



GCE A LEVEL MARKING SCHEME

SUMMER 2023

**A LEVEL (NEW)
PHYSICAL EDUCATION - UNIT 3
1550U30-1**

INTRODUCTION

This marking scheme was used by WJEC for the 2023 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.

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Guidance for examiners

It should be remembered that learners are writing under examination conditions and credit should be given for what the learner writes, rather than adopting the approach of penalising him/her for any omissions. It should be possible for a very good response to achieve full marks and a very poor one to achieve zero marks. Marks should not be deducted for a less than perfect answer if it satisfies the criteria of the mark scheme.

For questions that are objective or points-based the mark scheme should be applied precisely. Marks should be awarded as indicated and no further subdivision made.

Banded mark schemes

For band marked questions mark schemes are in two parts.

Part 1 is advice on the indicative content that suggests the range of concepts, facts, issues and arguments which may be included in the learner's answers. These can be used to assess the quality of the learner's response.

Part 2 is an assessment grid advising bands and associated marks that should be given to responses which demonstrate the qualities needed in AO1, AO2 and AO3. Where a response is not creditworthy or not attempted it is indicated on the grid as mark band zero.

Examiners should first read and annotate a learner's answer to pick out the evidence that is being assessed in that question. Once the annotation is complete, the mark scheme can be applied.

This is done as a two stage process.

Stage 1 – Deciding on the band

Beginning at the lowest band, examiners should look at the learner's answer and check whether it matches the descriptor for that band. If the descriptor at the lowest band is satisfied, examiners should move up to the next band and repeat this process for each band until the descriptor matches the answer.

If an answer covers different aspects of different bands within the mark scheme, a 'best fit' approach should be adopted to decide on the band and then the learner's response should be used to decide on the mark within the band. For instance if a response is mainly in band 2 but with a limited amount of band 3 content, the answer would be placed in band 2, but the mark awarded would be close to the top of band 2 as a result of the band 3 content. Examiners should not seek to mark candidates down as a result of small omissions in minor areas of an answer.

Stage 2 – Deciding on the mark

During standardising (marking conference), detailed advice from the Principal Examiner on the qualities of each mark band will be given. Examiners will then receive examples of answers in each mark band that have been awarded a mark by the Principal Examiner. Examiners should mark the examples and compare their marks with those of the Principal Examiner.

When marking, examiners can use these examples to decide whether a learner's response is of a superior, inferior or comparable standard to the example. Examiners are reminded of the need to revisit the answer as they apply the mark scheme in order to confirm that the band and the mark allocated is appropriate to the response provided.

Indicative content is also provided for banded mark schemes. Indicative content is not exhaustive, and any other valid points must be credited. In order to reach the highest bands of the mark scheme a learner need not cover all of the points mentioned in the indicative content but must meet the requirements of the highest mark band. Where a response is not creditworthy, that is contains nothing of any significance to the mark scheme, or where no response has been provided, no marks should be awarded.

1.	Number	Answer	Mark	Additional guidance
	(a)	<p><i>Outline the short-term responses that occur to the cardiac and neuromuscular systems during a warm-up.</i></p> <p><i>4X1 marks or 2x2 marks</i></p> <p>Maximum of 2 marks if only one system is outlined.</p> <p>Must include the two systems for 3-4 marks</p> <p>Cardiac Increase in heart rate, Increase in stroke volume Increase in cardiac output Increased venous return Frank Starling Mechanism</p> <p>Neuromuscular Increased speed of transmission as muscle is warmed up Increased activation of muscle fibres. Increased muscle pliability/ ability to stretch Increased muscle temperature.</p>	4	AO1 - 4
	(b)	<p><i>Describe how an endurance athlete would use the process of carbo-loading to aid performance.</i></p> <p>1-2 marks for basic description 3-4 marks for detailed description</p> <p>Phases - deplete, taper, replenish Intensity Duration</p> <p>Six days prior to competition, intense training is carried out in order to deplete glycogen stores (depletion phase). In the subsequent days as competition approaches, exercise intensity tapers off with a total rest day prior to competition. For the final three days before competition, carbohydrate intake is increased to 70-80% of diet (repletion phase).</p> <p>Pre competition meal.</p> <p>Carbo-loading will aid the performance of an endurance athlete as it will boost glycogen levels within the body allowing the athlete to work at a higher intensity for a longer period of time.</p>	4	AO1 - 4

1.

