



GCE A LEVEL MARKING SCHEME

AUTUMN 2021

**A LEVEL
PHYSICAL EDUCATION – COMPONENT 1
A550U10-1**

INTRODUCTION

This marking scheme was used by WJEC for the 2021 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 A LEVEL PHYSICAL EDUCATION

AUTUMN 2021 MARK SCHEME

Question	Mark Scheme	AO1	AO2	AO3	Total
1. (a)	Identify three factors that affect the horizontal distance travelled by the shot. <i>3x1 mark</i> Height of release Speed / velocity of release Angle of release	3			3
(b)	Explain why a spin technique could allow the athlete to throw the shot further than from standing. <i>2x2 marks</i> Impulse = force x time, the greater the time in contact with the discus the greater the impulse. An increase in impulse leads to greater velocity and a change in momentum and acceleration. $F=ma$ – Newton's second law of motion. Increased contact time on the object etc. <i>Max 2 marks for knowledge without explanation</i>	2	2		4
(c)	Explain, using figure 2, how the centre of mass and base of support affect the stability of the athlete during the javelin event <i>2x2 marks</i> The most stable position is when the centre of mass is directly over the base of support. When the centre of mass is outside the line of the base of support the body becomes unstable. Using the correct technique the throwers centre of gravity is low to the ground which means less energy is needed. <i>Max 2 marks for knowledge without explanation</i>	2	2		4

Question	Mark Scheme	AO1	AO2	AO3	Total
(d)	Explain how an understanding of Newton's Laws of Motion could aid the performance of an athlete when leaving the starting blocks and during a sprint event <i>3x1 mark for laws <u>outlined</u></i> Law of inertia Law of acceleration Law of reaction <i>3x1 mark for explanation / example:</i> Newton's 1st law is applied as the sprinter will remain stable in the blocks until a force acts upon him; in this case a muscle contraction has to take place. Newton's Second Law of Motion states that the acceleration of an object is proportional to the total force of the object. In accordance to Newton's Second Law, if a sudden gust of wind allows a runner to accelerate more, then the total force acting on the runner increases or similar. 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.	3	3		6
Total		10	7	0	17

Question	Mark Scheme	AO1	AO2	AO3	Total
2. (a) (i)	Identify, using figure 3, the part of the model that is responsible for selective attention. <i>Award one mark for:</i> Perceptual mechanism	1			1
(a) (ii)	Explain, using sporting examples, Whiting's model of information processing. <i>Indicative content:</i> Perceptual mechanism is the part of the brain which makes sense of the surroundings and gives the information meaning. Information is received from our senses. Selective attention filters the information. Translator mechanism is the part of the brain that selects relevant information. Comparing previous stores between the short and long term memory to determine the appropriate action. Effectors mechanism is the part of the brain that sets in motion the appropriate neuromuscular sequences to activate the skill. Messages are sent from the brain to the appropriate limbs for movement. Once the action is complete it is stored in the long term memory for future reference. Feedback into the memory via knowledge of results / knowledge of performance, positive and negative outcomes stored. <i>See banding grid for allocation of marks</i>		8		8
Band	AO2 8 marks				
3	6-8 marks The candidate is able to give a detailed explanation of Whiting's model of Information Processing. All four parts of the models are referenced with relevant examples are provided throughout. Complex ideas are expressed with clarity.				
2	3-5 marks The candidate is able to give a good explanation of Whiting's model of Information Processing. At least three areas of the model are referenced and they are able to provide examples.				
1	1-3 marks The candidate briefly explains Whiting's model of information processing, only two areas of the model are explained with little examples to support their answer				

Question	Mark Scheme	AO1	AO2	AO3	Total
(b)	Outline two types of feedback that a performer could receive following an activity to reinforce the learning of a skill. <i>2x1 mark –</i> Positive - praise Knowledge of performance Knowledge of results Terminal – received after performing Concurrent – received during performance in the content of after the activity but in the performance <i>2 marks can only be awarded if the candidate describes how it helped reinforce the skill e.g.</i> Strengthen S-R bond, motivated to repeat the skill again etc.	2			2
(c)	Describe the strategies that a coach could use to improve a performers retention of information when learning a skill. <i>4x1 marks</i> Rehearse / reinforce / repeat Link / associate information Make the stimulus more intense Cues Make the information meaningful Chunking / grouping information Use of imagery / visualisation	4			4

