



GCE AS MARKING SCHEME

SUMMER 2019

**AS (NEW)
PHYSICAL EDUCATION - COMPONENT 1
B550U10-1**

INTRODUCTION

This marking scheme was used by WJEC for the 2018 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 AS PHYSICAL EDUCATION

SUMMER 2018 MARK SCHEME

Question	Mark Scheme	AO1	AO2	AO3	Total
1. (a)	<p>The image below shows a sprinter leaving the starting blocks of a 100m race.</p> <p>Identify the articulating bones of the knee joint.</p> <p><i>Award 1 mark for</i></p> <p>D. Femur and Tibia</p>	1			1
(b)	<p>Describe two short term responses that occur in the neuro-muscular system during the 100m race</p> <p>2 x 1 mark</p> <p><i>Award 1 mark for any of the following: points</i></p> <p>Increased nerve transmissions Increased skeletal muscular contractions Reference to golgi tendons and muscle spindles Vasodilatation (diversion of blood to the muscles)</p>	2			2
(c) (i)	<p>Outline Newton's third law of motion</p> <p><i>Award 1 mark for the correct definition of Newton's 3rd law:</i></p> <p>Law of reaction – every action has an equal and opposite reaction or similar</p>	1			1

Question	Mark Scheme	AO1	AO2	AO3	Total
(ii)	<p>Explain why Newton's third law aids the performance of the sprinter leaving the blocks and during the race.</p> <p><i>Award up to two marks for correct explanation of the following:</i></p> <p>Newton's 3rd law is applied to sprinting as when the sprinter starts their race out of the blocks they're putting a force against the blocks with their body weight and as they release from the blocks, they are putting out the same amount of force that she did in the blocks but against her, forcing her out of them quickly; this is also then applied while they're sprinting, as with each step they're putting a force against the track so therefore the track is putting the same force out but against their foot, so it is then pushing them forward</p>		2		2
(d)	<p>Explain how the physiological adaptations from long term anaerobic training could affect a sprinters performance.</p> <p>2x2 marks Up to 2 marks linking the adaptation to performance</p> <p>No marks for identifying the adaptation, the adaptation must be explained and linked to the sprinter</p> <p>Adaptations include: Muscular hypertrophy Increased CP stores Increased tolerance to lactic acid Improved synchronisation of motor unit activation Reduced autogenic inhibition Greater recruitment of type IIb fibre types</p> <p>All the above develop performance by: Increased speed of muscular contraction Increased force production Work anaerobically for longer Improved co-ordination of movement</p>		4		4

Question	Mark Scheme	AO1	AO2	AO3	Total
2. (a)	<p>Coaches and teachers often use a variety of strategies to enhance learning.</p> <p>Discuss the strategies a coach would use for a learner in the cognitive stage compared to a learner in the autonomous stage of learning.</p> <p>Must reason why they use a strategy to access the top band.</p> <p>Indicative content:</p> <p>Characteristics of a performer in the cognitive stage of learning Not always understanding new information Difficulty in processing large amount of information Difficulty deciding what to pay attention to Errors are made which performer is unable to correct Knowledge of results Feedback through praise Immediate feedback more effective for desired result Limit amount of feedback</p> <p>Cognitive phase, guidance is characterised by Manual in nature to get performer used to the kinaesthesia of the movement Verbal repetition in terms of reinforcing on key points Verbal identification of key cues Constant visual demonstration of tasks essential Modelling of good practice key to performers understanding Coach may be more motivational/pep talks/verbal persuasion Removal of critical comments/shouting from coach/equiv e.g. Punishment is not applicable because it weakens response</p>	2		4	6

Question	Mark Scheme	AO1	AO2	AO3	Total
	<p>Associative stage of learning of learning characteristics will have many aspects that have progressed/developed from the cognitive phase but are not developed enough to be classified as autonomous. The type of guidance provided by a teacher or coach will reflect this.</p> <p>Characteristics of a performer in the autonomous stage of learning Performs complex skills with ease/correct technique/confidence Has plenty of time/efficient/consistent Can pick up early signals/use of selective attention – good reaction time Can concentrate on other aspects other than technique i.e. tactics Can detect and correct errors Few errors in performance Use of intrinsic feedback KR/KP Feedback from a significant source has greater benefits</p> <p>Autonomous phase guidance characterised by Verbal guidance concentrates on style and form and finer points Subtle technical cues are often given Visual guidance through video analysis Visual guidance through biomechanical analysis Far more emphasis on tactics KP via internal recognition</p>				

