

Surname	Centre Number	Candidate Number
Other Names		0



**GCSE**

4421/01



S15-4421-01

**PHYSICAL EDUCATION  
UNIT 1**

P.M. FRIDAY, 15 May 2015

1 hour 30 minutes

**ADDITIONAL MATERIALS**

DVD.

**INSTRUCTIONS TO CANDIDATES**

Use black ink or black ball-point pen.  
Do not use pencil or gel pen.  
Do not use correction fluid.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions in the spaces provided in this booklet.

If you run out of space, use the continuation page at the back of the booklet, taking care to number the question(s) correctly.

**INFORMATION FOR CANDIDATES**

The clips for Questions 1 and 2 in Section A will be shown three times.

Before the clips are shown you will have five minutes to read the questions. Two clips will be shown during which time you may answer the questions and make notes.

The clips will be shown a second time. There will be five minutes after each clip to answer the questions.

The clips will be shown for a third and final time.

There will then be approximately seventy minutes to complete Sections A and B.

The number of marks is given in brackets at the end of each question or part-question.

You are reminded that assessment will take into account the quality of written communication used in your answers that involve extended writing in Section A (Q3 (b) and (c)) and Section B (Q.8, Q.9).

**Section A**

**Section B**

For Examiner's use only		
Question	Maximum Mark	Mark Awarded
1.	15	
2.	17	
3.	18	
<b>Section A Total</b>	<b>50</b>	
4.	8	
5.	9	
6.	10	
7.	11	
8.	6	
9.	6	
<b>Section B Total</b>	<b>50</b>	
<b>Overall Total</b>	<b>100</b>	

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(iii) Describe a method of fitness training that could be used to help develop power. [3]

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(c) (i) Explain why warming up and warming/cooling down are so important for the players in the clip. [4]

- Warming up

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.....

- Warming/cooling down

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(ii) State how some players in the clip have **visibly** attempted to prevent injury. [1]

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(iii) Suggest **two** reasons why rugby is more likely to cause injury than many other sports. [2]

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2. Video clip of cyclists.

(a) The following are the two main fitness components demonstrated in the clip:

Cardiovascular endurance;

Local muscular endurance.

(i) Explain how these components of fitness are demonstrated in the clip. [2]

Physical Fitness Components	Explanation of how components are demonstrated in the clip
Cardiovascular endurance	<p>.....</p> <p>.....</p> <p>.....</p>
Local muscular endurance	<p>.....</p> <p>.....</p> <p>.....</p>

(ii) Identify the method of training taking place. [1]

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(iii) Explain how the cyclists could apply the *Principles of Training* to improve their performance. [4]

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(b) (i) Describe in detail the procedures for the two physical fitness tests identified below. [4]

Physical Fitness Components	Test	Description of procedures
Cardiovascular endurance	Multi Stage Fitness Test	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
Local muscular endurance	Abdominal Curl Test	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>

(ii) "Fitness tests must be both **valid** and **reliable** for results to be meaningful."

Explain both these terms.

[2]

**Valid**

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**Reliable**

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(c) Give **four** reasons why the testing of physical fitness is important as part of a training programme. [4]

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- .....
- .....
- .....

17



3. (a) Explain what has been done to improve access to physical activity for the following target groups. [6]

**Women**

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**Disabled**

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Area with horizontal dotted lines for writing.

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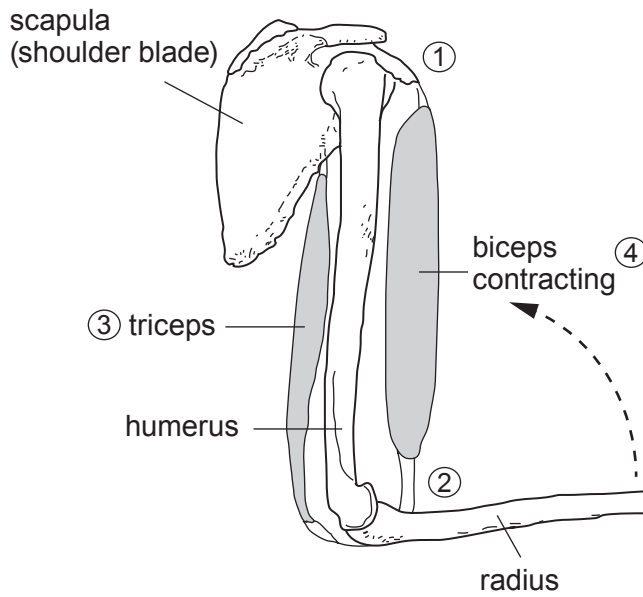
**SECTION B**

*Answer all the questions in the spaces provided.*

4. (a) Describe the following types of muscle contractions. [2]

Concentric contraction	Eccentric contraction

(b) The following diagram illustrates contraction at the elbow joint.

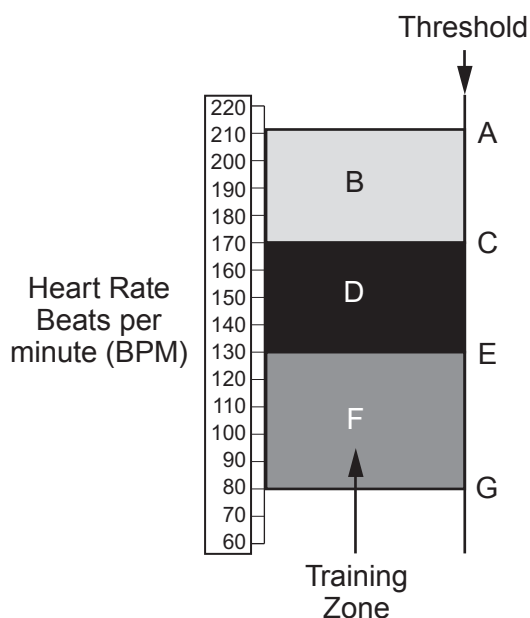


From the diagram on the opposite page identify the following:

- (i) the origin – 1 or 2.  [1]
- (ii) the insertion – 1 or 2.  [1]
- (iii) which muscle is the prime mover – 3 or 4.  [1]
- (iv) which muscle is the antagonist – 3 or 4.  [1]
- (v) What type of synovial joint is found at the elbow? [1]
- .....
- (vi) What tissue connects muscles to bones at a joint? [1]
- .....



5. The following diagram shows how heart rate can be used to establish **training zones** and **thresholds**.



(a) (i) How has the threshold E been calculated? [1]

.....

(ii) How has the threshold C been calculated? [1]

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(iii) Identify training Zone B. [1]

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(iv) Identify training Zone D. [1]

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6. (a) The following terms and definitions are used in the production of quality movement.  
Draw a line to link each term to its definition. [4]

TERM	DEFINITION
Skill	Basic movement pattern
Ability	How skill is carried out
Technique	Innate characteristics which facilitate movement
Performance	Learned ability

(b) Give reasons why it is usually more difficult to learn an open skill rather than a closed skill. [3]

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7. (a) To which part of the Information Processing model would the following apply? [1]

“Playing a smash having seen the shuttlecock being hit high in the air by your opponent.”

Tick (✓) **one** box only.

Decision making

Feedback

Input

Output

(b) “Feedback is used to improve technical performance and learning.”

Suggest **four** ways how feedback should be presented to make it effective for a sportsperson. [4]

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- .....
- .....
- .....

(c) (i) Explain the term *selective attention* in sport. [1]

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(ii) Give an example of *selective attention* from a sporting activity of your choice. [1]

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