

Candidate Name	Centre Number	Candidate Number

WELSH JOINT EDUCATION COMMITTEE
General Certificate of Secondary Education



CYD-BWYLLGOR ADDYSG CYMRU
Tystysgrif Gyffredinol Addysg Uwchradd

197/02

PHYSICAL EDUCATION

PAPER 2

A.M. MONDAY, 21 May 2007

(1½ hours)

For Examiner's use only		
Question	Maximum mark	Mark awarded
1	20	
2	20	
3	20	
4	20	
5	20	
Total	100	
Add QWC	5	
Final Total	105	

INSTRUCTIONS TO CANDIDATES

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

Answer **all** the questions.

Write your answers to all the questions in the spaces provided in this question-and-answer booklet.

INFORMATION FOR CANDIDATES

The mark allocation for each part of a question is shown in brackets.

You will be awarded marks for the quality of written communication.

No certificate will be awarded to a candidate detected in any unfair practice during the examination.

Answer all the questions in the spaces provided.

1. (a) (i) Name **one** factor that can affect physical activity. [1]

.....
(ii) Give **two** reasons to explain why physical fitness testing is important for a sportsperson. [2]

(I)

(II)

(b) (i) Name the physical fitness component that can be defined as, ‘the relative amount of muscle, fat and bone in the body’. [1]

.....
(ii) Name **one** way in which the physical fitness component defined in (b) (i) can be measured. [1]

.....
(iii) Why is it undesirable for most sportspersons to have a high percentage of body fat? [1]

.....
(iv) How can a sportsperson control his or her level of body fat? [1]

.....
(c) (i) Name the physical fitness component that can be defined as, ‘the energy you use in sporting activity to contract muscles with speed and force in one explosive act’. [1]

.....
(ii) Use specific sporting examples to explain the meaning of muscular strength and muscular endurance. [4]

	Specific Sporting Examples
Muscular strength
Muscular endurance

(d) Below is a list of **skill** related physical fitness components.

Speed, agility, power, balance, co-ordination, reaction time.

Use the table below to answer both parts (i) and (ii).

- (i) Select **two** physical fitness components from the list above and describe fully the correct test procedures for the two that you have chosen. [4]
- (ii) Explain how **each** of the two chosen physical fitness components can help a sportsperson's performance. [4]

Name of skill related physical fitness component	Test Procedures	How the physical fitness component helps a sportsperson's performance
	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
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Total Mark

Turn over.

2. (a) Explain **three** safety considerations which have to be taken into account when taking part in a named sporting activity. [3]

Name of sporting activity.

Safety Considerations	
(i)
(ii)
(iii)

- (b) During vigorous exercise the following changes can take place in the body:

- the heart beats faster;
- breathing becomes heavier;
- sweating occurs.

Explain why these changes help the body to cope with the demands of vigorous exercise.

[4]

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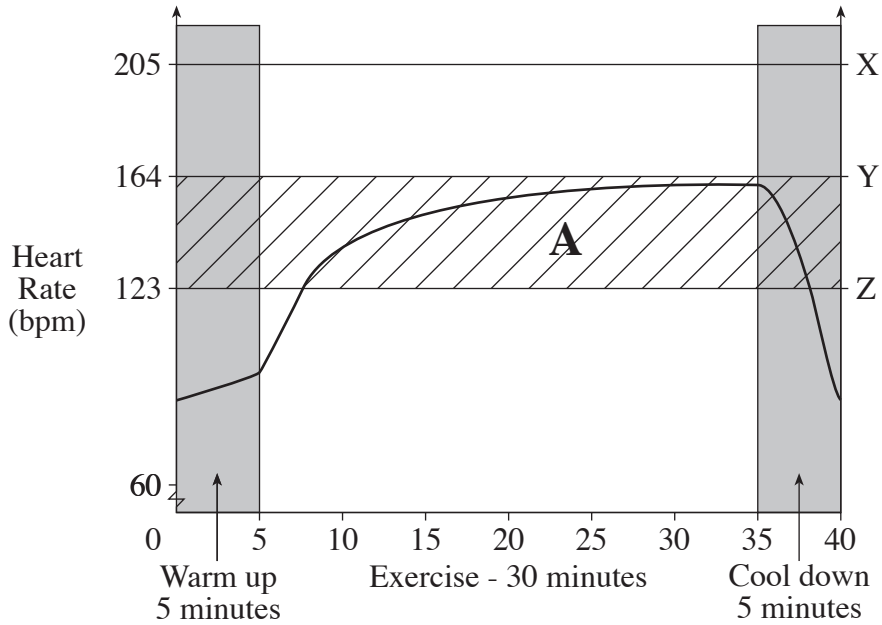
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(c) The graph below shows the heart rate of a 15 year old athlete during a training session.



(i) What heart rate is indicated at 205 bpm? [1]

.....

(ii) What threshold is identified at Z? [1]

.....

(iii) What is the name given to training zone A? [1]

.....

(iv) What type of sporting activity could the athlete be training for? [1]

.....

(v) What physical fitness component is being developed in this session? [1]

.....

(d) Below is a table showing some characteristics of three energy systems used in sporting activity.

