



GCSE MARKING SCHEME

SUMMER 2022

**PHYSICAL EDUCATION - COMPONENT 1
SHORT COURSE
C555U10-1**

INTRODUCTION

This marking scheme was used by WJEC for the 2022 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about this marking scheme.

GCSE PHYSICAL EDUCATION
COMPONENT 1 (SHORT COURSE)
SUMMER 2022 MARK SCHEME

Question	Mark Scheme	AO1	AO2	AO3	Total
1. (a) (i)	<p>Identify the two bones labelled A and B in Figure 1.</p> <p>Femur=A Tibia= B</p>	2			2
(ii)	<p>Identify the component of fitness defined below.</p> <p>Coordination</p>	1			1
(iii)	<p>Explain why the badminton player needs the component of fitness defined in 1.(a)(ii).</p> <p>Award 1 mark for a basic explanation Award 2 marks for a developed explanation including the relationship to badminton</p> <p>Coordination needed in order to move to the shuttle, complete the stroke and possibly win point or keep rally going. Lack of coordination could mean not reaching the shuttle and / or winning point. Accept any similar response</p>		2		2
(iv)	<p>Define agility.</p> <p>The ability to change direction at speed.</p>	1			1
(v)	<p>Explain why badminton players include agility exercises in their training programme.</p> <p>Award 1 mark for a basic explanation Award 2-3 marks for a developed explanation directly related to badminton for full marks</p> <p>Badminton players require many changes of direction. Moving at speed makes it more likely to get to the correct position to execute the stroke and return to the centre of the court ready for the next stroke in the rally. Badminton can be a very fast moving game therefore requiring both speed and changes of direction.</p> <p>Look for examples to support the definition in order to access maximum marks. Street language may be used therefore read answers carefully before awarding mark.</p>		3		3

Question	Mark Scheme	AO1	AO2	AO3	Total
(b)	<p>Identify two functions of the human skeletal system.</p> <p>2x1 mark support, protection, movement production of red blood cells. Mineral storage</p>	2			2
(c)	<p>Assess why a sportsperson uses principles of training to improve their performance.</p> <p>Please refer to banded response sheet before awarding a band then a mark. Many ways to answer! This is an Assess question therefore look for more than a list about what POT are. Candidates should comment on how a sportsperson could adapt their training in order to improve their performance in their answer.</p> <p><u>INDICATIVE CONTENT</u></p> <p>Look for knowledge of POT, particularly specificity.</p> <p><i>Content may refer to the following;</i> We need to train in order to improve fitness/ performance. Specific exercises have specific effects on different parts of the body. Correct training tailored to individual needs facilitates progress. Mention of Overload and Progression here. Look for SPECIFIC examples to support points made. Training should put increased stress on the muscle groups and body parts needed for improvement otherwise progress will not occur. Training should be specific to the sport and position of the sportsperson. Links to individual training needs. e.g. Comparison of the training of sprinter and distance runner. Look for sport specific examples as above. Look for terms such as adaptation and progression. Mention may be made about the loss of training effects if training is stopped or not appropriate to needs of sportsperson. Training intensity should match the needs of the sportsperson. Training must use correct techniques otherwise progress will not be as rapid. Some candidates may make reference to specific training methods linked to specific sport and needs of sportsperson.</p> <p><i>There are many different ways to access marks.</i></p>	2		5	7

Band	AO1 2 marks	AO3 5 marks
3		<p>5 marks</p> <p>Excellent assessment giving detailed information about principles of training. Explicit links are made between POT and improved performance supported by examples.</p> <p>Excellent use of appropriate grammar, punctuation and spelling.</p>
2	<p>2 marks</p> <p>Good knowledge of principles of training and specificity in particular.</p>	<p>3-4 marks</p> <p>Good assessment giving some relevant information about principles of training. Some links are made between POT and improved performance with some examples provided.</p> <p>Some good use of appropriate grammar, punctuation and spelling.</p>
1	<p>1 mark</p> <p>Limited knowledge of principles of training including specificity.</p>	<p>1-2 marks</p> <p>Limited assessment with few links made between POT and improved performance. Limited use of relevant examples in the discussion.</p> <p>Some errors in grammar, punctuation and spelling.</p>
0	<p>0 marks</p> <p>Not attempted. No relevant knowledge of principles of training.</p>	<p>0 marks</p> <p>Not attempted. No analysis.</p>

