



GCE AS MARKING SCHEME

SUMMER 2019

**AS (NEW)
PHYSICAL EDUCATION - UNIT 1
2550U10-1**

INTRODUCTION

This marking scheme was used by WJEC for the 2019 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.

GCE PHYSICAL EDUCATION - UNIT 1

SUMMER 2019 MARK SCHEME

Question	Mark Scheme	AO1	AO2	AO3	Total
1. (a)	<p>VO₂ max is the measurement of:</p> <p>B – aerobic fitness</p>	1			1
(b)	<p>Describe three ways of ensuring that fitness test results are reliable.</p> <ul style="list-style-type: none"> • Exact measurement/dimensions of test (20m MSFT) • Calibration of equipment/tape/CD etc. / computerised analysis • Same equipment used for all • Same protocol e.g. 2 failures to reach line and performer is out • Accuracy of timings (use of more than 1 attempt and take average) • Use the same testers • Same environment • Same warm up • Correct scheduling of tests (make sure difficulty/exertion of one will not impact on another) <p>3x1 marks</p>	3			3

Question	Mark Scheme	AO1	AO2	AO3	Total
(c)	<p>Critically analyse the use of the Multi Stage Fitness Test to provide an accurate measurement of VO_2 max.</p> <p>How the test attempts to provide an accurate measure</p> <p>Up to three marks for Indicative content:</p> <ul style="list-style-type: none"> • An understanding of the definition of VO_2 max. • Volume of O_2 that is consumed and utilised per minute with an ever increasing workload • The MSFT does this in terms of: <ul style="list-style-type: none"> • Each level is 1 minute • The test is progressive • There is an increase in workload as there are more beeps per minute <p>3 marks</p> <p>Up to three marks for indicative content: Problems associated with accurate measurement</p> <ul style="list-style-type: none"> • Motivation of the participant • Some participants have difficulty in pushing themselves to maximum exertion • Turning can be fatiguing • Variation in environments • Variation in protocols <p>3x1 or 2 amp</p>			6	6
(d)	<p>Explain why a high VO_2 max could be beneficial to an endurance athlete.</p> <p>4 x 1 or 1 x2 amp</p> <p>When exercising</p> <ul style="list-style-type: none"> • Stay working aerobically for longer • Higher anaerobic threshold • Maintain glycogen stores for longer • Maintain CP stores for longer <p>Recover quicker after an intense activity</p> <ul style="list-style-type: none"> • Repayment of Alactic/Lactacid oxygen debt • Remove lactic acid quicker • Replenish glycogen and CP stores quicker • Repayment of oxygen deficit • Re-saturates myoglobin stores 		4		4
	Totals	4	4	6	14

Question	Mark Scheme	AO1	AO2	AO3	Total								
2. (a)	<table border="1"> <thead> <tr> <th>Question</th> <th>Answer</th> </tr> </thead> <tbody> <tr> <td>(i) Which team had the greatest amount of possession in the 1st half</td> <td>White (A)</td> </tr> <tr> <td>(ii) Which team had the greatest amount of possession in the 2nd half</td> <td>GREY B</td> </tr> <tr> <td>(iii) Which team had the greatest amount of possession overall</td> <td>GREY B</td> </tr> </tbody> </table> <p>3x1 marks</p>	Question	Answer	(i) Which team had the greatest amount of possession in the 1 st half	White (A)	(ii) Which team had the greatest amount of possession in the 2 nd half	GREY B	(iii) Which team had the greatest amount of possession overall	GREY B	3			3
Question	Answer												
(i) Which team had the greatest amount of possession in the 1 st half	White (A)												
(ii) Which team had the greatest amount of possession in the 2 nd half	GREY B												
(iii) Which team had the greatest amount of possession overall	GREY B												
(b)	<p>Using examples, explain what is meant by qualitative data in relation to performance analysis</p> <p>1 mark for</p> <ul style="list-style-type: none"> • Subjectivity • Opinion <p>1 mark for example</p> <p>Qualitative analysis is the subjective form of analysis based on personal opinion and experience (or similar)</p> <p>Do not accept what it isn't e.g. statistical data</p> <p>Examples</p> <ul style="list-style-type: none"> • Coach observation of matches, training • Interviews or general conversation with individuals <p>1 mark for explanation 1 mark for appropriate example</p>		2		2								