(i) Tick (✓) the energy system which is appropriate for each characteristic. [3]

CHARACTERISTICS OF ENERGY SYSTEMS	ATP-CP	LACTIC ACID	AEROBIC
Used mainly in very high intensity, short duration activities of up to 10 seconds and in the very early stages of exercise.			
Used mainly in high intensity exercise of between 10 seconds and 3 minutes in duration.			
Used mainly during prolonged, low intensity exercise.			

(ii) Identify **one** factor which can determine the main energy system used in any sporting activity. [1]

.....

(iii) During the course of a **team game**, players would use all three energy systems.

Name a team game and **describe specific situations** in which **each** of the energy systems would be used. [4]

Name of team game

ENERGY SYSTEM	Description of specific situations in which energy system would be used
ATP-CP
LACTIC ACID
AEROBIC

Total Mark

3. "Health is the state of complete physical, mental and social well-being."

(a) Give **three** reasons to explain why taking part in sporting activity can help a person's **mental** well-being. [3]

(i)

.....

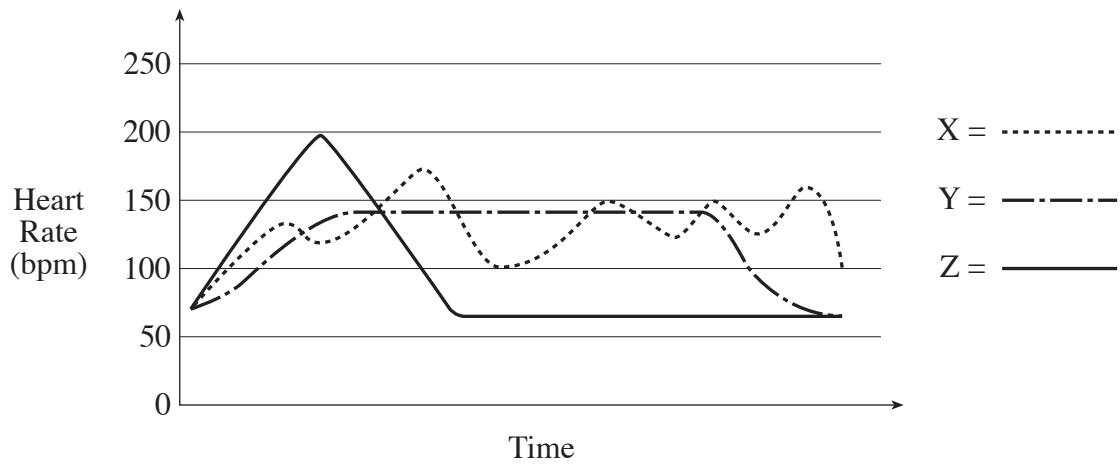
(ii)

.....

(iii)

.....

(b) The graph below shows the heart rates (X, Y and Z) for three different performers.



Which heart rate would be appropriate for (i) a 100 metre sprinter and (ii) a games player? Give reasons for your answers. [4]

Performer	Heart Rate	Reasons
(i) 100 metre sprinter	
(ii) Games player	

(c) (i) Explain what is meant by a balanced diet.

[2]

.....

.....

.....

(ii) Explain why some sportspeople ‘carbohydrate-load’ before endurance events, such as marathons. [3]

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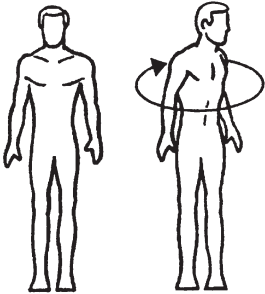
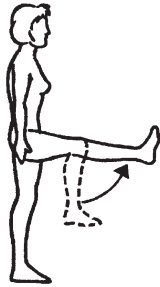

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- (d) (i) Use the figures in column 1 of the table below to:
name the type of movement taking place **and**
name the synovial joint which allows the movement to take place. [6]

Figures	Type of movement	Name of synovial joint
	<p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p>
	<p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p>
	<p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p>

- (ii) What is the name of the physical fitness component which describes ‘a range of movement at a joint’? [1]

.....

- (iii) What surrounds/crosses joints to give them stability when exercising? [1]

.....

Total Mark

Turn over.

4. (a) (i) What is meant by the term a ‘closed skill’? [1]

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(ii) Give an example of a specific sport skill which is closed. [1]

.....

(iii) What type of practice is best for learning a closed skill? [1]

.....

(b) “The desire to do well in sporting activity is based on motivation.”

(i) Name **two** types of motivation. [1]

I II

(ii) Which type of motivation is better in the long-term? Explain your answer. [2]

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(iii) Describe **one** way in which you have been motivated to help you improve your sporting performance. [1]

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.....

.....

(c) (i) What is **feedback**? [2]

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(ii) Give **three** reasons to explain why feedback is important in developing and improving skill. [3]

I

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II

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III

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(d) “Sporting goals should be SMART.”

(i) Complete the table below to describe a SMART performance goal in **one** of your chosen sporting activities. [5]

SMART	PERFORMANCE GOAL
<p style="text-align: center;">SPECIFIC</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p style="text-align: center;">MEASURABLE</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p style="text-align: center;">AGREED</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p style="text-align: center;">REALISTIC</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p style="text-align: center;">TIME PHASED</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>

Turn over.

(ii) Explain how the SMART principles will help you to improve performance in your chosen sporting activity. [3]

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Total Mark