Number	Answer	Mark	Additional guidance
(c)	<p>Compare, using figures 2 and 3, the similarities and differences in the performance of both athletes.</p> <p>1-2 marks for basic comparison.</p> <p>3-4 marks for good comparison for ONLY similarities or differences from figure 2 OR 3</p> <p>5-6 marks for detailed comparison. Must have <u>similarities and differences</u> from EITHER figures 2 OR 3. Must interpret data</p> <p>The response does not need to have an equal balance between similarities and differences from both graphs.</p> <p><u>Similarities</u> Both accelerate in the first 2 seconds Both athletes' velocity plateau's after the first 4 seconds, and velocity then remains relatively constant. Towards the end of the race both athletes de-accelerate</p> <p><u>Differences</u> Professional athlete accelerates quicker than amateur Professional athlete finishes race in 10 seconds whilst amateur takes 14 seconds Professional athlete has a higher maximum velocity of 12 metres per second whilst amateur is 8 metres per second. Difference of 4 metres per second at top speed. Professional average speed is $100/10= 10$ metres per second Amateur average speed is $100/14=$ Approx 7 meters per second Professional athlete finishes 28 metres before amateur</p>	6	AO2 - 6

2.	Number	Answer	Mark	Additional guidance
	(a) (i)	<p>Explain, with reference to the triadic model, the characteristics of a performer with a positive attitude.</p> <p>1-2 marks for basic explanation 3-4 marks for detailed explanation</p> <p>Max 1 mark for a list of the components of the triadic model.</p> <p>Triadic model. Cognitive – Belief - e.g. you believe you are improving, know you have a good skill set, think you can win. Affective – emotional involvement/feelings of enjoyment – training /winning /competing. Behavioural – participate/compete/join a club or team</p> <p>Relevant e.g.</p>	4	AO1 - 1 AO2 - 3
	(b)	<p>Explain how a coach could use verbal persuasion to change a performer's negative attitude.</p> <p>1-2 marks for basic explanation of how the coach uses persuasion in performance.</p> <p>3-4 marks for detailed explanation of how the coach uses persuasion in performance.</p> <ul style="list-style-type: none"> • Persuasion/ Persuasive communication can be used to foster positive attitudes. The message must be accurate, clear, easily understood, unambiguous, and credible. Coaches should be confident in their delivery and perceived as expert/high status. Consideration of emotional dimension – coaches must be trusted. The message – Positive to initiate change The persuader – Significant other with high status The recipients – Easier to change attitude if the recipient wishes to change The situation – The use of other persuaders could help the coach. • Highlight past achievements/success • Cognitive dissonance. This suggests that a mismatch in the cognitive/affective/behavioural aspects of attitude will form a dissonance (imbalance) in the mind of the performer. In order to address this dissonance, behaviour needs to be altered. Coaches can change 	4	AO2 - 4

2.

Number	Answer	Mark	Additional guidance
	<p>behaviour by creating dissonance in order to change a negative attitude. If a person holds two ideas that oppose and conflict with each other, an element of discomfort arises. Emotional conflict is called dissonance To reduce the feeling of dissonance, the impact of one of the conflicting ideas could be lessened and therefore an attitude could change. Relevant example</p>		
(c)	<p>Outline how an understanding of momentum is important to a rugby player.</p> <p>1-2 marks for basic outline 3-4 marks for detailed outline</p> <p>Max 1 mark for definition of momentum</p> <p>Momentum</p> <ul style="list-style-type: none"> • Momentum (Kgm/s) = mass (Kg) x velocity (m/s) • Momentum is the quantity of motion possessed by a body • Mass on the move • The amount of momentum possessed by a body depends on its mass and its velocity. • Momentum plays a more important role in sports involving collisions or impacts. • The result of the impact depends on the momentum of each of the colliding bodies just before impact. • Rugby players with a relatively large mass who have the ability to run at a high velocity can generate considerable momentum when at full speed. • The higher the momentum of a rugby player, the impact will be greater. • This makes it very difficult to stop them or slow their forward momentum and they are often able to run through tackles. • When a rugby player is trying to break the gain line, they will need to increase momentum in order to brake a tackle (increase impact) 	4	AO1 - 4