Question	Mark Scheme	AO1	AO2	AO3	Total
(d)	Evaluate the effectiveness of the different methods of practice that a coach could use to develop the skills of a cognitive learner. <i>Indicative content:</i> <i>Varied practice – conditions are varied to encourage the formation of schema. Practice conditions often replicate real situations and are match specific. Often used in the development of open skills.</i> <i>Fixed practice – conditions stay the same until the skills learnt. Often used to develop schema for closed skills.</i> <i>Massed practice – practice is often done with no rest intervals, sessions are long in duration. Good for grooving skills as they encourage a habitual response. Can lead to fatigue and boredom and are also linked with negative transfer.</i> <i>Distributed practice – training session include rest periods, these can involve mental practice. Allows time for recovery and for questions to be asked.</i> <i>Whole practice – when the skill is taught as a whole.</i> <i>Progressive part practice – when the skill is broken down into components that are learnt and then linked back together.</i> <i>Characteristics of cognitive learner:</i> <i>Difficulty in processing large amounts of information, short attention span, frequent errors to begin with, feedback essential through praise, immediate feedback is more effective.</i> <i>Candidates must comment on the effectiveness of the practices linked to the characteristics of a cognitive learner for A03 marks</i> <i>See banding grid for allocation of marks</i>	1	2	5	8

Band	AO1 1 mark	AO2 2 marks	AO3 5 marks		
3			4-5 marks Excellent evaluation of at least three different types of practise that could be used with a cognitive learner, the methods chosen are linked to the characteristics of a cognitive learner Relevant examples are provided throughout. Ideas are expressed with clarity.		
2		2 marks The candidate demonstrates good knowledge of relevant methods of at least two practises that can be used with a cognitive learner and good knowledge of why they may be used	2-3 marks Good evaluation of at least two different types of practise that could be used with a cognitive learner, the methods chosen are linked to the characteristics of a cognitive learner		
1	1 mark The candidate correctly identifies relevant methods of practise that can be used with a cognitive learner	1 mark The candidate demonstrates some knowledge of relevant methods of practise that can be used with a cognitive learner	1 mark Limited evaluation the use of relevant methods of practice that can be used with a cognitive learner		
Total		8	10	5	23

Question	Mark Scheme	AO1	AO2	AO3	Total
3. (a)	Explain, using figure 4, why knowledge of training zones and the anaerobic threshold are important when developing an exercise programme. <i>Max of 3 marks for knowledge only</i> Coaches and athletes need to understand the energy demands of the sport to allow for specificity of training Anaerobic threshold is the point at which more energy is produced anaerobically than aerobically Working close to the threshold will improve aerobic endurance Exercising below the threshold will reduce the build-up of lactic acid; retain glycogen stores for longer and CP stores. Candidates may also provide specific examples from sport to support their answers.	3	3		6
(b)	Explain the impact on performance of the physiological changes that occur as a result of a warm up. <i>4x1</i> <i>Candidates must explain the benefit for the mark to be awarded</i> Increased muscle temperature will improve elasticity of muscle fibres – increased range of movement / decrease chances of injury Increased heart rate / breathing rate – Efficiency of oxygen and delayed build-up of lactic acid Increased nerve conduction velocity, quicker neural responses – faster contraction of muscles and increased reaction time Increased enzyme activity – more ATP for energy		4		4

Question	Mark Scheme	AO1	AO2	AO3	Total
(c)	Explain the physiological effects of dehydration on performance. <i>4x1</i> <i>Candidates must explain the affects for the mark to be awarded</i> • Increase in heart rate and breathing rate. • Oxygen being transported at a slower rate through the blood vessels. • Less glucose/glycogen and fatty acids being transported to the muscles for energy. • Increased levels of lactic acid production. • Blood becomes viscous We can become dehydrated when water used for normal bodily functions such as producing energy is not replaced. For every molecule of ATP that is produced a chemical reaction must take place which releases heat. The more we exercise the greater the heat produced. This heat is controlled by the water in the blood plasma as it's taken to the surface of the skin. The heat is then released through the skin which condenses forming sweat. If this water in the blood plasma is not replaced through drinking water or any other fluids then the blood plasma becomes more viscous (thicker). This means the blood cannot be transported around the body as quickly.		4		4

