



GCE MARKING SCHEME

SUMMER 2023

**A LEVEL
PHYSICAL EDUCATION – COMPONENT 2
A550U20-1**

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.

GCE PHYSICAL EDUCATION

COMPONENT 2

SUMMER 2023 MARK SCHEME

Question	Mark Scheme	AO1	AO2	AO3	Total
1. (a)	<p>Joints are classified according to their range and type of movement.</p> <p>Identify the type of synovial joint and the movement patterns possible at the ankle joint.</p> <p><i>Award one mark for the correct identification of the joint type:</i></p> <ul style="list-style-type: none"> - Joint type - Condylloid - Hinge <p><i>Award a further two marks for the correct identification of the following movement patterns:</i></p> <ul style="list-style-type: none"> - Plantar flexion Dorsi-flexion Inversion/inward rotation - Eversion/outward rotation <p>(3x1)</p> <p><i>Accept any other appropriate movement patterns.</i></p>	3			3
(b)	<p>In 2001, UEFA launched its injury surveillance study involving 69 European top-level teams. So far, results show that the overall burden of match injuries has fallen by 2% per season.</p> <p>Describe injury treatment methods that can be implemented in sports such as football to ensure that player availability is increased.</p> <p><i>Award 1 mark for a basic description</i> <i>Award 2-3 marks for a description of any of the following treatment methods:</i></p> <ul style="list-style-type: none"> - SALTAPS – this process involves getting the athlete to STOP to assess how the injury was caused and the mechanism of the injury, ASK questions about the injury, where it hurts, pain severity, and how they thought it happened, LOOK for specific signs such as redness, swelling or foreign objects, TOUCH the injured area for heat and tenderness, ACTIVE MOVEMENTS – can the athlete perform these movements to check for pain and range of motion, PASSIVE MOVEMENTS – gently move the injured body part to check how it feels, pain and range of motion and test the STRENGTH of the body part by providing light resistance I.e., can they stand on it? 	3			3

Question	Mark Scheme	AO1	AO2	AO3	Total
	<ul style="list-style-type: none"> - PRICE/PRICED – PROTECT the injured person and the injured part of the body to minimise risk of further injury, REST allows for healing and prevents further damage, ICE stops the injured area from swelling and reduces pain, COMPRESSION will act as support and also help to prevent swelling, ELEVATION will reduce swelling by using gravity to reduce blood flow the injured area and DIAGNOSIS will need to be done by a qualified professional. - Cryotherapy – this involves the use of bagged ice, ice packs, ice sprays, frozen peas, ice bandages, cryo-compression equipment and skin temperature monitoring devices such as ProMOTION EV1 - Thermotherapy – heat packs and pads, radiant heat lamps, heat creams/gels, paraffin wax, spa baths and skin temperature monitoring devices such as ProMOTION EV1 - Stability treatments – athletic tapes, kinesio tape, bracing, joint supports, slings, crutches, splints and bandaging. - Electrotherapy – ultrasound, shockwave, transcutaneous electrical nerve stimulation (TENS) - Massage – deep muscle therapy can help by realigning connective tissue fibres and flushing out toxins from the damaged area as the fluid and nutrients can be moved through the damaged tissue to encourage healing and accelerate the removal of waste products., helping to increase joint mobility and flexibility as the tissues can be stretched, releasing tension and pressure and improving elasticity, breakdown scar tissue from previous injuries, reduce pain and generate heat helping circulation and relaxation. <p><i>Accept any other appropriate treatment methods for sports injuries.</i></p>				

Question	Mark Scheme	AO1	AO2	AO3	Total
(c)	<p>The risk of injury increases when the demands of a sport such as football cannot be met.</p> <p>Explain the possible causes of fatigue that affect sporting performance.</p> <p>Award 1-2 marks for a basic explanation of any of the factors shown below: <i>Basic = depletion of energy stores such as PC and glycogen (1 mark) accumulation of waste products such as CO₂ and a buildup of lactic acid (1 mark) = 2 marks</i></p> <p>Award 3-4 marks for a detailed explanation of any of the factors shown below (must refer to at least two</p> <ul style="list-style-type: none"> - Depletion of energy stores – depletion of PC (phosphocreatine), muscle and liver glycogen stores. The body then starts to metabolise fats but is unable to use this as a fuel on its own. This will have a major effect on performance as muscular performance will decrease and an inability to maintain power output will ensue. - Metabolic accumulation – a build-up of lactic acid and CO₂ in the muscle cells will cause fatigue and complete loss of muscle function. This is because an accumulation of lactic acid causes a release of hydrogen ions. The H⁺ ions cause an increase in acidity which then causes a decrease in pH which then inhibits both aerobic and anaerobic enzyme activity and therefore the breakdown of glucose required for ATP regeneration, irritates the nerve endings, causing pain. - Body fluid balance and dehydration – fluid loss decreases plasma volume which reduces blood pressure and as a result produces a reduction in blood flow to the skin and working muscles. This means that the heart has to work harder, body temperature will rise, and fatigue will occur which will negatively impact performance. <p><i>Accept any other appropriate causes of fatigue and their effects on performance.</i></p>		4		4