2.	Number	Answer	Mark	Additional guidance
	(d)	<p>Describe the long-term adaptations to the cardio-respiratory system following a structured training programme.</p> <p>1-2 marks for basic description. 3-4 marks for good description. 5-6 marks for detailed description.</p> <p>(both cardio and respiratory systems must be covered for 5-6marks)</p> <p>CARDIO adaptations</p> <ul style="list-style-type: none"> • Cardiac Hypertrophy/myocardium/ increase in heart muscle size. • Increase chamber size. <p>Bradycardia. Increase Cardiac Output. Increase in Stroke Volume/ heart contracts with greater force/ ejects more blood with each beat. Increase max HR. Lower resting HR</p> <p>The points below must refer to pulmonary circulatory system Greater vasodilation/vasoconstriction</p> <p>Increase number of capillaries/ capillarisation/ heart muscle/ Increase elasticity of arterial walls. Arteries can withstand greater fluctuations of blood pressure.</p> <p>RESPIRATORY adaptations Strengthening/Hypertrophy of respiratory muscle. Increase surface area of alveoli. Capillarisation of Alveoli. Increase lung volumes/TV/IRV/ERV/VE Increase lactic acid tolerance. Better O₂ transportation Efficient use of O₂/ cells /lungs Improved Max VO₂ Improved gaseous exchange/diffusion Lower resting/ recovery respiratory rate.</p>	6	AO1 - 6

3.	Number	Answer	Mark	Additional guidance
	(a)	<p>Explain, using Figure 4, the role of memory in relation to improving performance.</p> <p>1-2 marks for basic explanation 3-4 marks for detailed explanation</p> <p>Memory- STSS/Short term/Long term</p> <p>Rehearse/repeat/reinforce information Make information more meaningful Associate with information that is already familiar Relate to past experiences, chunking and chaining Make experiences emotional/pleasurable/painful/intense Make stimuli more recognisable/contrasting/different/intense.</p> <p>Example of how performance is improved</p>	4	AO2 - 4
	(b)	<p>Analyse the strategies that can be used to manage aggression.</p> <p>1-2 marks for basic analysis 3-4 marks for good analysis 5-6 marks for detailed analysis</p> <p>Cognitive Stress management techniques, e.g.: imagery goal setting mental rehearsal positive self-talk cognitive re-labelling</p> <p>Somatic stress management techniques, e.g.: biofeedback breathing techniques PMR self-directed relaxation meditation</p> <p>Other strategies Lower/control arousal levels. Punishment/ removal from situation, e g: substitution Reinforcement/Reward of good/fair behaviour Sanctions Educate Use of passive role models Emphasising the need of fair play and the correct code of conduct</p> <p>Other relevant example</p>	6	AO3 - 6

3.	Number	Answer	Mark	Additional guidance
	(c)	<p>Explain how a coach could use their knowledge of Attribution theory to improve an athlete's performance.</p> <p>Banded answer</p> <p>Indicative content</p> <ul style="list-style-type: none"> • Attribution theory - perceived cause for events or behaviour. • Reasons for behaviour, for winning and losing. • Important because it can affect –future effort, motivation and behaviour. • Coaches can use attribution theory to develop an understanding of performer's behaviour and an understanding of motivation. • Identification of reasons for performance helping performer to improve, develop, maintain performance, develop confidence • Weiner model of attribution. <ul style="list-style-type: none"> • Locus of control/causality and stability dimensions explained. • Stable elements that are permanent • Unstable temporary elements that can changed • Internal –under performers control • External –outside of performers control • Internal /unstable – concentration, commitment, confidence, attitude, preparation. • Relevant example of ability, effort, luck task. • Attributing defeat to external attributions sustains confidence and establishes a winning expectation, taking away the responsibility of the loss from players. This would maintain self-esteem, sustain motivation, pride. • Success should be attributed to stable /internal reasons • Link with motivation- understanding attributions help coach/performer to realise what needs improving, how hard they need to work even when winning. • Attribution's affect EXPECTATIONS (how we will perform in future) • EMOTION (pride, enjoyment satisfaction/dissatisfaction, disappointment, frustration) • SELF SERVING BIAS –where performers who lose tend to attribute their failure to external causes and performers who win attribute success to internal factors. This limits sense of shame due to failure and highlights personal achievement in success. • LEARNED HELPLESSNESS – extreme lack of motivation, feeling of hopelessness. Caused by reinforced failure and internal /stable factors. • Global learned helplessness (all sport) • Specific learned helplessness (one sport) • Relevant example 	8	

3.

Number	Answer	Mark	Additional guidance
	<p>ATTRIBUTIONAL RETRAINING – changing attributions to help motivation. Focus on external factors.</p> <p>Band</p> <p>AO2</p> <p>7-8 marks</p> <p>3 Excellent explanation of how a coach could use their knowledge of Attribution theory to improve an athlete’s performance.</p> <p>4-6 marks</p> <p>2 Good explanation of how a coach could use their knowledge of Attribution theory to improve an athlete’s performance.</p> <p>1-3 marks</p> <p>1 Limited explanation of how knowledge of Attribution theory to improve an athlete’s performance.</p> <p>0 marks</p> <p>0 Response not worthy of credit</p>		