	TOTAL AOS AND MARKS	8	5	5	(18)
--	----------------------------	----------	----------	----------	-------------

Question	Mark Scheme	AO1	AO2	AO3	Total
2. (a) (i)	<p>Identify the main component of fitness being demonstrated by the gymnast in Figure 2.</p> <p>Balance</p>	1			1
(ii)	<p>Explain why the component of fitness demonstrated in the cartwheel is important for the gymnast.</p> <p>Award 1 mark for a basic explanation Award 2-3 marks for a developed explanation directly related to gymnast for full marks</p> <p>Do not accept any responses that cannot be seen in the figure: Endurance, Muscular Endurance, Body Composition, Agility, Reaction Time,</p> <p>Other answers could include: Power, Flexibility, Co-ordination, Speed, Strength as well as BALANCE. Balance can be dynamic or static. Both are required in a cartwheel. Balance is important in order to ensure the quality of movements in the performance. Balance makes the performance more aesthetically pleasing and prevents marks being deducted in competition. Balance makes the performance of the movements more effective and allows the performance to be technically correct.</p> <p>Accept any similar appropriate responses.</p>		3		3
(iii)	<p>Analyse the gymnast performing the cartwheel in Figure 2 and identify the correct movement in each of the tables below.</p> <p>4x1 mark</p> <p>Plane of movement (A) Frontal Axis of movement (B) Sagittal Movement at Shoulder (C) Abduction Movement at the knee (D) Extension</p>			4	4

Question	Mark Scheme	AO1	AO2	AO3	Total
(b) (i)	<p>Compare the muscular contractions of a concentric movement to an eccentric movement.</p> <p>Award 1 mark for a basic comparison e.g. Tension Award 2-3 marks for a developed comparison e.g. Concentric and Eccentric comparison for full marks</p> <p>Muscles work in pairs. Isotonic contractions occur whenever there is movement of the body.</p> <p><i>Concentric</i> Contraction/Tension – Muscle contracts and get shorter and fatter The ends of the muscle move closer to make the action.</p> <p><i>Eccentric</i> Contraction/Tension Muscle lengthens and gets longer and thinner The ends of the muscle move further to make the action.</p> <p>Walking up the stairs at home would be an example where the muscles are shortening to step up. When walking downstairs the leg has to lengthen and stretch to make the next step down. This contraction takes place under tension.</p> <p>Accept any similar appropriate response.</p>		3		3
(ii)	<p>Describe the function of ligaments and tendons.</p> <p>2x1 mark</p> <p>Ligaments attach bone to bone. They are strong, stabilising and together with muscles support the joint. They prevent dislocation. Tendons are strong flexible cords. Voluntary muscles are attached to the skeleton by tendons(usually across a synovial joint). They are non-elastic.</p>	2			2

Question	Mark Scheme	AO1	AO2	AO3	Total
(c)	<p>Identify three social benefits of taking part in sport and physical activities.</p> <p>3x1 mark</p> <p>There are numerous social benefits including;</p> <ul style="list-style-type: none"> • Increased self-confidence, • chance to teamwork and cooperate, • personal challenges are created by taking part, increase in self worth, • increased respect from peers, • opportunity to socialise and meet people, • join a club in order to be with people of similar interests <p>Look for any links to mental and physical benefits but links must be specific and clear.</p>	3			3
	TOTAL AOS AND MARKS	6	6	4	16

Question	Mark Scheme	AO1	AO2	AO3	Total
3. (a)	<p>Evaluate the information provided and suggest how young people could lead a more healthy lifestyle.</p> <p>The question asks for an evaluation of a 2018 survey on health in England and candidates should also comment on what could / should be done to ensure that young people lead a healthy lifestyle. There will be a great variety in the answers provided. Please read the answer, award a band and allocate a mark.</p> <p><u>INDICATIVE CONTENT</u></p> <p>Look for coverage of, and commentary on, the data selected from the survey. There are numerous possibilities for what should be done to encourage a healthy lifestyle. Accept appropriate answers provided they relate to the question being asked and give suitable recommendations.</p> <p>Advertising / media promotion of health and fitness. Local / national government initiatives. Target specific age, gender, ethnic groups in initiatives. Raise awareness in schools and colleges. Information provided in school on diet and nutrition. Tax on sugary products. Banning advertising of junk foods on media. Social media campaigns. Funding of grass roots sports programmes. Further sports promotions in schools. Greater funding of free school meals. Rest and sleep Spending times with friends</p> <p>Accept any reasonable response</p> <p>Data analysis – significant decrease in number of young people smoking – more than half – significant decrease in number of young people drinking alcohol – more than half</p> <p><i>LOTS OF POSSIBLE SUGGESTIONS.</i></p>	2		6	8

Band	AO1 2 marks	AO3 5-6 marks
3		<p>5-6 marks</p> <p>Excellent evaluation of the data provided. Detailed suggestions are made as to what should be done to lead a healthy lifestyle. Explicit links are made between the data provided and suggestions to leading a healthy lifestyle.</p> <p>Excellent use of appropriate grammar, punctuation and spelling.</p>
2	<p>2 marks</p> <p>Good knowledge of how to lead a healthy lifestyle. At least two factors are identified</p>	<p>3-4 marks</p> <p>Some suggestions are made as to what should be done to lead a healthy lifestyle. Some links are made between the data provided and suggestions to leading a healthy lifestyle.</p> <p>Some good use of appropriate grammar, punctuation and spelling.</p>
1	<p>1 mark</p> <p>Limited knowledge of how to promote a healthy lifestyle. Only one factor identified</p>	<p>1-2 marks</p> <p>Limited evaluation of the data provided. Limited suggestions made as to how to lead a healthy lifestyle.</p> <p>Few links made between the data provided and the leading of a healthy lifestyle.</p> <p>Some errors in grammar, punctuation and spelling.</p>
0	<p>0 marks</p> <p>Not attempted. No knowledge of how to lead a healthy lifestyle.</p>	<p>0 marks</p> <p>Not attempted. No evaluation.</p>