Question	Mark Scheme	AO1	AO2	AO3	Total
(d) (i)	<p>It is important to understand how individuals differ in the way they master the skills involved in sports such as football and, how some are able to perform at a higher level by using different forms of feedback. Outline the difference between skill and ability.</p> <p>Award up to 1 mark for each correct definition or two marks for the difference between skill and ability:</p> <ul style="list-style-type: none"> - Skill is the learned ability to bring about predetermined results with maximum certainty, often with the minimum outlay of time or energy or both - Ability is the qualities which make it possible for you to achieve a task. These are stable and enduring characteristics which are genetic (innate) and can be either completely perceptual, completely motor or a combination. <p>(2x1) <i>Accept any other appropriate definitions/ differences between skill and ability.</i></p>	2			2
(ii)	<p>Explain, using sporting examples, how performers may use different types of feedback to help improve their performance.</p> <p><i>Award 1-2 marks for knowledge of feedback (at least 2 forms of feedback should be explained) and 1-2 marks for application to practical examples: (2x2):</i></p> <ul style="list-style-type: none"> - Intrinsic feedback involves information available to the performer that is internal or arises from their senses. It is often continuous in nature and comes from our senses and from the proprioceptors found in muscles, ligaments and joints (kinesthesia). - This type of feedback has the advantage of occurring as the movement is being performed (concurrent) and is readily available which means that movements can often be corrected or changed immediately. This also means that the performer does not have to rely on the feedback from others and if in the autonomous stage of learning they would be able to make correct interpretations and correct their performance. - Extrinsic feedback is a from an external source to the performer and can often lead to improved performance an increase in motivation. 		4		4

Question	Mark Scheme	AO1	AO2	AO3	Total
	<p>Types of external feedback include:</p> <ul style="list-style-type: none"> - Knowledge of results – a type of feedback that gives the performer information about the end result of the performance. It often comes from another person such as a coach or teacher and is often also referred to as terminal feedback. For example, the ball landed short of the target line or a coach may give a diver simple verbal feedback and also show them a video of their performance in slow motion to reinforce technical points as a teaching aid. This type of feedback is extremely beneficial as it enables the performer to know exactly the result of their performance and correct errors which will enable them to start to gain a kinaesthetic awareness for the movements to later allow them to correct their own performance. - Knowledge of performance – this is feedback and information about how well the movement was or is being executed rather than as an end result. This allows difference forms of feedback to be used to reinforce good mechanics or to reinforce errors. For example, a tennis players could be told verbally by their coach what they did or didn't do well, they could be shown via a video or still image, the player can also be guided through the movement for example by the coach holding their racquet arm or giving a demonstration of how a particular skill should be performed, to allow them to see/feel then movement for themselves. - Immediate: Instant verbal feedback if very effective in improving skills, especially coupled with visual feedback - Delayed: The transference of information to the memory can be inhibited if feedback is delayed - Concurrent: Received during the movement, both intrinsically and extrinsically - Terminal: Received when the movement is complete or after the training session. <p><i>Accept any other appropriate explanations of how performers may use feedback to improve performance.</i></p>				

Question	Mark Scheme	AO1	AO2	AO3	Total
(e)	<p>'The outcome of sport contests is often decided by narrow margins, as elite players and teams tend to be physically, technically and tactically well prepared. Subsequently, psychological and team-related factors often prove to be the difference between winning and losing; this especially seems to be the case in interactive team sports, like football.' (Asamoah & Grobbelaar, 2017).</p> <p>Explain, using practical examples, two factors affecting the formation of a cohesive team.</p> <p><i>Award up to 2 marks for any of the following points below, (explanations must relate to practical examples to achieve maximum marks, 2x2 for a developed point with an appropriate example):</i></p> <p><i>Cohesion is defined as the degree to which the members of a group exhibit the desire to achieve a common goal.</i></p> <p>The factors affecting group cohesion are:</p> <ul style="list-style-type: none"> - Environmental factors such as location, age and eligibility contribute to team cohesion by creating a common environment / shared expectations and the extent to which the players work towards a shared goal, affects team task cohesion. - Method of appointment of the leader (elected / appointed) affects team cohesion by how much the team are willing to accept their leader. - Style of leadership they adopt / relationship affects the relationship they build with team members. - Personal factors, e.g., motives, member personalities can affect team cohesion by the extent to which individual's interact socially with the group/ how well the team gets on with one another/attitudes of group members/similarities of group members – age, gender etc. - Combination of high task and social cohesion is more productive in achieving group productivity. - Motivation of the group is a key factor in achieving agreed targets / aims. - Size of the group and job roles can lead to social loafing. - Coordination and cooperation can be reduced if in a larger Whether the individuals in a team share a common goal - The amount of communication between group members 	2	2		4