Question	Mark Scheme	AO1	AO2	AO3	Total
(b)	<p>Explain, using examples, how the different types of reinforcement used by a coach can impact upon performance.</p> <p><i>Award up to 2 marks for knowledge:</i> Positive reinforcement, use of praise or rewards Negative reinforcement, removal of an unpleasant stimulus to encourage desired response</p> <p><i>Award up to 2 marks for application:</i> Praise after the desired response will strengthen the SR bond or ensure the repetition of the desired (developing schema) e.g.</p> <p>Take away the negative feedback when the correct response occurs e.g. coach stops shouting when a serve is performed correctly</p> <p>Must provide example for full marks</p>	2	2		4

Question	Mark Scheme	AO1	AO2	AO3	Total
3. (a)	<p>The diagram below shows a badminton player preparing to serve.</p> <p>Identify the type of joint located in the wrist.</p> <p><i>Award 1 mark for:</i></p> <p>Ellipsoid</p>	1			1
(b)	<p>Using figure 2, classify the badminton serve on each continuum below.</p> <p>1 mark for discrete 1 mark for justification Discrete – Clear beginning and end 1 mark for self-paced 1 mark for justification Self-paced – speed/timing is controlled by performer</p>	2	2		4
(c)	<p>Evaluate how the use of interval training can develop the match fitness of a badminton player</p> <p>Banded answer</p> <p>Indicative content:</p> <p>Benefits- Badminton is played at varied intensities. Interval training can develop speed and agility, components vital to badminton. Within games no continuous running so the pattern of training reflects a game. High intensity interval will develop fast twitch fibres used within the game. Reference to intensity of training e.g. 80% +. Reference to duration of training – working with breaks Working over lactate threshold and its benefits.</p> <p>Can contribute to: Development of aerobic fitness Development of power and strength</p> <p>Must be linked to interval training</p>	2	2	2	6

Question	Mark Scheme	AO1	AO2	AO3	Total
<p>4.</p> <p>(a)</p>	<p>Endurance athletes must plan their diet to optimise performance.</p> <p>Analyse how nutrition can be manipulated before, during and after exercise to enhance performance.</p> <p>Banded answer The candidate must make reference to before, during and after exercise to access full marks</p> <p>Indicative content:</p> <p>Before: Carbo-loading 6 days prior to an event intense training is carried out with a normal diet. This partially <i>depletes</i> glycogen stores. As the days progress the exercise intensity <i>tapers</i> off. With a total rest day prior to competition day. For the final 3 days prior to the event carbohydrate intake is increased to 70-80% of total diet. Pre-competition meal is high carbohydrate meal mix of medium and low glycaemic index food. Hydration – to include volumes and timings</p> <p>During: Med to high glycaemic index foods/drinks Maltodextrin Use of energy/isotonic drinks Aim to prevent glycogen depleting too quickly Hydration – to involve volumes and timings</p> <p>After: Eat within 30 minutes of stopping exercise Mix of high and med GI carbohydrates Take on protein to aid growth and repair Use of specific recovery drinks Hydration – to include volumes and timings</p>		2	4	6

Question	Mark Scheme	AO1	AO2	AO3	Total
(b)	<p>Using the information in the figure 3, explain the varied use of energy systems during a 1500m race.</p> <p>1 mark for the explanation of each energy system. 1 mark for application of the system to the race. Max of 2 marks per energy system.</p> <p>Indicative content-</p> <p>The relative contribution of each energy system to ATP re-synthesis it is determined by the intensity and duration of exercise. Start - ATP - PC High intensity sprint off line to gain position Limited supply/short duration of ATP-PC (approx. 10 seconds) means also use anaerobic glycolysis for the first 100-150m Limited supply of muscle glycogen/build-up of lactic acid means intensity has to drop Pace settles using aerobic system at a lower intensity/high duration Working under anaerobic threshold (60-80%) As pace builds towards end of race as intensity increases more anaerobic energy will be used Final sprint more ATP-PC</p>	0	6		6

Question	Mark Scheme	AO1	AO2	AO3	Total
5. (a)	<p>For success in sport performers are required to be both physically and mentally fit.</p> <p>Identify a method used to assess the psychological well-being of a performer.</p> <p>POMS SCAT CSAI</p>	1			
(b)	<p>Outline three of the somatic techniques that can be used to control anxiety.</p> <p>3 x 1 mark</p> <p><i>Award 1 mark for any of the following points:</i></p> <p>Physiological action which include:</p> <ul style="list-style-type: none"> - Bio feedback - Breathing techniques - Progressive muscular relaxation - Self-directed relaxation - Relevant physical action 	3			3

