



General Certificate of Secondary Education

Centre Number

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Candidate Number

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Physical Education

Paper 1

Factors Underpinning Health and Performance



[G9771]

G9771

Assessment

TIME

1 hour 15 minutes.

Assessment Level of Control:
Tick the relevant box (✓)

Controlled Conditions	
Other	

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 **6(a)**, **7** and **9**.



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

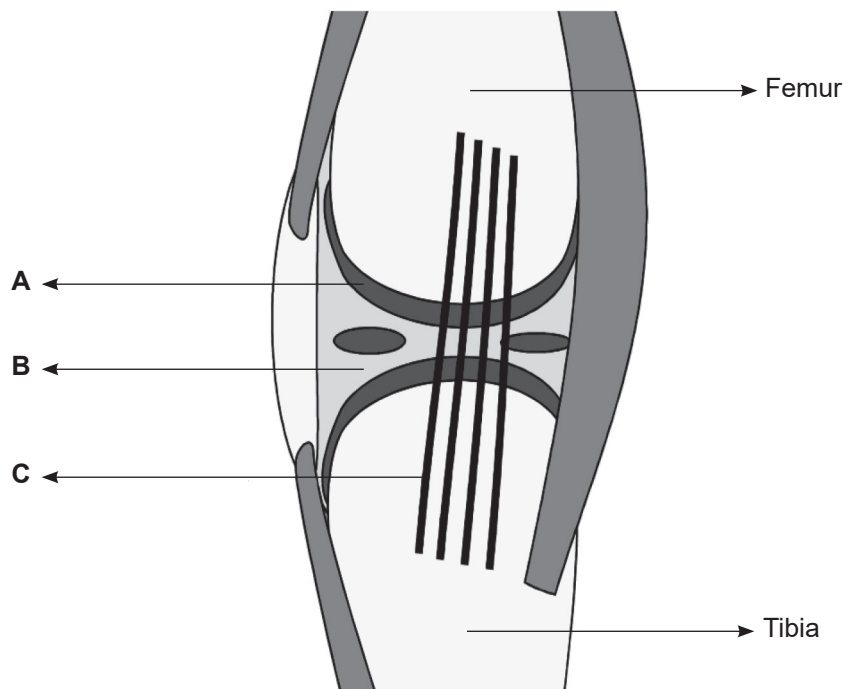


Fig. 1



Identify **A** to **C** on **Fig. 1** and explain how they help with movement during performances in physical activity and sport.

A = _____ [1]

A helps with movement because _____

_____ [1]

B = _____ [1]

B helps with movement because _____

_____ [1]

C = _____ [1]

C helps with movement because _____

_____ [1]

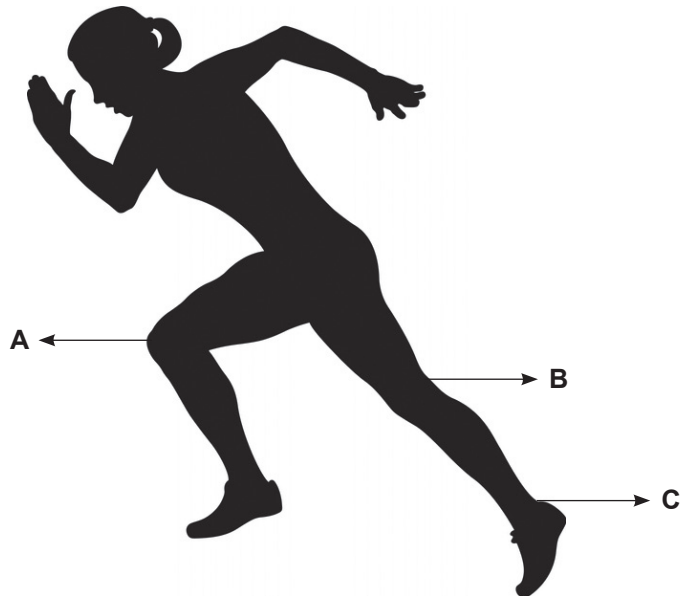
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- 2 **Fig. 2** shows a range of movement that can occur at synovial joints when a person is running.