Question	Mark Scheme	AO1	AO2	AO3	Total
(c)	<p>There is an over reliance on the use of performance analysis data within sport. Discuss this statement, providing appropriate examples.</p> <p>Benefits of How Coaches use PA</p> <p>It is clear that the foundations for training and competing can no longer be based on simple subjective views of how well athletes perform or on traditional methods passed from one generation of coach to another (Carling, Reilly and Williams, 2009). Sport, especially at the elite level, has embraced technology for performance analysis.</p> <p>Physical/Fitness Testing/GPS</p> <ul style="list-style-type: none"> • Individualise training e.g. work on specific weaknesses • Tailor training sessions to replicate competitive situations in terms of intensity and duration <p>Technical/Tactical</p> <ul style="list-style-type: none"> • Observe opposition teams/individuals/tactics • Use/change/adapt tactics • Attempt to exploit perceived opposition weaknesses • Encourage performers to watch their own performance and be self-critical. • This empowers players and encourages independent learning <p>Psychological</p> <ul style="list-style-type: none"> • Understand performer's behaviour or psychological make up. E.g. Help build an individual's confidence <p>Negative impact of PA</p> <p>Physical/Fitness Testing</p> <ul style="list-style-type: none"> • Too much focus on physical development over technical development and tactical ability (often linked to team games, particularly rugby players in Wales) • This is only one aspect of performance an individual who is powerful may not necessarily have the technical/tactical/psychological ability • Field tests can be unreliable/tester error is common and therefore a lack of reliability and validity to testing 		3	5	8

Question	Mark Scheme	AO1	AO2	AO3	Total
	<p>Technical/Tactical</p> <ul style="list-style-type: none"> • Can be subjectivity, particularly to tactical approaches • Players and teams become clones and robotic in the way they play • Over analysis can reduce creativity and spontaneity • Analysis of opposition can result in team/player being surprised or put off their game when something unplanned happens <p>Psychological</p> <ul style="list-style-type: none"> • Players often not comfortable with psychological interventions • Unless psychologist knows player well, information can be very general 				
	Totals	3	5	5	13

Band	AO2 3 marks	AO3 5 marks
3	<p>3 marks</p> <p>Excellent explanation of performance analysis techniques.</p> <p>Appropriate examples of the techniques are provided.</p>	<p>4-5 marks</p> <p>Excellent discussion of how coaches use performance analysis to develop performance.</p> <p>Both positive and negative aspects are covered in detail</p> <p>Relevant examples are provided throughout.</p> <p>The response is clearly expressed and shows an accurate use of terminology.</p> <p>Writing is very well structured using accurate grammar, punctuation and spelling.</p>
2	<p>2 marks</p> <p>Good explanation of the performance analysis techniques.</p> <p>Appropriate examples of the techniques used.</p>	<p>2-3 marks</p> <p>Good discussion of how coaches use performance analysis to develop performance.</p> <p>Relevant examples are provided throughout.</p> <p>The response is adequately expressed and shows an accurate use of terminology.</p> <p>Writing is generally well structured using accurate grammar, punctuation and spelling.</p>
1	<p>1 mark</p> <p>Limited application of the performance analysis techniques.</p> <p>Appropriate examples of the techniques however may not cover all the phases.</p>	<p>1 mark</p> <p>Limited discussion of how coaches use performance analysis to develop performance.</p> <p>Few examples are provided.</p> <p>The response shows basic use of terminology.</p> <p>Writing shows evidence of structure but some errors in grammar, punctuation and spelling.</p>
0	<p>0 marks</p> <p>No application of knowledge and understanding of performance analysis.</p>	<p>0 marks</p> <p>No discussion of how performance analysis is used.</p>