Question	Mark Scheme	AO1	AO2	AO3	Total
	<ul style="list-style-type: none"> - The type of sport – interactive sports, such as team sports, need more cohesion than individual sports. - The amount of past success and the likelihood of future success - The reward on offer/unequal pay or reward for different individuals - The amount of time the group has been together to establish relationships. <p><i>Accept any other appropriate explanations of factors affecting cohesion related to practical examples.</i></p>				
(f) (i)	<p>After the coronavirus pandemic brought the world of football to a standstill, extensive work was needed to address how best to help players prepare for their return to world-class competition and minimise performance plateaus.</p> <p>Evaluate, using practical examples, how the use of different types of goals can help performers achieve maximum productivity and avoid plateaus in their performance.</p> <p>Banded answer</p> <p><i>The content below is indicative of what candidates might discuss but is, by no means, exhaustive:</i></p> <p><i>The use of SMART/SMARTER/SCAMP goals:</i></p> <ul style="list-style-type: none"> - Specific – directly related to their sport/activity/outcome focused on what they want to achieve e.g., to improve speed over 50m. - Measurable – objective aspect that can be measured e.g., improving pass completion over the next 3 matches, kgs, seconds etc. - Achievable – within reach/attainable/realistic e.g., improve pass completion by 5% over the next 3 matches. - Relevant – At the correct level for the performer/challenging e.g., specific to a position on the field. - Recorded – the performer is able to keep a record of their performance during the target setting window to enable them to effectively monitor their progress and enable accountability. 	2	2	6	10

Question	Mark Scheme	AO1	AO2	AO3	Total
	<ul style="list-style-type: none"> - Time-phased – completed over a set time frame e.g., short-, medium- and long-term targets. For example, pass completion improvement over 3 matches by 5% followed by a further 2% after a further 4 weeks. - Evaluated/Self-assessed – goals should be reviewed e.g., review the progress made after the 3 matches. - Agreed – shared with other parties e.g., their coach, other team members to ensure they have been negotiated and accepted etc. - Exciting/Positive/Motivational – goals should be positive rather than negative, give a sense of worth and avoid learned helplessness. - Process goals – goals that are directed towards improvement of a skill or aspect of performance which, are often related to technique e.g., improving running efficiency by correcting shoulder movement in sprinting. - Outcome goals – goals that are directed towards an end result of the sport/event e.g., winning a match. - Performance goals – goals that are directed towards the end performance and compared to previous performances e.g., to improve a netballer’s shooting average or an athlete’s P.B. <p>If any of these aspects are not effective the following may result:</p> <ul style="list-style-type: none"> - Direction of attention – the performer will not be focused on what needs to be done to improve their performance. - Regulation of effort – the amount of effort put into achieving their target/s will be affected and may result in time being wasted on unnecessary aspects of performance. - Sustaining of effort – effort may not be sustained throughout the target window as the performer may not be motivated enough to continue their effort and give up too easily. - Learned helplessness. - Outcome goals – can act as a demotivating factor especially with those performers at the cognitive stage of learning if a win is not achieved. - Performance goals – comparison with previous performances will only act as a motivating factor if performance has been bettered. 				

Question	Mark Scheme	AO1	AO2	AO3	Total
	<ul style="list-style-type: none"> - Time-based targets – these should be used in conjunction with one another i.e., a long-term target will only be effective if performance has started with short-term targets that have been achieved as, it can be far more motivating to split goals down into medium- and short-term targets. - Shared decision making – goals that have not be set through agreement and negotiation will not be as effective as those that have as the performer will feel that they have no ownership over their goals and be less motivated as a result. - <i>Accept any other appropriate evaluations associated with the use of different types of goals.</i> 				

Banding for Question 1(f)(ii)

Band	AO1 2 marks	AO3 5 marks
3		<p>4-5 marks</p> <p>Excellent analysis of the stages of periodisation. Specialist terminology used throughout showing how periodisation can be used to improve performance with particular reference to specific sports. Complex ideas are expressed with clarity. Relevant examples are provided throughout and most key factors identified and analysed in detail.</p>
2	<p>2 marks</p> <p>Good knowledge of periodisation and the phases of training and their effectiveness in sport. Good technical language employed.</p>	<p>2-3 marks</p> <p>Good analysis of the stages of periodisation. Some key factors identified and analysed in some detail.</p>
1	<p>1 mark</p> <p>Limited knowledge of periodisation and the phases of training and their effectiveness in sport. Limited technical language employed.</p>	<p>1-2 marks</p> <p>Limited analysis of the stages of periodisation. Few key factors identified and analysed but in a superficial manner.</p>
0	<p>0 marks</p> <p>Response not worthy of credit.</p>	<p>0 marks</p> <p>Response not worthy of credit.</p>

Banding for Question 1(f)(i)

