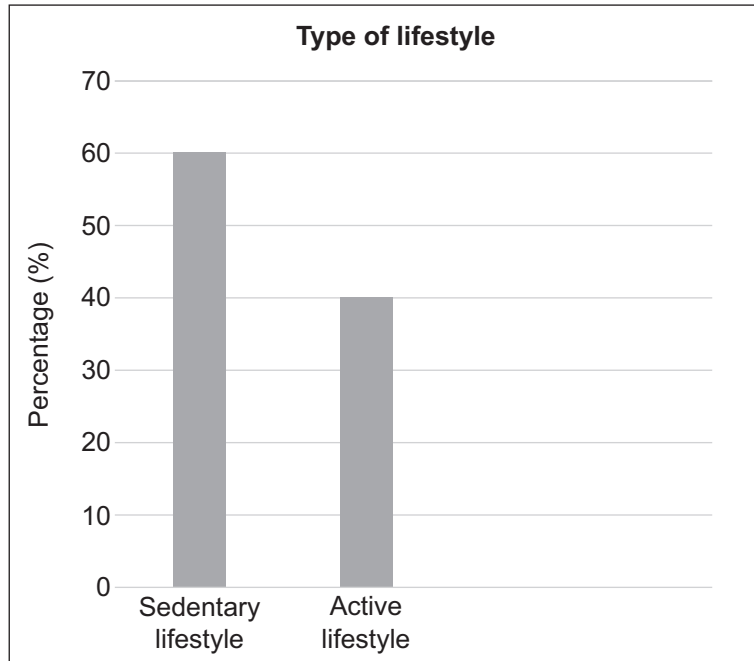


Fig. 2

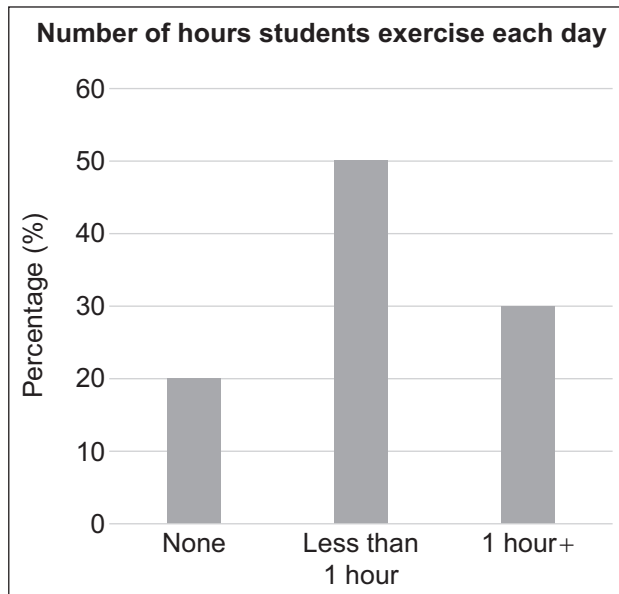


Fig. 3

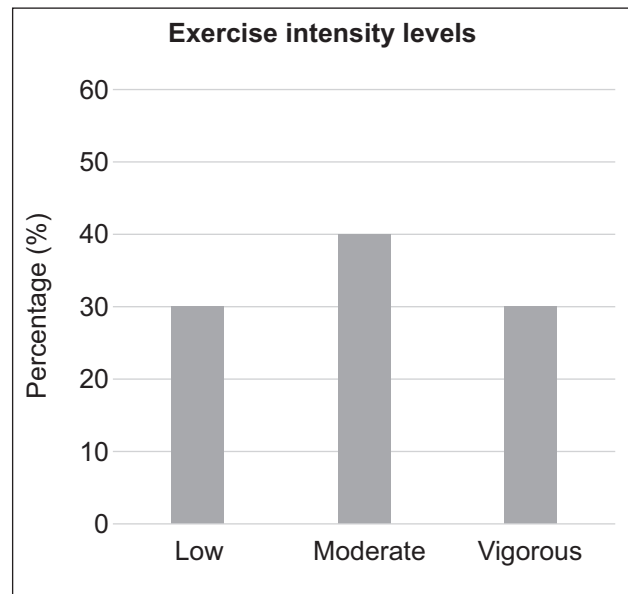


Fig. 4



(a) Using the data in **Fig. 2**, **Fig. 3** and **Fig. 4** compare the student's **type of lifestyle**, the **time** and **intensity** students exercise against the **Public Health Agency's (PHA) physical activity guidelines**.

Quality of written communication will be assessed in your answer.

Lifestyle _____

Time _____

Intensity _____

[9]

[Turn over

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(b) State **three practical changes** students could make to meet the PHA's physical activity guidelines.

1. _____
_____ [1]

2. _____
_____ [1]

3. _____
_____ [1]

(c) Further analysis of the survey results showed females spent less time exercising daily than males.

State **three** reasons why activity levels for females are lower than males.

1. _____
_____ [1]

2. _____
_____ [1]

3. _____
_____ [1]





14 Explain how each factor stated can help lead to **continued involvement** in physical activities and sports.

Quality of written communication will be assessed in your answer.

Mental Health _____

Facilities _____

Family _____

[9]

[Turn over

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15 The local youth club held a fun run to raise money for club equipment.

Table 4 shows the financial report on the **expected income** at the planning stage and the **actual income** after the event was completed.

Table 4

Expected income at the planning stage		Actual income after the event	
Grant from local council	£2000	Grant from local council	£2000
Entry fee £1 per runner	£300	Entry fee £1 per runner	£150
Total	£2300	Total	£2150

(a) Study **Table 4** and suggest **two** ways in which the **income** could be increased at the planning stage.