Question	Mark Scheme	AO1	AO2	AO3	Total
(d)	Analyse how legal nutritional supplements and ergogenic aids can benefit performance. <i>Indicative content:</i> Ergogenic aids are any outside influence that assists performance. They can be performance enhancing drugs, mechanical aids, sports supplements and psychological aids. Creatine monohydrate enhances CP stores. Aims to re synthesise ATP. This allows athletes to train harder for longer. Gains in power, speed and strength are evident. Side effects include muscle cramps, water retention, bloating and vomiting which can hinder aerobic performance Caffeine stimulates the central nervous system and will improve decision making and reaction time. Allows fats to be used as energy therefore may benefit aerobic performance However large quantities are illegal and can lead to dehydration – effects of dehydration may also be discussed. Protein, the amino acids stimulate growth and repair of the muscle, bones and tendons. Casein protein is slow releasing and helps to increase metabolic rate whilst whey protein is fast releasing repairing micro tears allowing more training to take place. Overuse can lead to kidney damage. <i>See banding grids for allocation of marks</i>	1		3	4
Band	AO1 1 mark	AO2 3 marks			
3		3 marks If the candidate is able to offer benefits and drawbacks of taking ergogenic aids for at least two examples			
2		2 marks If the candidate only offers either a benefit or drawback but not both of ergogenic aids for at least two			
1	1 mark If the candidate is able to identify different types of ergogenic aids	1 mark If only one example of an ergogenic aid is provided and a draw back or benefit is identified			
Total		4	11	3	18

Question	Mark Scheme	AO1	AO2	AO3	Total
4. (a)	Identify which of the following statements best describes the term sponsorship. <i>Award 1 mark for:</i> C.	1			1
(b)	Explain how sponsorship influences sport. Indicative content: Advantages – Covers costs e.g. kit, equipment, travel, accommodation, time to train, quality coaching, talent development, venue hire Disadvantages – no security, can be withdrawn, unhealthy image is sponsor has a negative effect on health e.g. smoking/ alcohol, exploitation to suit the sponsor, difficult for minority sports to seek sponsorship. (See banding grid for allocation of marks)		6		6
Band	AO2 6 marks				
3	5-6 marks The candidate is able to give a detailed explanation of how sponsorship influences sports. Both advantages and disadvantages are explained in an array of areas. Examples are provided throughout. Complex ideas are expressed with clarity.				
2	3-4 marks The candidate is able to give a detailed explanation of how sponsorship influences sports. Either advantages or disadvantages are explained in an array of areas. Examples are provided throughout. Complex ideas are expressed with clarity.				
1	1-2 marks The candidate gives a brief explanation of how sponsorship influences sports. Examples are limited and an array of areas are not given, focus on one area for example.				

Question	Mark Scheme	AO1	AO2	AO3	Total
(c)	Discuss, using examples, the impact of the media on the globalisation of sport <i>Indicative content:</i> Sportsmanship- an intention to compete within the rules and intended spirit of the rules. Link with moral integrity. Public school ethos of gentlemen sportsman subscribed that it was better to lose honourably than win by cheating. Nash model of morality, scale + to -. 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 considerations. Deviance Coakley (2007) states most actions in sport are within a normal accepted range in society. Deviance occurs outside of this normal range of action. Deviant behaviour refers to those who will find a way around the rules. Deviant behaviour can be – Institutional, Group specific, Individual. Deviant behaviour can be Voluntary, Co-operative, enforced. Deviance under conformity consists of actions based on ignoring or rejecting norms. e.g. violence, drug use, financial fraud/bungs etc. Deviance over conformity consists of actions based on accepting norms and being willing to follow them to extreme degree, e.g excessive training affecting family and health, playing through pain whilst injured, extreme loyalty/love for sport /team. Pressure of Commercialisation of sport- sport becomes subject to market force of commerce. Sport has become a commodity. Golden triangle – media, sport and sponsor	2	3	7	12