Band	AO1 2 marks	AO2 2 marks	AO3 6 marks
3			<p>5-6 marks</p> <p>Excellent, well-reasoned evaluation of the use of different types of goals on sports performance and avoiding plateauing. Most key factors identified and discussed in detail.</p>
2	<p>2 marks</p> <p>Good knowledge of the use of different types of goals on sports performance.</p>	<p>2 marks</p> <p>Good application of different types of goals to sporting performance.</p>	<p>3-4 marks</p> <p>Good evaluation of the use of different types of goals on sports performance. Some key factors identified and discussed in some detail.</p>
1	<p>1 mark</p> <p>Limited knowledge the use of different types of goals on sports performance.</p>	<p>1 mark</p> <p>Limited application of different types of goals to sporting performance.</p>	<p>1-2 marks</p> <p>Limited evaluation of the use of different types of goals on sports performance. Few key factors identified and discussed but in a superficial manner.</p>
0	<p>0 marks</p> <p>Response not worthy of credit.</p>	<p>0 marks</p> <p>Response not worthy of credit.</p>	<p>0 marks</p> <p>Response not worthy of credit.</p>

Question	Mark scheme	AO1	AO2	AO3	Total
1. (f) (ii)	<p>Analyse how a performer could use the training principle of periodisation to ensure they reach their physiological peak at the correct time.</p> <p>Banded answer</p> <p>The content below is indicative of what candidates might discuss but is, by no means, exhaustive.</p> <p>Indicative content:</p> <p>Introduction:</p> <p>PERIODISATION is the organised division of training into specific blocks. Each block or cycle is related to a specific goal and time-frame. The aim of this principle is to make sure that performers avoid injury and burnout where possible, training is structured in such a way that it gives the performer realistic and achievable goals and, ultimately to ensure that performers reach their peak at the right time.</p> <p>References to the specific cycles of training:</p> <ul style="list-style-type: none"> - In order to make training plans specific and achievable the training year can be split into three cycles – Macro, meso and micro-cycles. - Periodisation is very flexible and can span a period of 6 months to four years (an Olympic cycle for example) depending on the sport in question. - Macro-cycle – this is a long-term training plan typically spanning a year that can be split into several meso-cycles with the aim of achieving a long-term goal such as achieving a personal best. - Meso-cycle – this is a mid-term training plan typically spanning 1-4 months depending on the phase of training the performer is in and can be split into several micro-cycles with the aim of achieving a mid-term goal such as, maintaining fitness over a transition phase. - Micro-cycle – this the shortest cycle of all three and typically spans 1-3 weeks with the aim of achieving a short-term goal, such as perfecting a specific element of performance or skill. Each micro-cycle can be further broken down into a number of different sessions to enable focus to be placed on a specific skill or component of fitness such as strength. 	2		5	7

Question	Mark scheme	AO1	AO2	AO3	Total
	<p><i>There are three main seasons within a year:</i></p> <ul style="list-style-type: none"> - The preparatory phase/Pre-season/off-season – with the focus being placed on general, sports specific and skill-based fitness. - The competitive phase/competitive season – with the focus being placed on technique/maintenance of fitness/tapering and remaining injury free. - The transition phase/transition season/post-season – maintaining/rest /recovery/ recuperation/low intensity and possibly treatment for injuries and as the prep phase draws nearer training load will be increased gradually to ensure peaking occurs at the right time. <p><i>Accept any other appropriate analysis of the use of periodisation to ensure peak performance is achieved in the correct time.</i></p>				

Question	Mark scheme	AO1	AO2	AO3	Total
2.	Tom Daley and Matty Lee overcoming the stresses of Olympic pressure and executing a forward 4½ somersault during their 10-metre men's synchronised platform dive to secure gold at the Tokyo Olympics 2020.				
(a)	<p>Describe the types of stress that can have an impact on performance in sports such as diving.</p> <p><i>Award one mark for each of the following definitions below, (2x1):</i></p> <ul style="list-style-type: none"> - Eustress – means ‘good stress’ and is the type of stress that elicits positive emotions such as increased motivation, effort and a sense of fulfilment has a positive effect that enhances performance. (1) - Distress – means ‘bad stress’ and is a pattern of negative psychological and physiological responses occurring in situations where people perceive threats to their well-being that they are unable to meet and, is linked to unpleasant feelings such as anxiety, apprehension and worry and will decrease performance. (1) <p><i>Accept other appropriate definitions of Eustress and Distress.</i></p>	2			2
(b)	<p>Explain, using diving examples, Newton's three laws of motion.</p> <p><i>sub-max of 2 per law): 1 mark for law, 1 mark for application</i></p> <ul style="list-style-type: none"> - Newton's 1st law (the law of inertia) states that a body remains at rest or in a constant state of motion until acted upon by an external/unbalanced force. For example, whilst the diver is standing on the board, preparing to take their dive they will remain at rest on the diving board until a downward force is applied by the diver as all the forces acting on the diver and the board are balanced, so neither the diver or the board should move. - Newton's 2nd law (the law of acceleration) $F=ma$ – states that when a force acts on an object, the rate of change of momentum experienced by the object is directly proportional to the size of the force applied and in the direction the force is applied. For example, when a downward force is applied to the diving board the rate of change of momentum experienced by the board is 		6		6