4.	Number	Answer	Mark	Additional guidance
	(a)	<p>Describe how a coach could use feedback to motivate a performer.</p> <p>1-2 marks for basic description 3-4 marks for detailed description</p> <p>Functions of feedback Inform – increase knowledge Error detection/error correction Praise/increase self confidence Reinforce / good /correct performance/rewards Punishment- against undesirable behaviour/ supplemented by positive reinforcement</p> <p>Factors affecting use of feedback</p> <p>Types of feedback Positive/negative Immediate/delayed Concurrent/terminal Knowledge of performance/knowledge of results Verbal/visual External</p> <p>A coach could encourage Internal feedback</p> <p><i>Type of feedback dependent on- Stage of learning</i></p> <p><i>Cognitive/Associative/Autonomous</i> <i>Novice = positive feedback/praise/reinforce good habits/ immediate/ simple /clear/no overload/KP</i> <i>Advanced performers = positive + negative/detect errors/prevent bad habits/delayed/detailed/KR</i></p> <p><i>Type of activity</i></p> <p><i>Personality of performer</i> <i>Avoid information overload</i> <i>Allow performer to develop internal feedback/kinesthesia (rather than relying on external/augmented feedback)</i></p>	4	AO1 - 4

4.	Number	Answer	Mark	Additional guidance
	(b)	<p>Explain, using examples, how a coach could develop team cohesion.</p> <p>Banded answer</p> <p>Indicative content</p> <p>Group dynamics Encourage Cohesion (working together) and its effect Interactive sports lend themselves to more cohesion Encourage friendships / feelings Develop communication within the group Highlight attractiveness the group are to each other. Highlight the success / achievement of the individuals Highlight the success / achievement of the group.</p> <p>Set team goals Set individual goals Provide feedback Reward effort and performance Recognise improvement</p> <p>Leadership/ type/strength Size of group External perception of threats Similarities of group members /race/gender/age/ability/attitude/effort/skill level/personality. Driven by a common goal</p> <p>Understanding of group faults and motivational losses and group performance Actual performance= potential performance – group faults</p> <p>Reduce the effects of Social loafing and Ringlemann effect Highlighting individual effort/performance/importance Feedback about performance/positive/negative/reinforcement/praise/ use statistics/notation Social support from group members/social cohesion/team building activities Give individual responsibility Perform in small groups/manipulate success</p> <p>Use of Attributions - failure due to stable /internal factors/task complexity/or relevant e.g. Low arousal/boredom.</p> <p>Other relevant examples</p>	8	

Band	AO1- 3	AO2 – 5		
3		4-5 marks Excellent explanation of strategies to develop team cohesion. Excellent application and use of examples throughout		
2	2-3 marks Good knowledge of strategies to develop cohesion	2-3 marks Good explanation of strategies to develop team cohesion. Good application and use of examples.		
1	1 mark Limited knowledge of strategies to develop cohesion	1 mark Limited explanation of strategies to develop team cohesion. Limited application and use of examples.		
0	0 marks Answer not worthy of credit	0 marks Answer not worthy of credit		

(c)	<p>Analyse, with reference to Chelladurai’s multi-dimensional model why a coach could use a variety of different leadership styles.</p> <p>Banded answer</p> <p>Indicative content</p> <p>Situational characteristics</p> <ul style="list-style-type: none"> • Effective leadership will adapt to the situation. • Certain situations may influence/control/dictate a particular mode of leadership eg. dangerous (environmental factors) with high risk such as teaching javelin will require a strong, autocratic style leadership. • time <p>Leader characteristics</p> <ul style="list-style-type: none"> • Effective leadership is related to the personality of the leader. Leadership style will be influenced by personality e.g. autocratic/democratic/laissez-faire • Personality/experience/ability of the leader will influence whether a performer reacts in a positive/negative way towards the leader. <p>Member characteristics</p> <ul style="list-style-type: none"> • Effective leadership is related to the group eg. size, experience, tradition/culture, previous expectations. • Age 	8	
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Leaders Behaviour

Required behaviour

- Style of leadership that is required / suitable / appropriate for the particular situation / members.

Actual behaviour

- Relates to the leadership style adopted – the way the leader acts and behaves.
- The leader's actual behaviour will have a direct impact on performance of the team and the members' satisfaction.

Preferred behaviour

- This relates to way in which the group wish to be led (links with satisfaction).
- The leader's behaviour can have a direct impact on performance and motivation leading to successful outcomes for the team.
- Leaders should be flexible/can change/can adapt to differing styles (to accommodate the differing needs to improve performance.)