Source: © Getty Images

Fig. 2

- (a) Identify the type of **synovial joint** labelled **A**.

A is a _____ synovial joint. [1]



(b) Identify and describe the type of **movement** at the synovial joints **A – C** on **Fig. 2**.

A shows _____ [1]

A movement occurs when _____

_____ [1]

B shows _____ [1]

B movement occurs when _____

_____ [1]

C shows _____ [1]

C movement occurs when _____

_____ [1]

[Turn over



3 Muscles work in pairs to produce movement. As one muscle contracts, the other muscle relaxes.

(a) The muscle that **contracts** is called the _____ [1]

(b) The muscle that **relaxes** is called the _____ [1]

4 Muscles contract in different ways to produce a range of movements.

(a) Press-up and plank exercises are examples of different types of muscle contractions. **Identify** and **explain** the type of contraction taking place for each exercise.

1. In a **press-up** _____ muscle contraction occurs because _____ [2]

2. In a **plank** _____ muscle contraction occurs because _____ [2]

(b) Describe the difference between concentric and eccentric muscle contractions.

Concentric muscle contractions involve _____

_____ [2]

Eccentric muscle contractions involve _____

_____ [2]





5 The mouth and stomach form part of the digestive system to break down food.

(a) Explain the role of the **small intestine**.

[2]

(b) Explain the role of the **large intestine**.

[2]



(b) Explain **two** reasons why the person's performance in the run would decline if they became a regular, steady smoker.

1. _____

_____ [2]

2. _____

_____ [2]





8 A balanced, healthy diet includes water and dietary fibre.

(a) Explain the importance of **water** in a balanced diet.

[2]

(b) Explain the importance of **dietary fibre** in a balanced diet.

[2]

[Turn over



- 9 **Table 1** outlines the approximate amount of calories needed to maintain energy balance for various gender and age groups at two different levels of physical activity.

Table 1

Gender	Age	Approximate <u>Sedentary</u> Calories	Approximate <u>Active</u> Calories
Female	9–13	1600	2000
	14–18	1800	2300
	19–30	2000	2500
	31–50	1800	2250
	51+	1700	2100
Male	9–13	1800	2300
	14–18	2200	2900
	19–30	2400	3100
	31–50	2200	2800
	51+	2100	2700



10 A young person regularly takes illegal substances.

State an effect this could have on the young person's **personality**.

[1]

11 A high percentage of people who smoke tobacco want to stop but find it too difficult.

Explain **two** methods of help that can support a person who wishes to stop smoking.

1. _____

[2]

2. _____

[2]



12 Analyse Fig. 3 and Fig. 4 below and then answer the questions that follow.



Source: © Getty Images

Fig. 3



Source: © Getty Images

Fig. 4

(a) State the law on alcohol consumption that Fig. 3 relates to.

_____ [1]

(b) State the advice on alcohol consumption that Fig. 4 relates to.

_____ [1]

[Turn over



13 State **three** reasons why females are less likely than males to participate in physical activity or sport.

1. _____
_____ [1]

2. _____
_____ [1]

3. _____
_____ [1]

14 State **three** ways public sector provision can encourage people's participation in physical activity.

1. _____
_____ [1]

2. _____
_____ [1]

3. _____
_____ [1]



15 Study a section of a person's job description in **Table 2** and answer the questions that follow.

Table 2

Typical duties will include:

- giving a professional examination and diagnosis of injuries
- using professional methods like manipulation, massage, electrotherapy and applying strapping/taping techniques to provide support
- giving professional advice about stretching and warming up exercises
- keeping legally required records of patient's treatment and progress
- giving accurate timescales for when players may be able to play again

(a) Identify the person's career within the active leisure industry.

_____ [1]

(b) State where a person in this career might find employment.