Question	Mark scheme	AO1	AO2	AO3	Total
	<p>directly proportional to the size of force applied by the diver (the board will propel the diver faster into the air, the more powerful the downward force applied to the board and will takes place in the direction in which the force was applied.</p> <ul style="list-style-type: none"> - Newton's 3rd law (action reaction) – states that for every action there is an equal and opposite reaction. For example, when the diver exerts a downward force on the board (action force) and releases there will be an equal and opposite force exerted by the second (diving board) on the first (diver) as the board will spring back propelling the diver into the air (reaction force) to enable them to execute the remaining phases of their dive. <p><i>Accept any other appropriate explanations of how Newton's Laws of Motion apply to the take-off phase in diving.</i></p>				
(c)	<p>As Tom Daley and Matty Lee prepare to take their dive, their breathing rate must be regulated.</p> <p><i>Award 1 mark for a basic description Award 2-3 marks for a detailed description</i></p> <p><i>Indicative content:</i></p> <ul style="list-style-type: none"> - Central chemoreceptors from within the medulla oblongata of the brain are responsible for responding to changes in the pp of carbon dioxide in their immediate environment - Peripheral chemoreceptors in the carotid arteries send information to the inspiratory control centre (ICC) on: <ul style="list-style-type: none"> - An increase in the partial pressure (PP) carbon dioxide in arterial blood (linked to higher levels of hydrogen ions in the blood). - A decrease in the partial pressure (PP) oxygen in arterial blood. - A decrease in pH which in turn increases acidity. - The chemoreceptors therefore stimulate the ICC to increase the force and depth of breathing, helping to restore the pp of oxygen and carbon dioxide to their usual levels. <p><i>Accept any other roles of the chemoreceptors in the regulation of respiration.</i></p>	3			3

Question	Mark scheme	AO1	AO2	AO3	Total
3. (a)	<p>Team GB's Jonny Brownlee finally ended his Olympic gold medal jinx by winning the Triathlon mixed team relay event, finishing 14 seconds ahead of the United States and France; proving that having the right mix of personalities in a team is critical to success.</p> <p>Evaluate, using sporting examples, the trait, social learning and interactionist perspectives of personality development.</p> <p>Banded answer</p> <p><i>The content below is indicative of what candidates might evaluate but is, by no means, exhaustive.</i></p> <p>Personality definition – the sum of characteristics that make him or her unique.</p> <p>The Trait perspective:</p> <ul style="list-style-type: none"> - B=F(P) - Personality traits are seen as stable and enduring and behaviour can be predicted across a variety of situations. - The Narrow band approach – personalities are split into Type A and B. Type A is characterised by intolerance, impatience, and high levels of stress and the opposite is true for Type B personalities. - Stable and unstable personalities (neurotic) <ul style="list-style-type: none"> - the trait approach holds the view that an individual's personality is made up of a collection of stable traits, which are unchangeable and remain constant and predictable. Unstable or neurotic traits on the other hand are said to be changeable and unpredictable. - Extroversion and introversion – individuals are said to have some degree of both within their personalities but, one will dominant more than the other. Extroverts are said to have an RAS that inhibits or reduces the effects of external sensory stimuli which leads to low levels of arousal in some aspects of the brain which therefore leads to them seeking more external stimulation in order to achieve higher levels of internal arousal which is why they are said to be far more outgoing. The opposite is said to be true for introverts who tend to be shy and avoid social situations. 	3		6	9

Question	Mark scheme	AO1	AO2	AO3	Total
	<p>Evaluative points:</p> <ul style="list-style-type: none"> - There is much contradictory evidence surrounding this approach due to its generalisation of personality. - It does not take into account how our environment and social interaction influences can influence our behaviour. - Introversion and extroversion have been linked to sporting prowess and sports choice suggesting that introverts are better suited to situations that require a calmer less stressful approach such as taking a penalty kick and are more attracted to individual sports and that extroverts prefer team-based activities and situations that require higher levels of arousal and are said to be more success in sport for this reason. - Personality traits may have little or no bearing on whether a performer will be good at sport or not or why they will select a particular sport; this could be down to past experiences, friendship groups or parental influences. - Sceptical vs Credulous view. - Very little emphasis has been placed on personality testing in sport as a predictor of success and many feel that this type of selection is unreliable. <p>The Social Learning perspective:</p> <ul style="list-style-type: none"> - B=F(E) - This perspective suggests that personality is changeable and changes according to the demands of the situation and the environment and past experiences shape our behaviour as well as the behaviour of others. - Our personalities are said to be shaped by those around us and our role models and that we are more likely to model and imitate the behaviour of others if it has been displayed by a significant other and appropriately reinforced (Bandura’s bobo-doll experiment and the modelling of aggressive behaviour). <p>Evaluative points:</p> <ul style="list-style-type: none"> - Research suggests that sport can have varying effects on our personality rather than the other way around but valid research is yet to be proven even though links have been made between the impact of sport and physical activity on psychological well –being. - The influence of biological factors on behaviour is underestimated. - Reinforces the idea that behaviour can be changed and shaped to create more desirable responses. 				