Question	Mark Scheme	AO1	AO2	AO3	Total
3. (a)	Which form of connective tissue is found on the surface of bones within a joint C – Cartilage	1			1
(b)	Using a sporting example, explain antagonistic muscle action. <ul style="list-style-type: none"> • When muscles work in pairs agonist/antagonist • While one muscle contracts the other relaxes • Example – flexion/extension etc. related to a sporting example 3x1 marks		3		3
(c)	Outline what is happening to levels of muscle glycogen shown within figure 2. <ul style="list-style-type: none"> • As exercise intensity increases then so does the rate of glycogen depletion • Glycogen levels remain close to 100% during light exercise and do not deplete • During moderate intensity glycogen gradually depletes and begins to run out after two hours (120mins) • During heavy/higher intensity exercise glycogen depletes after one hour (60min) 3x1 marks (must refer to all 3 intensities to achieve full marks and provide specific information)	3			3

Question	Mark Scheme	AO1	AO2	AO3	Total
(d)	<p>Discuss how exercise intensity and individual levels of fitness affect the food fuel usage of a performer.</p> <p>3 marks for exercise and intensity</p> <p>General reasons</p> <ul style="list-style-type: none"> • Fats require 15% more oxygen to be metabolised (or similar) • The body will always be using relative proportions of fats and carbohydrate • During low intensity exercise fats are the predominant source of energy • As exercise intensity increases then there is an increase in carbohydrate usage • During anaerobic exercise, carbohydrate is the predominant source of energy <p>Discussion regarding individual differences</p> <p>3 marks for individual usage</p> <p>Aerobically fitter</p> <ul style="list-style-type: none"> • Individual levels of aerobic fitness will affect fat and carbohydrate usage • The higher the aerobic fitness the greater the fat usage • Maintains glycogen stores allowing a higher intensity of exercise over a longer period <p>Anaerobically fitter</p> <ul style="list-style-type: none"> • Greater levels of glycogen and CP mean individuals work anaerobically for longer <p>3 marks (discussion)</p>		3	3	6
	Totals	4	6	3	13

Question	Mark Scheme	AO1	AO2	AO3	Total
4. (a)	<p>Place a specific skill on each continuum below. Justify your answer.</p> <p>Practical example MUST be used or marks are not awarded</p> <p>3x1 mark for justification of where the skill was placed on the continuum.</p> <p>Open skills</p> <ul style="list-style-type: none"> • Constantly changing environment / unpredictable / affected by environment • Performer must adapt to changing environment/performer is reactive • Skill is mainly perceptual/involves decision making <p>Closed skills</p> <ul style="list-style-type: none"> • Environment doesn't change • No outside influences <p>Response must be linked to the placement of the continuum.</p> <p>(3x1 marks) for explanation of where the skill was placed on the continuum not for the placement</p>		3		3
(b)	<p>Providing examples, explain the strategies that could be used to improve the skills of a performer within the cognitive stage of learning.</p> <p>The answer must be linked to cognitive stage of learning.</p> <p>Up to 2 marks for identification of strategies.</p> <p>Possible strategies:</p> <ul style="list-style-type: none"> • Give extrinsic feedback – types • Develop extrinsic motivation • Give positive reinforcement • Set realistic goals • Use appropriate observational strategies – demonstrations/video • Select appropriate practice method e.g. whole/part/whole • Keep instruction simple/to a minimum/do not overload with information <p>2 marks for amplification. Maximum 2 marks if no examples are provided.</p>	2	2		4

