Rewarding Learning

Centre Number

Candidate Number

General Certificate of Secondary Education
2024

Physical Education

Paper 1

Factors Underpinning Health and Performance

[G9771]

G9771

WEDNESDAY 22 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 **4(c)**, **6** and **13(b)**.

14262

24G977101

1 Complete **Table 1** by identifying **where the synovial joint is located** in the body and **one possible movement** at the joint.

Table 1

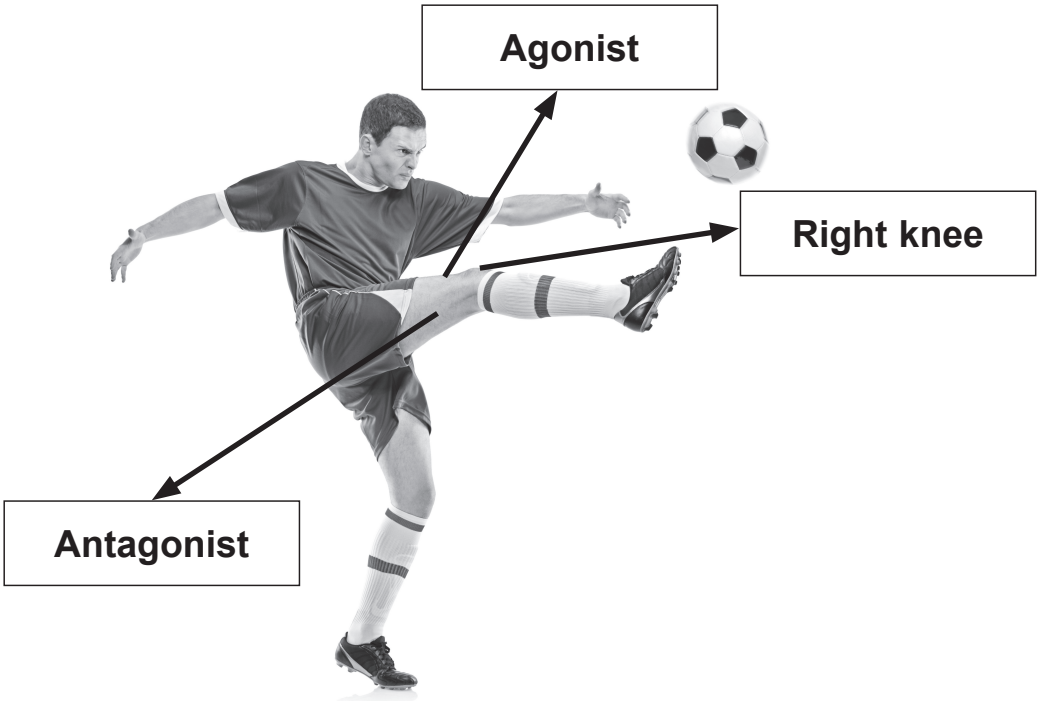
Synovial joint	Location in the body	One movement possible at the joint
Pivot joint		
Saddle joint		
Ball and socket joint		
Gliding joint		

[8]

2 **Fig. 1** shows a footballer after they kicked the ball.

Complete **Table 2** by identifying the:

- type of synovial joint
- Agonist muscle
- Antagonist muscle
- movement at the **right knee** when performing the action.



Source: © Getty images

Fig. 1

Table 2

Joint	Right knee
Type of synovial joint	
Agonist	
Antagonist	
Movement at the joint	

[4]

[Turn over

3 Explain, using examples, the differences between **voluntary** and **involuntary** muscle contraction in the body.

_____

_____

_____

_____

_____

_____

_____

_____ [4]

BLANK PAGE

DO NOT WRITE ON THIS PAGE

(Questions continue overleaf)

4 Study **Table 3**, which shows the distribution of blood (%) to various parts of the body for a games player during a competitive match.

Table 3

Part of body	Distribution of blood at rest (%)	Distribution of blood during exercise (%)
Liver	25	1.5
Heart	5	5
Kidneys	20	1
Muscles	20	80
Skin	10	5
Other	20	7.5

(a) Identify the part of the body that receives the most blood **during exercise**.

_____ [1]

(b) Identify the part of the body that receives the most blood **at rest**.

_____ [1]

(c) Using the data in **Table 3**, evaluate how blood redistribution during exercise benefits the games player.

Quality of written communication will be assessed in your answer.

_____ [6]

5 Complete the sentences by selecting the correct words from the list below.

aerobic	**endurance**	**fast**	**few**	**high**	**quickly**
anaerobic	**explosive**	**slow**	**lot**	**low**	**slowly**

Type II muscle fibres are also known as _____ twitch muscle fibres. They are designed for _____ sport events as they contract _____. Type II muscle fibres contain a _____ content of myoglobin and a _____ mitochondria and blood capillaries. They rely on _____ respiration for the release of energy. [6]

6 **Fig. 2** shows a tennis player preparing to return a service.