Question	Mark scheme	AO1	AO2	AO3	Total
	<ul style="list-style-type: none"> - Can take away responsibility for actions and behaviours. - Some behaviours will develop and continue in the absence of a model. <p>The Interactionist perspective:</p> <ul style="list-style-type: none"> - B=F(PE) - This perspective suggests that personality is a combination of traits that are stable and enduring and other aspects of our personality have developed as a result of our experiences and environments. - Behaviour is much more difficult to predict as it can change from moment to moment and as a response to the demands of the situation. - Hollander’s approach – psychological core (the true self, typical responses and role-related behaviour) and suggests that behaviour is dependent on the Personality of the performer and the situation they are in. <p>Evaluative points:</p> <ul style="list-style-type: none"> - Core values could be very hard to alter and therefore the behaviour they show during competition may remain stable and this could affect performance/competition positively or negatively. - Reinforcement from significant others could lead to the behaviour of the team member being continued, which may have positive or negative effects during competition. - Personality is stable; however, the competitive situation can be unstable. - Particular competitive situations may require varying behavioural responses from the team member, which may be difficult depending upon their traits. - There may be varying forms of distinguishing the team member’s personality profile. If the team member better understands their personality profile this may assist them in altering/adapting/learning to cope better in any given competitive situation. <p><i>Accept any other appropriate evaluations of trait, social learning and interactionist perspectives of personality development.</i></p>				

Question	Mark scheme	AO1	AO2	AO3	Total
(b)	<p>Analyse, using appropriate theories, how arousal can influence performance in sport.</p> <p>Banded answer</p> <p>The content below is indicative of what candidates might analyse but is, by no means, exhaustive.</p> <ul style="list-style-type: none"> - Drive Theory of arousal – this theory suggests as arousal increases so does the level of performance/direct link between arousal and quality of performance. For example, A basketball player scores two from two free throws when trying hard. Therefore, the dominant response is more likely to occur as arousal increases. Most applicable to experts as skills tend to be well learned so their dominant response is to perform better as arousal levels increase. Conversely beginners' dominant response is worse with high levels of arousal. - Points for Analysis: - The Drive theory is very simple to understand and clearly shows the relationship between arousal and performance. - Many performers and coaches believe that the dominant response is indeed what happens when their arousal increases and could be why country's hosting major competitions/tournaments always do well. - The theory is also accurate when related to certain types of skills such as gross and simple skills as these are skills that require/suit higher levels of arousal and so therefore performance should improve when arousal increases. - Doesn't take into account the idea that performer may lose motivation (drive reduced) - However, the quality of performance does not always increase as levels of arousal increase as seen with both experts and novice performers as, even experts and experience team's choke. - Doesn't take into account individual differences such as personality and skill type. - Doesn't explain why some performers and personalities i.e., extroverts perform well at low levels of arousal. - Some skills/simple/gross skills are performed well at low arousal 	2		6	8

Question	Mark scheme	AO1	AO2	AO3	Total
	<ul style="list-style-type: none"> - The Inverted U theory of arousal – this theory suggests that, as arousal increases so does the quality of performance up to an optimal point where performance is said to have reached its peak (peak flow) and performance is at its best. Also suggests that at lower levels of arousal when performers are said to be under arousal this causes poor performance and that after the optimal zone the performer becomes over aroused and performance declines. - Points for Analysis: - It is simple and easy to apply. - This theory is far more reliable than the drive theory as many performers have and do refer to the zone of optimal functions or being in the zone/peak performance and that when they are not in the zone performance was low or that they simply were not ‘feeling it.’ - It is also accurate that most sports and skills respond positively to arousal up to a point. - It also recognises that the optimal levels can differ for different performers/ personalities / skill level / types of skill. - It is however, a very limited view of the relationship between arousal and performance as it does not take into account the effect of different types of arousal on performance i.e., if over aroused some performances may drastically decline not gradually. - It also does not take into account that some performers with the right level of experience and skills may be able to recover once performance has started to deteriorate and does not always lead to disaster. - The Catastrophe theory – This theory suggests that, as somatic arousal increases the quality of performance improve and that optimal performance will only be achieved if cognitive arousal is kept low. If cognitive arousal is allowed to increase then this can cause a sudden drastic drop in performance know as a ‘catastrophe’ and, after this point if arousal continues to rise performance will continue to drop more. However, it is also at this point that performance can be recovered if cognitive arousal can be lowered. - Points for Analysis: - This theory represents a realistic picture of why performers choke, or their performance suddenly drops. - It also takes into account the effects of both cognitive and somatic types of arousal on performance. 				