Question	Mark Scheme	AO1	AO2	AO3	Total
(c)	<p>Using examples from sport, discuss how the transfer of skill could influence performance.</p> <p>Transfer</p> <ul style="list-style-type: none"> • Skills learnt in one activity affects, influences and impacts on another <p>Types of transfer</p> <ul style="list-style-type: none"> • Bi-lateral (limb to limb) • Proactive (when a skill being learned in the present will have future long term impact E.g. Learning to over arm throw as a child can influence the action of a tennis serve in the future) • Retroactive (When a newly learned skill influences a previously learned skill. e.g. the acquisition of a successful tennis serve may influence the previously learned over arm throw used in cricket) • Practice to performance. Positive transfer occurs with environmental conditions similar in both • Skill to skill • Stage to stage – motor skill development depends on building new skills on those previously learned. <p>Up to 2 marks for discussion.</p> <p>Discussion Points</p> <ul style="list-style-type: none"> • Regularly performing a skill can have either a positive or negative impact on a second skill e.g. tennis and badminton in terms of wrist action • Positive – enhances the learning of a new skill • Negative transfer – learning a of a new skill is interfered with by knowledge of a similar activity 	2		2	4
	Totals	4	5	2	11

Question	Mark Scheme	AO1	AO2	AO3	Total
5. (a)	Identify the theory that suggests, academically intellectual individuals take of the main decision making roles within a team B - Centrality	1			1
(b)	Describe the terms stereotyping and stacking and briefly discuss how they have affected sporting participation in ethnic minority groups. Stereotyping Is a fixed or general belief or set of characteristics that many people believe represent a particular type of person. 1 mark Stacking This theory suggests that different people be guided into different sports due to their colour or their ethnicity 1 mark Discussion <ul style="list-style-type: none"> • Due to ideologies and beliefs that are deeply rooted in society (often racist), some people believe that certain ethnic populations can only play specific sports. E.g. White/Caucasian swimmers • The result of this is that they get channelled into these sports and thus reproduce the inequalities in sport and society. 1 mark for link between stereotyping and stacking 1 mark for relevant example(s) related to ethnic minority participation in sport	2		2	4

Question	Mark Scheme	AO1	AO2	AO3	Total
(c)	<p>Describe a government or national governing body campaign aimed at increasing participation in physical activity within disadvantaged groups.</p> <p>Sporting Equals –</p> <ul style="list-style-type: none"> • Attempting to target ethnic minority groups and improve skill levels and encourage a positive attitude towards sport • Attempts to increase the number of ethnic minority decision makers and organisers in sport. <p>Kick it out</p> <ul style="list-style-type: none"> • Attempting to rid football of racism at all levels in relation to playing and spectators <p>(others schemes can be accepted)</p> <p>1 mark for naming a scheme/initiative e.g kick it out, this girl can 1 mark for description and intentions</p> <p><i>No marks for commercail campaigns e.g. Nike: Just Do it.</i></p>	2			2
	Totals	5		2	7

Question	Mark Scheme	AO1	AO2	AO3	Total
6.	<p>Using the diagram as a guide, discuss how various psychological factors that affect sporting performance. Provide appropriate examples to support your answer.</p> <p>Personality (all discussion points)</p> <ul style="list-style-type: none"> • Personality can impact on all psychological factors • Extrovert/introvert the potential effect on performance • Leadership qualities, reaction to different coaching styles. • NACH/NAF • Variable research in terms of personality being a predictor of sporting performance <p>Motivation</p> <ul style="list-style-type: none"> • Motives for the students involvement in exercise and sport • Intrinsic and extrinsic motivation • Achievement motivation • Link to self esteem and self efficacy - Understanding of how Self Esteem can affect learning e.g. progress not made because of fear of failure or unwilling to try new practices. • Link motivation to goal setting - Understand the importance of goal setting for development of sporting performance. <p>Discussion Points</p> <ul style="list-style-type: none"> • Links between self-esteem/efficacy and confidence in trying new skills or activities. • Linked to performance in a positive and negative manner • Personality and achievement motivation links <p>Arousal</p> <ul style="list-style-type: none"> • As arousal increases so does performance but only up to an optimum level • Optimum performance is at moderate levels of arousal • If arousal is too high or the performer is highly aroused then performance will be negatively affected e.g. foul play • Under arousal leads to poor performance because of lack of effort • Links to theories e.g. Drive, inverted U, Catastrophe, ZOF, Flow state etc. 	4	4	6	14