	Players and other individuals want share of profits. Massive prize money. Sponsorship and advertising deals. Influence of television revenues on Fair play, huge Sky /BT sport deals for televising rights. Americanisation of sport. Rewards are so massive that it creates a 'win at all cost mentality. Lombardian ethic. 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. Models of morality. Deviant (behaviour deviating from norm of society) even violence is becoming more prevalent. Potential rewards outweigh consequences of being caught. Everybody else cheats!! Pressure by sponsors/coaches/managers/teammates. Examples of deviant behaviour – violent play, drug taking, match fixing, bungs, bribery, sledging, diving in football, corruption (Fifa, IOC) Poor role models. However/ Counter argument – Good role models Sportsmanship is still important and still evident in modern sport. Are sport authorities getting better at catching cheating. Has cheating in sport always existed. Better drug test. WADA.				
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	Greater coverage of deviance by media Relevant sporting examples <i>Symbiotic relationship between sport, media and sponsorship</i> Impact of commercialization Sport as 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 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 sport star – influence within and outside of sport. Impact of social media. Power of the media and sponsors to shape sport e.g. rule changes, breaks in play for advertising 'hits', creation of new formats (e.g. Twenty20 Cricket). Commercialisation of sport- sport becomes subject to market force of commerce. Sport has become a commodity (bought and sold) 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).				
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	Importance of television revenues, huge Sky /BT sport deals for televising rights. Pay per view/ Sport channels. Americanisation of sport. Has sport become over commercialised? Rewards are so massive that it creates a 'win at all cost mentality. Lombardian ethic. Naïve to assume that fair play could still be part of modern sport given vast sums of money involved! <i>See banding grid for allocation of marks</i>				
Band	AO1 2 marks	AO2 3 marks	AO3 7 marks		
3		3 marks The candidate demonstrates good knowledge of at least three examples of globalisation in sport and the influence of the media	6-7 marks Excellent discussion of at least three examples of the impact of the media on the globalisation of sport Relevant examples are provided throughout. Ideas are expressed with clarity.		
2	2 marks The candidate describes at least two relevant reasons of the medias influence on globalisation of sport	2 marks The candidate demonstrates good knowledge of at least two examples of globalisation in sport and the influence of the media	3-5 marks Good discussion about at least two examples of the impact of the media on the globalisation of sport. Relevant examples are provided		
1	1 mark The candidate correctly identifies relevant reasons of the globalisation of sport linked to the media	1 mark The candidate demonstrated some knowledge of globalisation of sport linked to the media	1-2 marks Limited discussion of globalisation in sport linked to the media, only one area used as an example.		
Total			3	9	7 19

Question	Mark Scheme	AO1	AO2	AO3	Total
5. (a)	Describe the stable and unstable characteristics of Weiners model (4) <i>4x1 mark</i> Ability is an internal and stable factor because ability within the performer is not likely to change in the short term Effort is internal and unstable because only the individual can determine the amount of effort they exert each performance Task difficulty is external and stable, fixtures are set e.g. playing top of the league Luck is external and unstable. The performer cannot control their luck e.g. slipping while taking a penalty Or similar A - skill B = effort C= task difficulty D = luck	4			4
(b)	Explain strategies that a coach may use to increase the self-efficacy of a performer <i>Indicative content:</i> <i>Self efficacy is defined as a person's or team's belief in their capacity to produced desired results under specific conditions.</i> <i>There are four sources of self efficacy: past performance, vicarious experiences, verbal persuasion and emotional arousal.</i> <i>Self efficacy can be developed through providing opportunity for players to experience success, especially as a beginner.</i> <i>Set realistic and attainable goals, short term, to enable players to experience success. Goals should be performance rather than outcome related.</i> <i>Show the performer you have confidence in them, praise, positive body language etc.</i>	3	3		6

Question	Mark Scheme	AO1	AO2	AO3	Total
	<i>Use psychological tools such as positive self talk, imagery etc.</i> <i>Attribute success to internal factors to build confidence.</i> <i>(See banding grids for allocation of marks)</i>				
Band	AO1 3 marks	AO2 3 marks			
3	3 marks Award three marks if the candidate is able to identify all aspects of the self-efficacy model	3 marks Award three marks if the candidate explains three strategies linked to the self-efficacy model			
2	2 marks Award 2 marks if the candidate is able to identify at least two aspects of self-efficacy	2 marks Award 2 marks if the candidate explains the strategies linked to two areas of the self-efficacy model			
1	1 mark Award 1 mark if the candidate is able to define self-efficacy / identify one area of the self-efficacy model	1 mark Award 1 mark if the candidate explains a strategy linked to one area of self-efficacy			