Question	Mark scheme	AO1	AO2	AO3	Total
	<ul style="list-style-type: none"> - Takes into account the fact that the performer can recover by lowering arousal resulting in performance improving again. - However, not all performers will suffer a sudden drop in performance when over aroused as some performers cope and thrive on high levels of cognitive arousal as some are able to do this by using stress management techniques such as biofeedback. - It is also not true that optimum arousal has a mid-way point. - The theory also does not take into account personality, level of performer and type of skill. - Hanin’s Individual Zone of Optimal Function (IZOF) – This theory suggests that there are individual differences in the way performers react to arousal. Some tend to succeed when it is low while others tend to succeed when it is high. Thus, suggesting that the optimal zone of functioning is different for us all and not as previously suggested at a mid-way point so, each performer has their own preferred zone. Hanin suggested that in a sport setting it is more useful to distinguish between helpful and unhelpful or optimal and dysfunctional emotions. For example, some athletes may notice that feeling excited is not conducive to performing well, while others would say that feeling angry helps them to reach their optimal performance state. Thus, suggesting that each athlete could find out his or her optimal combination of useful emotions and learn, how to reach this unique state prior to competitions. - Points for Analysis: - Currently the most accepted explanation of the impact of arousal on performance and the most widely applied theory in this field as it takes into account the individual rather than making generalisations. <p><i>Accept any other appropriate analysis of how arousal can influence performance in sport such as different types of skills (gross/fine) etc.</i></p>				

Question	Mark scheme	AO1	AO2	AO3	Total
(c)	<p>Figure 4: Jonny Brownlee’s heart rate (HR) and stroke volume (SV) during aerobic exercise.</p> <p>Define stroke volume and, using the data in Figure 4, calculate Jonny Brownlee’s cardiac output (Q).</p> <p><i>Award one mark for a correct definition of Stroke Volume (SV)</i></p> <p><i>Award two marks for the correct calculation of cardiac output (Q) (one mark for the correct understanding of the formula and one mark for the correct answer).</i></p> <p>Stroke Volume is the volume of blood ejected each time a ventricle contract. (1)</p> <p><i>Accept any other appropriate definitions of stroke volume (SV).</i></p> <p>Calculation:</p> <p>Cardiac Output (Q) = Stroke Volume (SV) x Heart Rate (HR) Cardiac Output = 140 (ml per beat) x 100 (bpm) Cardiac Output = 14000 ml/min = 14 l/min</p> <p>(1000ml = 1L. When calculating blood volumes figures of 1000ml and above should be represented in L/min).</p>	3			3
(d)	<p>Venous return is the return of blood to the right atria through the veins and, the greater the return of blood to the heart, the greater the volume of blood available in the ventricles for ejecting.</p> <p>Outline three mechanisms which assist venous return during exercise.</p> <p><i>Award up to three marks for any two of the following mechanisms below (3x1):</i></p> <p>Mechanisms assisting venous return:</p> <ul style="list-style-type: none"> - Pocket valves – these are one-way valves in the veins that prevent backflow of blood and direct it towards the heart. - Muscle pump – when skeletal muscles contract and relax they help to squeeze blood back towards to the heart as the veins are situated between these skeletal muscles. 	3			3

Question	Mark scheme	AO1	AO2	AO3	Total
	<ul style="list-style-type: none"> - Respiratory pump – pressure changes are caused in the thorax and abdomen due to the impact of exercise on the rate and depth of breathing and the large veins in the abdomen region are squeezed, which helps to force blood back towards the heart. - Smooth muscle – the contraction of smooth muscle in the walls of veins helps to push blood through them and towards the heart. - Gravity – blood from the upper body is aided by gravity as it travels down towards the heart. 				

Banding for Question 3(a)

Band	AO1 3 marks	AO3 6 marks
3		5-6 marks Excellent evaluation of the effectiveness of the three personality theories in behaviour development. Most key factors identified and discussed in detail.
2	2-3 marks Good knowledge of the three personality theories. Good technical language employed.	3-4 marks Good evaluation of the effectiveness of at least two personality theories in behaviour development. Some key factors identified and discussed in some detail.
1	1-2 marks Limited knowledge of personality theories. Limited technical language employed.	1-2 marks Limited evaluation of the effectiveness of at least one personality theories in behaviour development. Few key factors identified and discussed but in a superficial manner.
0	0 marks Response not worthy of credit.	0 marks Response not worthy of credit.

Question	Mark Scheme	AO1	AO2	AO3	Total
(e)	<p>Figure 5 – Shows Heart rate response to sub-maximal (aerobic exercise). Explain, using Figure 5, the changes in heart rate.</p> <p>Award 1 mark for a basic explanation <i>Award 2- 3 marks for an explanation from any of the points below up to a maximum of 3 marks, (explanations must refer to figure 5 in order to achieve maximum marks):</i></p> <p>Indicative content:</p> <p>Sub-maximal – exercise that is low-moderate intensity or below the anaerobic threshold and is associated with aerobic work.</p> <p>Figure 6 indicates that:</p> <ul style="list-style-type: none"> - There is an initial anticipatory rise in HR prior to exercise due to the release of adrenaline which stimulates the SA node to increase HR. - As exercise starts there is a rapid increase in HR to enable the increase in blood flow and oxygen delivery to meet the demands of exercise. - HR begins to plateau as exercise intensity is being sustained as oxygen delivery is meeting the demands of the exercise. - Once exercise is stopped there is an initial rapid decrease in HR as the recovery phase is entered and the action of the muscle pump reduces as the demand for oxygen is by the working muscles is decreased - There is a more gradual decrease in HR to allow the body to recover and return to resting levels. <p>Accept any other appropriate explanations of the changes to HR during sub-maximal exercise.</p>		3		3