Band

AO3

7-8 marks

- 3** Excellent analysis of Chelladurai's multi-dimensional model of leadership. Excellent judgements are made on the use of different leadership styles.

4-6 marks

- 2** Good analysis of Chelladurai's multi-dimensional model of leadership. Good judgements are made on the use of different leadership styles.

1-3 marks

- 1** Limited analysis of Chelladurai's multi-dimensional model of leadership. Limited judgements are made on the use of different leadership styles.

0 marks

- 0** No analysis.
Response not worthy of credit

5. **Discuss how the media and commercialisation have influenced sportsmanship.**

Banded answer

Both the positive and negative influence of media and commerce on sportsmanship must be discussed to access band 3

Indicative content

Commercialisation of sport

- Sport has become a commodity / sport as a business. Concept of assets (such as players / clubs / stadia etc) that can be bought and sold.
- Golden' triangle – symbiotic relationship between sport, media and sponsorship.
- Sponsorship is huge- in all its forms eg. replica kit market.
- Financial fair play and irregularities.
- Influence of business and entrepreneurs.
- The influence of market eg. supply and demand / those with most money have most influence.
- Effect on transfer fees.
- Development of the 'cult' of the celebrity sportstar influence within and outside of sport.
- Impact of social media.
- Power of the **media** and sponsors to shape sport eg. rule changes, breaks in play for advertising 'hits', creation of new formats (eg. Twenty20 Cricket).

- Rise in professionalism led to rise in commercialisation.
- Players and other individuals want share of profits.
- Entrepreneurs buying sport teams as business investment.
- Huge increase in wages/fees. Transfer market.
- Massive prize money.
- Sponsorship and advertising deals.
- Commodification of sports brands (Nike).
- Importance of television revenues, huge Sky /BT sport deals for televising rights. Pay per view/ Sport channels.

- Has sport become over commercialised? Rewards are so massive that it creates a 'win at all cost mentality. Lombardian ethic.
- Deviance in sport

- Americanisation of sport.
- Naïve to assume that fair play could still be part of modern sport given vast sums of money involved!
- Is there still a moral code in sport

Sportsmanship v Gamesmanship debate. Sportsmanship has been eroded and replaced by gamesmanship as individuals/teams/authorities seek to gain the vast rewards associated with success.

- Sportsmanship- an intention to compete within the rules and intended spirit of the rules. Link with moral integrity.
- Gamesmanship, the intention to compete to the limit of the rules, to get away with as much as you can. Potential rewards can outweigh moral consideration.
- Players and other individuals want share of profits.
- Greed -Massive prize money.

Other Positive influence of media and commerce.

- Financial gain/salaries/transfer fees
- Better sport coverage
- Improved investment in facilities and stadiums
- Sponsorship and advertising deals.

OTHER ERELEVANT EXAMPLES

5. Discuss how the media and commercialisation have influenced sportsmanship.		
Band	AO1	AO3
	4 marks	16 marks
3	<p>4 marks</p> <p>Excellent knowledge and understanding of the effects of media and commercialisation on sportsmanship.</p>	<p>11-16 marks</p> <p>Excellent discussion on how the media and commercialisation have influenced sportsmanship.</p> <p>Detailed and reasoned judgements are made.</p> <p>Positive and negative effects on sport are discussed in detail</p> <p>The response is clearly expressed, and shows accurate use of technical terminology. Writing is very well structured using accurate grammar, punctuation and spelling.</p>
2	<p>2-3 marks</p> <p>Good knowledge and understanding of the effects of media and commercialisation on sportsmanship.</p>	<p>5-10 marks</p> <p>Good discussion on how the media and commercialisation have influenced sportsmanship.</p> <p>Judgements are made but not always evidence-based</p> <p>Evaluation tends to be one sided concentrating on either the positive or negative effects</p> <p>The response is adequately expressed, and shows appropriate use of technical terminology. Writing is generally well structured using reasonably accurate grammar, punctuation and spelling.</p>

<p style="text-align: center;">1</p>	<p style="text-align: center;">1 mark</p> <p>Limited knowledge and understanding of the effects of media and commercialisation on sportsmanship.</p>	<p style="text-align: center;">1-4 marks</p> <p>Limited discussion on how the media and commercialisation have influenced sportsmanship.</p> <p>Evaluation is one sided and is superficial</p> <p>The response shows basic use of technical terminology. Writing shows some evidence of structure but with 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 and understanding of the effects of media and commercialisation on sportsmanship.</p>	<p style="text-align: center;">0 marks</p> <p>No evaluation of the effects of commercialisation on sport and the influence on deviance, sportsmanship and fair play</p> <p>Response not worthy of credit</p>