1. _____
_____ [1]

2. _____
_____ [1]

[Turn over

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Table 5 shows the financial report on the **expected expenditure** at the planning stage and the **actual expenditure** after the event was completed.

Table 5

Expected expenditure at the planning stage		Actual expenditure after the event	
Wages for staff		Wages for staff	
Marshals × 8	£320	Marshals × 8	£320
Carpark attendants × 2	£80	Carpark attendants × 2	£80
Insurance	£300	Insurance	£400
Equipment (tape/cones)	£100	Equipment (tape/cones)	£100
Advertising	£200	Advertising	£200
Water	£100	Water	£100
Certificates for runners	£150	Certificates for runners	£150
Total	£1250	Total	£1350
Expected profit (expected income – expected expenditure)	£1050	Actual profit (actual income – actual expenditure)	£800



(b) Study the data in **Table 5** and suggest **four** ways the **expenditure** could be reduced to increase the actual profit.

1. _____
_____ [1]

2. _____
_____ [1]

3. _____
_____ [1]

4. _____
_____ [1]

[Turn over

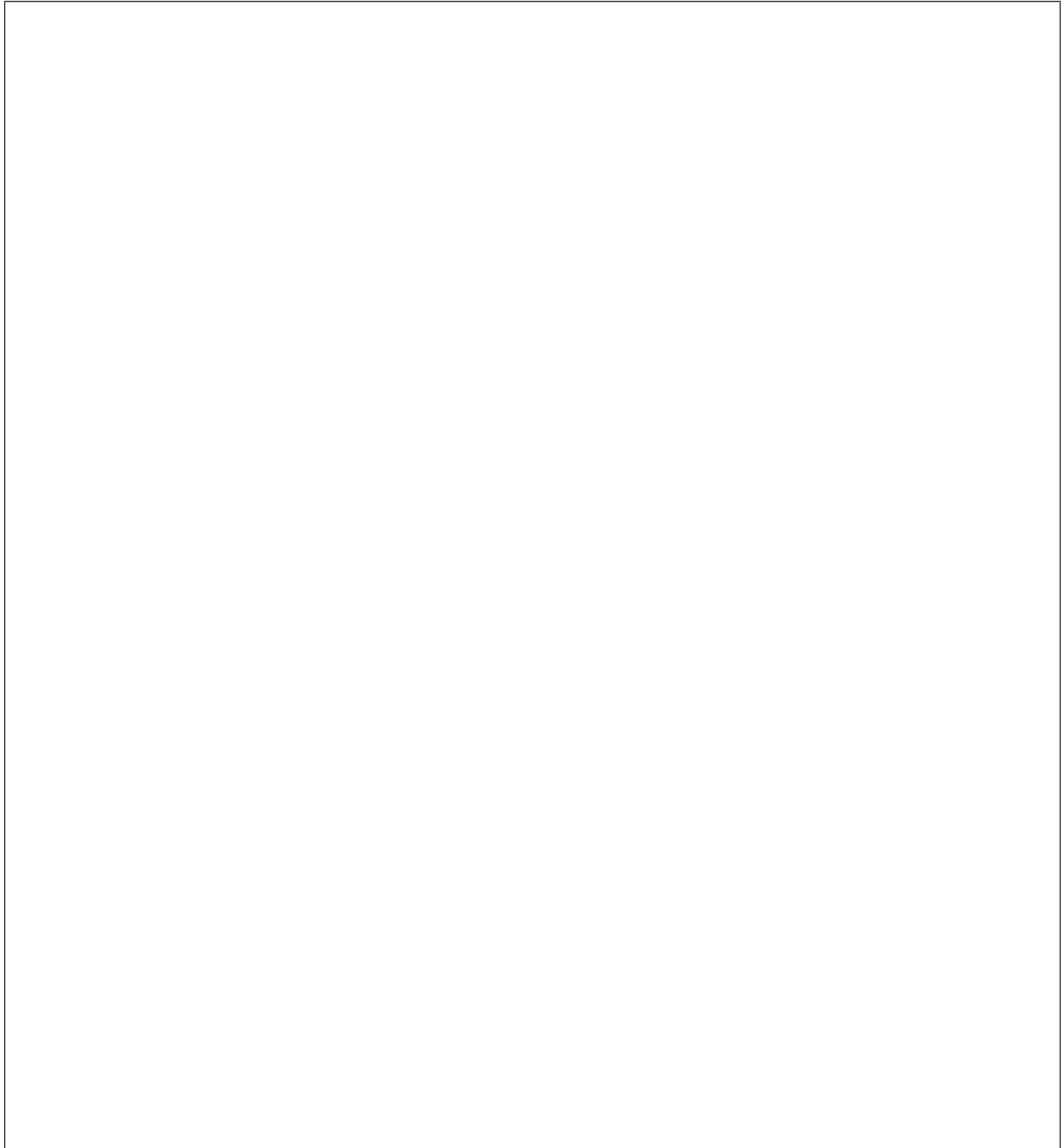
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16 You are responsible for organising and running a badminton **knockout** tournament for **eight students** of **similar playing ability**. The tournament will take place in the sports hall.

(a) Create the **draw** for the knockout tournament from the **first round through to the final**.



[6]



(b) Explain how **third place** will be decided in the knockout competition.

[1]

(c) State **two** examples of how you would use the **skills of communication** and **organisation** to effectively plan and run the tournament.

Communication _____

[1]

Communication _____

[1]

Organisation _____

[1]

Organisation _____

[1]

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Question Number	Marks
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Examiner Number

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