_____ [1]

16 Life expectancy in the UK continues to increase.

State how this could impact on people's leisure time.

_____ [1]

[Turn over



17 Study **Table 3** which outlines the weekly participation of a 14-year-old student in physical activity and sport.

Table 3

Day	Type of physical activity or sport	Time	Intensity
Monday	Netball training	60 mins	Moderate
Tuesday	PE class, circuit training Walk from bus stop to home	45 mins 8 mins	Vigorous Fairly moderate
Wednesday	Netball training	60 mins	Moderate
Thursday	Walk from bus stop to home	8 mins	Fairly moderate
Friday	Netball match	60 mins	Vigorous to hard
Saturday	Swim	60 mins	Moderate
Sunday	Family walk	45 mins	Moderate

(a) Evaluate the student's weekly participation in relation to the Public Health Agency's advice and recommendations on exercise and physical activity.

[4]



(b) **Table 4** includes the physical activities and sport that the 14-year-old student must complete during a school week.

Complete **Table 4** to show how the student could meet the advice and recommendations of the Public Health Agency to improve physical health by making appropriate **additions** to the

- **type of physical activity or sport**
- **time**
- **intensity**

Table 4

Day	Type of physical activity or sport	Time	Intensity
Monday	Netball training	60 mins	
Tuesday	PE class, circuit training	45 mins	
Wednesday	Netball training	60 mins	
Thursday			
Friday	Netball match	60 mins	
Saturday			
Sunday			




[4]

[Turn over



18 Identify a different potential hazard **and** risk reduction measure for each activity in Table 5.

Table 5

	Hazard associated with the activity	Measure to reduce risk
<p>Activity 1:</p>  <p>Source: © Getty Images</p> <p>Competitive swimming</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Activity 2:</p>  <p>Source: © Getty Images</p> <p>Competitive trampolining</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Activity 3:</p>  <p>Source: © Getty Images</p> <p>Competitive football</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>





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19 As part of the risk assessment procedure, a personal trainer asks clients to complete a Physical Activity Readiness Questionnaire.

Study **Table 6** which shows the responses of a client.

Table 6

1.	Have you ever suffered from any medical conditions?	No
2.	Have you had any operations or injuries in the last 3 years that would affect your ability to participate in physical activity? I broke my hand five months ago and I am still undergoing physiotherapy.	Yes
3.	Do you ever feel pain in your back during/after physical activity?	No
4.	Have you ever experienced chest pains during/after doing physical activity?	No
5.	Are you currently taking any medication? I currently have a cold and I am taking over-the-counter medication for this.	Yes
6.	Do you smoke?	No
7.	Do you drink alcohol? If so, how many units per week? 10 units per week	Yes
8.	How many litres of water would you drink per week?	1 litre
9.	How many times a week do you eat breakfast?	Everyday
10.	On a scale from 1–10 (1 being least), how stressed do you feel on a typical day?	7
11.	How many times do you exercise per week?	3
12.	If you exercise, what intensity is it done at?	Moderate to High



(a) Evaluate the client's responses to identify **two** strengths. Explain how **each** strength will help the client engage in physical activity.

1. _____

_____ [2]

2. _____

_____ [2]

(b) Evaluate the client's responses to identify **two** areas for improvement. Explain how **each** area for improvement could negatively affect the client participating in physical activity.

1. _____

_____ [2]

2. _____

_____ [2]

[Turn over



20 You are responsible for organising and running a local area school hockey league. In the league there are ten teams. Every team plays against each of the other teams at home and away.

(a) Explain your plan for the league's scoring process and how the overall winner will be decided.

[4]

(b) State the total number of matches **one** team will play in the hockey league.

[1]



(c) Being well organised will be important to the success of your league.

(i) State another specific skill you would require to successfully organise the hockey league. Using an example, explain your choice.

Skill _____

_____ [2]

(ii) State a specific quality you would require to successfully organise the hockey league. Using an example, explain your choice.

Quality _____

_____ [2]

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Examiner Number

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