Question	Mark Scheme	AO1	AO2	AO3	Total
	<p>Anxiety</p> <ul style="list-style-type: none"> • State/trait/cognitive/somatic • Cognitive anxiety always detrimental to performance • Somatic - beneficial OR detrimental / depends upon individual • Links to theories e.g. Catastrophe, ZOF, Flow state etc. <p>Discussion points</p> <ul style="list-style-type: none"> • Links between anxiety/stress/arousal and performance in a positive and negative manner • How personality can influence anxiety / stress / arousal <p>Other areas</p> <p>Attitudes</p> <ul style="list-style-type: none"> • Formation of attitudes – previous experience, significant others etc. • Variations in attitude in different situations. • The components of attitudes – Triadic model (cognitive, affective and behavioural) • Changing attitudes e.g. persuasion etc <p>Group Dynamics</p> <ul style="list-style-type: none"> • Cohesion, factors that effect cohesion and what can be done to help it. • Motivational factors within the group • Social loafing and how it can be overcome. <p>Coaching/leading</p> <ul style="list-style-type: none"> • How coaching/leadership has influenced their development. • Understand the skills necessary to be an effective leader e.g. effective communication with players • Different leadership styles e.g. Autocratic/authoritarian, democratic and laissez-faire • The strategies that can be used to improve an individual's self esteem. E.G. Avoid humiliation or comparison with others in group and always be positive. • Task orientated/people orientated 				

Band	AO1 4 marks	AO2 4 marks	AO3 6 marks
3	4 marks Excellent knowledge and understanding of all the psychological factors in the diagram.	4 marks Excellent explanation and application of the psychological factors. Appropriate examples from sporting situations are provided throughout.	5-6 marks Excellent discussion of how a variety of psychological factors influence one another and sporting performance. <i>E.g. how arousal and anxiety are linked and can have a positive or negative impact on performance.</i> Relevant examples are provided throughout. The response is clearly expressed and shows an accurate use of terminology. Writing is very well structured using accurate grammar, punctuation and spelling.
2	2-3 marks Good knowledge and understanding of most of the psychological factors in the diagram.	2-3 marks Good explanation and application of the psychological factors. Some appropriate examples from sporting situations are provided throughout.	3-4 marks Good discussion of how a variety of psychological factors influence one another and sporting performance. There is more focus on one aspect of discussion <i>e.g. how self-efficacy can have a positive and negative impact on performance.</i> Some relevant examples are provided throughout. The response is adequately expressed and shows an accurate use of terminology. Writing is generally well structured using accurate grammar, punctuation and spelling.
1	1 mark Limited knowledge and understanding of some of the psychological factors in the diagram.	1 marks Basic explanation and application of the psychological factors. Few examples from sporting situations are provided throughout.	1-2 mark Limited discussion of how the psychological factors affect performance. Basic links are made between the factors and the influence on performance. Few examples are provided. The response shows basic use of terminology. Writing shows evidence of structure but some errors in grammar, punctuation and spelling.
0	0 marks No knowledge of performance analysis.	0 marks No application of knowledge and understanding of performance analysis.	0 marks No discussion of how performance analysis is used.

Unit 1: Assessment objectives mark allocations

	Q1	Q2	Q3	Q4	Q5	Q6	Total
AO1	4	3	4	4	5	4	24
AO2	4	5	6	5	0	4	24
AO3	6	5	3	2	2	6	24
Total	14	13	13	11	7	14	72