Question	Mark Scheme	AO1	AO2	AO3	Total
(c)	<p>Discuss, using appropriate theories, the possible causes of aggression in sport and the strategies a coach could use to manage the behaviour of performers.</p> <p>Banded answer</p> <p>Indicative content:</p> <p>1. Instinct/trait theory Aggression is innate/born with aggressive traits Aggression builds and has to be realised</p> <p>2. Displacement theory – waiting for an acceptable time to be aggressive e.g. sport</p> <p>3. Frustration-aggression theory Blocked goal caused frustration, frustration causes aggression. Release of aggression has cathartic effect.</p> <p>4. Aggressive cue, frustration builds but aggression only released when socially desirable cue present Social learning theory. Aggression is learnt by observing and copying others. Vicarious experiences Reinforcement causes behaviour to be repeated Hostile or reactive aggression Instrumental or challenged aggression</p> <p>Strategies: Punish aggressive acts Develop players code of conduct Remove from situation, change position/tactics Peer support Roles of responsibility / role model Goal setting – performance goals Reduce importance of event/avoid win at all cost attitude Stress management techniques Positive reinforcement Avoid aggressive cues</p>		2	8	10

Question	Mark Scheme	AO1	AO2	AO3	Total
6.	<p>Elite sport has changed significantly since the 19th Century.</p> <p>Evaluate the effect of 19th Century amateurism and professionalism on modern day sport.</p> <p>Banded answer</p> <p>Indicative content:</p> <p>Amateurism Moral integrity 'Healthy mind healthy body' muscular Christian ethic Sportsmanship Taking part in sport for the love of it / no monetary gain Participation/process more important than winning Encourages socially acceptable behaviour e.g. morals / abide by rules of sport/fair play/sportsmanship Discourages deviant behaviour e.g. cheating / match fixing etc Because not tempted by extrinsic rewards 19th century – amateur middle or upper class /amateurs revered the 'all-rounder' Today can still be financially supported e.g. sponsorship / Sports Aid Freedom from restrictions of professional contracts /not seen as a commodity/no contractual obligations (Amateurism) inclusive / not always based on ability / less pressure/can perform at all levels/experience lots of sports/ can perform at grass roots to elite level 'open' championships – amateurs can still compete against professionals – just not win the money e.g. golf Eligibility codes <i>protect</i> amateurs from competing against professionals Olympic Games – biggest competition in the world maintained exclusive amateurism for over a century / still have the oath – keeping moral focus in the Games Amateur sport can act as a platform for professional sport e.g. boxing, golf etc.</p>	5	2	6	13

Question	Mark Scheme	AO1	AO2	AO3	Total
	<p>Professionalism Gamesmanship</p> <p>(Professionalism) – earning money from sport/broken time payments 19th century sport became a business/amateur paid for professionals/upper class were patrons 19th century from the working class Train full time So standards improve As winning is critical/win ethic Encourages spectator sport / better spectacle for spectators 19th century occupied the masses / social control Olympic Games – do now accept some professional performers e.g. basketball</p> <p>Other: Deviance Commercialisation Contrast of the points above to modern sport Today all social classes can participate in either amateur or professional Ethics/moral codes still evident in amateur and professional sports today NGB's formed Today injection of money / commercialisation – TV rights etc. allows NGB's to invest in grass roots / economic benefit to country/sport benefits/country benefits Today amateur and professional codes blurred due to shared characteristics/difficult to distinguish between amateur and professional</p>				
Total		22	24	24	70

Question 2. (a)

Band	AO1 2 marks	AO3 4 marks
3		<p>4 marks</p> <p>Excellent discussion of the characteristics in the stages of learning linked to strategies e.g. guidance and feedback</p> <p>Candidates compare and contrast the different techniques in relation to their use in the different stages of learning</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 knowledge of the stages of learning, feedback and guidance used by a coach to enhance learning.</p>	<p>2-3 marks</p> <p>Good discussion of the characteristics in the stages of learning linked to strategies e.g. guidance and feedback</p> <p>Candidates must make reference to at least 2 strategies used by a coach to enhance learning.</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>

<p style="text-align: center;">1</p>	<p style="text-align: center;">1 mark</p> <p>Limited knowledge of the stages of learning, feedback and guidance used by a coach to enhance learning.</p>	<p style="text-align: center;">1 mark</p> <p>Limited discussion of the characteristics in the stages of learning linked to strategies e.g. guidance and feedback</p> <p>Candidates discuss some of the feedback types and guidance techniques used by coaches to enhance performance.</p> <p>Relevant 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>
<p style="text-align: center;">0</p>	<p style="text-align: center;">0 marks</p> <p>No knowledge of the stages of learning, feedback and guidance used by a coach to enhance learning</p>	<p style="text-align: center;">0 marks</p> <p>No discussion of the stages of learning, feedback and guidance used by a coach to enhance learning</p>

Question 3. (b)