Source: © Getty Images

Fig. 2

Explain how the **short-term sensory storage**, **short-term memory**, and **long-term memory** help to **generate a response (output)** in returning the serve.

Quality of written communication will be assessed in your answer.

[6]

[Turn over

7 Complete the risk assessment in **Table 4** by stating the **action needed to minimise the risk** of the six hazards identified in a school's fitness suite.

Table 4

Hazard	Action needed to minimise the risk
Equipment not in use lying on the fitness suite floor	
Damaged equipment being used by the students	
Water spilled on the floor	
Poor lifting technique by students	
Heavy free weights available for all	
Falling from the treadmill	

[6]

8 **(a)** State **two physical** well-being benefits of participating in regular exercise.

1. _____

_____ [1]

2. _____

_____ [1]

(b) State **two mental** well-being benefits of participating in regular exercise.

1. _____

_____ [1]

2. _____

_____ [1]

(c) State **two social** well-being benefits of participating in regular exercise.

1. _____

_____ [1]

2. _____

_____ [1]

9 Below are the recommended energy needs in kilocalories (kcal) for three individuals:

- **2000 kcal**
- **2500 kcal**
- **3500 kcal**

(a) Complete **Table 5** by matching the **energy needs in kcal** to the most suitable person.

Table 5

Person	Energy needs (kcal)
Average male	
Active male	
Average female	

[3]

(b) Explain why you chose the specific energy needs (kcal) for the three people.

_____

_____

_____

_____

_____

_____ [3]

10 State **two** benefits of maintaining quality sleep.

1. _____

_____ [1]

2. _____

_____ [1]

11 State **two** consequences that **alcohol abuse** can have on a person's health.

1. _____

_____ [1]

2. _____

_____ [1]

12 State **two** methods of help that can support a person who wishes to stop drinking alcohol.

1. _____

_____ [1]

2. _____

_____ [1]

13 Study **Table 6** which shows an extract from a student's nutritional logbook from Monday to Friday.

Table 6

Day	Breakfast	Lunch	Dinner	Snacks	Fluid intake
Monday	Fried eggs, bacon, and sausage	Tuna sandwich	Chicken goujons and chips	2 chocolate brownies	A glass of water 2 cans of coke
Tuesday	Toast	Burger and chips	Potato waffles and baked beans	3 packets of crisps	A glass of water 2 cans of coke
Wednesday	Cereal	Ham pizza	Take-away cheeseburger	2 caramel squares	A glass of water 2 cans of coke
Thursday	Fried eggs and toast	Hot dog	Chicken and leek pasta bake	3 chocolate bars	A glass of water 2 cans of coke
Friday	Cereal	Ham roll	Take-away fish and chips	2 chocolate muffins	A glass of water 2 cans of coke

(a) Using the information from **Table 6**, identify **three negative** habits which make the student's diet unbalanced.

1. _____

_____ [1]

2. _____

_____ [1]

3. _____

_____ [1]

(b) Explain the consequences of the student's unbalanced diet on the health of their body and mind.

Quality of written communication will be assessed in your answer.

[6]

14 Explain how a person's personality characteristics may make them more suited to taking part in archery rather than rugby.

[4]

15 Using a sporting example, explain the difference between **intrinsic** and **extrinsic** motivation.

[4]

16 State **three** examples of the experiences students get in school which may positively affect their decision to participate in physical activity or sport.

1. _____

_____ [1]

2. _____

_____ [1]

3. _____

_____ [1]

[Turn over

17 A local running club is planning a park run event to take place in 3 months' time. State **eight** actions the event management team should include in their planning to ensure success.

1. _____

_____ [1]

2. _____

_____ [1]

3. _____

_____ [1]

4. _____

_____ [1]

5. _____

_____ [1]

6. _____

_____ [1]

7. _____

_____ [1]

8. _____

_____ [1]

BLANK PAGE

DO NOT WRITE ON THIS PAGE

(Questions continue overleaf)

18 Five teams have entered a league competition.

- Teams will play each other once
- The winner will be the team with the most points
- Two pitches are available
- 5 matches will be played on Pitch 1
- 5 matches will be played on Pitch 2

(a) Complete **Table 7** to show how many points will be awarded for **a win** or **a draw**.

Table 7

Win	
Draw	

[2]

(b) Create the **playing schedule** for the matches by completing **Table 8**.

Table 8

	Pitch	Match 1	Match 2	Match 3	Match 4	Match 5
Group stage	**Pitch 1**					
Group stage	**Pitch 2**					

[10]

THIS IS THE END OF THE QUESTION PAPER

BLANK PAGE

DO NOT WRITE ON THIS PAGE

BLANK PAGE

DO NOT WRITE ON THIS PAGE

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	
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.