Question	Mark Scheme	AO1	AO2	AO3	Total
(b)	<p>Identify the functions of water, vitamins and minerals in a healthy diet.</p> <p>WATER is essential for living. It can replace water lost during exercise. About two thirds of our body weight is water. It is the main component of blood and cells. In the blood it carries nutrients, blood and waste products. It helps to control body temperature in different ways. It can prevent dehydration / heatstroke.</p> <p>VITAMINS enable our body to work normally and efficiently. They regulate the chemical reactions in the body. They help in the growth / repair of body tissues, in the working of our muscles, and in release of energy from food. ALSO LOOK FOR specific functions of specific vitamins.</p> <p>MINERALS enable the body to work normally and efficiently. Minerals have their own function in order for the body to work well. E.g. calcium, iron, iodine.</p>	3			3
(c)	<p>Explain the possible mental health benefits of taking part in sport and physical activities.</p> <p>Award 1-2 marks for a basic explanation Award 3-4 marks for a developed explanation</p> <p>This is an explain question therefore some amplification is required in answers. Look for the MENTAL benefits of taking part in sport and physical activities. There are MANY benefits such as;</p> <p>Satisfaction at own performance. Promotion of feel good factor. Develops self confidence Improves self- esteem Mental stimulation. Can provide excitement. Provides fun enjoyment. Reduces tension / aggression. Enhance feeling of inclusion. Promotes sense of success / achievement. Relieves stress / worries. Provides challenges.</p>		4		4
	TOTAL AOS AND MARKS	5	4	6	15

Question	Mark Scheme	AO1	AO2	AO3	Total
4. (a) (i)	<p>Outline two functions of the respiratory system.</p> <p>2x1mark</p> <p>To get Oxygen into the body. To remove CO₂ and other waste products from the body. Breathing Gaseous exchange</p>	2			2
(ii)	<p>Identify two changes to the breathing of a sportsperson when they exercise.</p> <p>Faster and deeper breathing. Heavier and quicker breathing.</p>	2			2
(b) (i)	<p>Explain how an improved vital capacity could benefit a sportsperson involved in sport and physical activities.</p> <p>Vital Capacity definition - Maximum volume of air that can be expired after deepest breath in.</p> <p>Award 1 mark for a basic explanation</p> <p>More oxygen or More waste products removed: CO₂ and Water</p> <p>Award 2 marks for a developed explanation</p> <p>Combination of both oxygen and CO₂; or the focus on expiration of waste products Benefits: More air breathed in, more O₂ supplied to working muscles, and more CO₂ and waste products removed</p> <p>There is a greater need for oxygen during exercise to supply the working muscles.</p> <p>More waste products then have to be removed from the body.</p> <p>More oxygen is required during exercise therefore an increased vital capacity is necessary to supply greater amount of inhaled air.</p>		2		2

Question	Mark Scheme	AO1	AO2	AO3	Total
(ii)	<p>Explain the term Oxygen Debt.</p> <p>Award 1 mark for a basic explanation</p> <p>Extra oxygen we take in at the end of exercise to repay the O₂ deficit.</p> <p>Award 2-3 marks for a developed explanation</p> <p>Focus on intensity and duration When we use the ATP-CP and Lactic Acid systems during high intensity exercise we produce an O₂ deficit- our muscles need more oxygen than they get at the time.</p> <p>We continue the activity by using glycogen and produce lactic acid.</p> <p>At the end of exercise we need to rest and take in the extra O₂ we need: panting and heavy breathing.</p> <p>This extra oxygen supply allows the removal of Lactic Acid, restores supplies of ATP-CP and repays DEBT.</p> <p>Read answers carefully. Look for street language in responses. This is an EXPLAIN question.</p>		3		3
(c)	<p>Identify two waste products which are removed from the body during exercise.</p> <p>2x1 mark</p> <ul style="list-style-type: none"> • Water • Salt / minerals • CO₂ • Lactic acid • Heat 	2			2
	TOTAL AOS AND MARKS	6	5		11

QUESTION AND AO TOTALS EDUQAS GCSE PE SHORT COURSE.

QUESTION	AO1	AO2	AO3	TOTAL
1	8	5	5	18
2	6	6	4	16
3	5	4	6	15
4	6	5	0	11
TOTAL	25	20	15	60