Band	AO1 2 marks	AO2 2 marks	AO3 2 marks
3			
2	<p>2 marks Good knowledge of the intensity and duration on interval training</p>	<p>2 marks Good explanation of the intensity and duration of interval training for a games player</p>	<p>2 marks Good discussion of the benefits of interval training</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 Limited knowledge of the duration and intensity of interval training</p>	<p>1 mark Limited explanation of the duration and intensity of interval training linked to a games player</p>	<p>1 mark Limited discussion of the benefits of interval training</p> <p>Relevant 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 No knowledge of the duration and intensity of interval training</p>	<p>0 marks No explanation of the of the duration and intensity of interval training linked to a games player</p>	<p>0 marks No discussion of the benefits of interval training</p>

Question 4. (a)

Band	AO2 2 marks	AO3 4 marks
3		<p>4 marks</p> <p>Excellent discussion about the range of manipulation techniques related to nutrition used by athletes before, during and after competition.</p> <p>Appropriate sporting examples used to analyse the impact on sporting performance.</p> <p>There is a clear link between the manipulating effect and the impact on sporting performance.</p> <p>Relevant examples are provided throughout</p> <p>Complex ideas are expressed with clarity.</p> <p>Note all 3 areas must be discussed to award full AO3 marks</p>
2	<p>2 marks</p> <p>Good explanation of a variety of manipulation techniques before, during and after competition.</p>	<p>2-3 marks</p> <p>Good discussion of a variety of manipulation techniques to nutrition before, during and after exercise.</p>
1	<p>1 mark</p> <p>The candidate correctly identifies some ways of manipulating nutrition before, during and after competition</p>	<p>1 mark</p> <p>Brief discussion of how to manipulate nutrition before, during and after competition.</p>
0	<p>0 mark</p> <p>No identification of manipulating nutrition before, during or after competition.</p>	<p>0 mark</p> <p>No discussion about manipulating nutrition before, during or after competition</p>

Question 5. (c)

Band	AO1 2 marks	AO3 8 marks
3		<p>6-8 marks</p> <p>Excellent discussion of the theories of aggression in sport or the strategies used to overcome it.</p> <p>Candidates must make reference to more than two theories</p> <p>Candidates should compare and contrast the different techniques in relation to their use in overcoming aggression in sport.</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 knowledge of the theories of aggression in sport or the strategies used to overcome it.</p>	<p>3-5 marks</p> <p>Good discussion of aggressive behavior in sport.</p> <p>Candidates must make reference to at least 2 theories of aggression in sport and the strategies used to overcome such aggression.</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 knowledge of the theories of aggression in sport or the strategies used to overcome it.</p>	<p>1-2 mark</p> <p>Limited discussion of the theories of aggression in sport.</p> <p>Candidates discuss some of the strategies used to combat aggression</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 knowledge of the theories of aggression in sport or the strategies used to overcome it.</p>	<p>0 marks</p> <p>No discussion of the theories of aggression in sport or the strategies used to overcome it.</p>

Question 6.

Band	AO1 5 marks	AO2 2 marks	AO3 6 marks
3	<p>3-4 marks Excellent knowledge of the 19th century codes of amateurism and professionalism</p>	<p>3-4 marks Excellent explanation of the 19th century codes of amateurism and professionalism</p>	<p>5-6 marks Excellent discussion the 19th century codes of amateurism and professionalism</p> <p>Candidates must make reference to various impacts upon modern day sport</p> <p>Candidates compare and contrast the different codes of practice</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 Good knowledge of the 19th century codes of amateurism and professionalism</p>	<p>2 marks Good explanation of 19th century codes of amateurism and professionalism</p>	<p>3-4 marks Good discussion of the 19th century codes of amateurism and professionalism</p> <p>Candidates must make reference to at least 2 impacts upon modern day sport</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>

<p style="text-align: center;">1</p>	<p style="text-align: center;">1 mark</p> <p>Limited knowledge of the 19th century codes of amateurism and professionalism</p>	<p style="text-align: center;">1 mark</p> <p>Limited explanation of 19th century codes of amateurism and professionalism</p>	<p style="text-align: center;">1-2 mark</p> <p>Limited discussion of the 19th century codes of amateurism and professionalism</p> <p>Relevant 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>
<p style="text-align: center;">0</p>	<p style="text-align: center;">0 marks</p> <p>No knowledge of the 19th century codes of amateurism and professionalism</p>	<p style="text-align: center;">0 marks</p> <p>No explanation of the 19th century codes of amateurism and professionalism</p>	<p style="text-align: center;">0 marks</p> <p>No discussion of the 19th century codes of amateurism and professionalism</p>

QUESTION	AO1	AO2	AO3	TOTAL
1	4	6	0	10
2	4	2	4 (4xA)	10
3	5	4	2 (2xE)	11
4	0	8 (6*)	4 (2xA, 2xE)	12
5	4	2	8 (4xA, 4xE)	14
6	5	2	6 (2xA, 4xE)	13
TOTAL	22	24	24	70

* Indicates marks awarded for the use of qualitative data