(c)	Evaluate, using sporting examples, the effectiveness of different types of goals that a coach could set to motivate performers <i>Indicative content:</i> SMART goals Short /mid/long term goals – gives the performer a focus, confidence levels will increase when met. Outcome goals – based on the end result. If achieved successfully then motivation will increase however if they are not achieved stress and anxiety may set in Performance goal / task orientated – based on personal standards. Lower levels of anxiety and stress during performance if these are achieved. Process orientated goals – based on techniques or tactics. Goals should be a mixture of process and product in order to be effective and should include individual and team targets. Efforts will be become more focused in training and during competition. <i>(See banding grid for allocation of marks)</i>	2	3	3	8
Band	AO1 2 marks	AO2 3 marks	AO3 3 marks		
3		3 marks The candidate demonstrates good knowledge of at least three types of goals that can motivate a performer	3 marks Excellent discussion of at least three types of goals and how they motivate a performer Relevant examples are provided throughout. Ideas are expressed with clarity.		
2	2 marks The candidate describes at least two types of goals that can motivate pupils	2 marks The candidate demonstrates good knowledge of at least two types of goals that can affect performance	2 marks Good discussion of at least two types of goals and how they motivate a performer Relevant examples are provided		
1	1 mark The candidate correctly identifies types of goals	1 mark Limited knowledge of how goals affect motivation of a performer	1 mark Limited discussion of how goals affect motivation of a performer		

Question	Mark Scheme	AO1	AO2	AO3	Total
(d)	Discuss, using appropriate theories how the presence of an audience can affect performance <i>Indicative content:</i> 1. Theory from Zajonc; - Presence of audience causes increased arousal; Increased drive/arousal means performer tries harder/drive; Increased likelihood of learnt dominant response; Effects depend on stage of learning; Early/cognitive stage. negative effects/social inhibition; Performer not fully developed appropriate response to demands; Later/associative/autonomous stages performance enhanced by presence of audience; Enhancement effect more likely if simple task/gross skill; Impairment effect more likely if complex task/fine skill; If they think they are being judged negative effect is enhanced; This is known as evaluation apprehension. Home field advantage – Home support tends to improve performance/social facilitation effect/boost self-efficacy/lower levels of anxiety. More matches won at home than away/during early rounds of competitions/Olympic & World medals by host nation. Home teams tend to play more attacking styles/ tactics/functional aggressive behaviour (accept reverse answer) Proximity effect/closeness of crowd has negative effect on visiting teams Larger crowd/hostile crowd has a negative effect on visiting teams. Away team commit more fouls/can become anxious/over-aroused due to crowd or unfamiliar surroundings Increased pressure from the home crowd. More important the game the greater the pressure/ choke effect/championship choke. Performers become more self-conscious at home causing over-arousal. Players place more pressure on themselves at home matches due to expectations. Social inhibition for the home team. Evaluation apprehension for the home team. Other theories include self-presentation theory, distraction conflict theory. Other content: Presence of an audience increased arousal/anxiety	2	2	6	10

Question	Mark Scheme	AO1	AO2	AO3	Total
	Can lead to either social facilitation or social inhibition. Increase in arousal will cause the dominant response Novice – not well-learned – poorer performance Elite – well-learned – improved performance Complex skill more difficult to perform/simple skill easier to perform Will also have an impact if they feel the crowd is evaluating them/evaluation apprehension The importance of the crowd will also dictate the level of arousal POSSIBLE STRATEGIES: Improve selective attention Reduce the importance of the match Avoid social comparison with coach, teachers. Encourage team mates to be supportive Use stress management techniques Goal setting Use attributions correctly Ensure skills are over learnt. Mental rehearsal Train in front of others <i>(See banding grids for allocation of marks)</i>				
Band	AO1 2 marks	AO2 2 marks	AO3 6 marks		
3			5-6 marks Excellent discussion of at least three theories. Relevant examples are provided throughout. Ideas are expressed with clarity.		
2	2 marks The candidate describes at least two relevant theories	2 marks The candidate demonstrates good knowledge of at least two relevant theories	3-4 marks Good discussion about at least two relevant theories Relevant examples are provided		
1	1 mark The candidate correctly identifies the theories of the effect of an audience on performance	1 mark The candidate demonstrated some knowledge of the theories of the effect of an audience on performance	1-2 marks Limited discussion of the theories of the effect of an audience on performance.		
Total		11	8	9	28

	Q1	Q2	Q3	Q4	Q5	Total
AO1	10	8	4	3	11	36
AO2	7	10	11	9	8	45
AO3	0	5	3	7	9	24
Total	17	23	18	19	28	105