Question	Mark Scheme	AO1	AO2	AO3	Total
(f)	<p>Discuss the view that ‘doping in sport should be embraced and that, dirty blood should be accepted as part and parcel of modern sport.’ (Men's Health, 2021).</p> <p>Banded answer.</p> <p>The following is indicative of material that might be included:</p> <p>Reasons for doping in Sport:</p> <p>Several reasons currently exist for why sports performers dope in sport even despite the risks, these include:</p> <ul style="list-style-type: none"> - Pressure – from peers/coaches/media etc. - Financial gain/reward/sponsorship as a result of success. - Power/fame and success - for example Lance Armstrong and Tyler Hamilton have both famously admitted that they believed that the Tour de France cannot be won unless you dope. - To mask pain and other substances being taken I.e., Victor Conte and several high-profile athletes have spoken about their doping calendars and how things have to be taken at certain times and in certain amounts to aid and mask other substances (Dwain Chambers, Marion Jones, Shane Mosely to name a few) - Train harder for longer/recover faster. - Physiological reasons – EPO/Blood doping – oxygen/hematocrit benefits to performance. - Systematic Doping/state wide – Russian doping and East German doping scandals (Doping for Gold). - To level the playing field – Dr Rodchenkov (Russian doping mastermind) suggests that 20+ states are doping anonymous surveys have revealed over 44% of athletes are doping. - Resource availability – some athletes are able to afford technical equipment that enables them to gain an advantage but this is extremely expensive such as altitude/oxygen chambers, curved treadmill use for IHT and so, is not available to all, doping enables them to get the same performance benefits for a lower financial cost led to the argument for legalisation. 	2		9	11

Question	Mark Scheme	AO1	AO2	AO3	Total
	<ul style="list-style-type: none"> - Unsuccessful strategies – most substances are hard to detect / low conviction rate / chance of getting away with it / weaknesses in or disregard for testing procedures and lack of appreciation for the dangers. the 3-strike testing procedure has been proven not to work as athletes have specialised help to evade the tests suggesting they are in place ‘x’ but are really in ‘y’ gives them a missed test which is not recorded and by the time they have been caught up with they have often been able to have a full doping cycle under their belt. Most substances are undetectable I.e., some athletes are admitting way after the fact that they doped for years. WADA as an organisation is weak as it was set up and is controlled by IOC, receiving 50% of its budget from the IOC, they only have around 7 members of staff from their 127 staff members tasked with carrying out investigations around the world so power is devolved to the states themselves and many of these states do not carry out testing or change/tamper with positive samples in a bid to cover up state wide doping (Russia had mouseholes to enable them to switch samples and poured coffee into positive samples etc) and Jamaica's sample centre was not even in use and was being used as a storage centre. - Accept other reasons. <p>Reasons against doping in sport:</p> <ul style="list-style-type: none"> - Morally and ethically wrong – Cheating / unfair advantage / laws, ethics or norms of sport broken / some drugs against the law of the land / Olympic Oath broken. - Stricter punishments/deterrents – bans disqualifications / fined / stripped of medals or other punishment / loss of sponsorship. - Physiological damage / danger to body or health / addiction / lower life expectancy / death. - Psychological damage / damage to mind or to mental well-being. - False / meaningless results or records. - Scandal or bad publicity for sport/performers or nation / status of sport, performers or nation lowered / interest in sport lowered - Prevent false accusations of clean athletes. - Improvements in testing – has become stricter or more random or out of season / more money or research into testing/blood passports 				

Question	Mark Scheme	AO1	AO2	AO3	Total
	<ul style="list-style-type: none"> - Education programmes – have improved highlighting the dangers and responsibilities - Role models or sports ambassadors to publicise or encourage drug-free sport. - Research – there is now more research into the dangers - Accept other reasons. <p><i>Accept any other appropriate arguments for and against doping in sport.</i></p>				

Banding for Question 3(f)

Band	AO1 2 marks	AO3 9 marks
3		<p>7-9 marks</p> <p>Outstanding discussion of the reasons for and against doping in sport. Detailed and reasoned judgements are made. 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 marks</p> <p>Good knowledge and understanding of doping in sport.</p>	<p>4-6 marks</p> <p>Good discussion of the reasons for and against doping in sport. Judgements are made but not always evidence based. Discussion tends to be one-sided, concentrating on either the positive or negative impacts. 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>
1	<p>1 mark</p> <p>Limited knowledge of doping in sport.</p>	<p>1-3 marks</p> <p>Limited discussion of the reasons for and against doping in sport. Discussion is one-sided and is superficial. The response shows basic use of technical terminology. Writing shows some errors in grammar, punctuation, and spelling.</p>
0	<p>0 marks</p> <p>No knowledge and understanding of the reasons for and against doping in sport.</p>	<p>0 marks</p> <p>No discussion of the reasons for and against doping in sport.</p>

Banding for Question 3(b)

Band	AO1 2 marks	AO3 6 marks
3		5-6 marks Excellent, well-reasoned analysis of the influence of arousal on performance in sport. Most key factors identified and discussed in detail.
2	2 marks Good knowledge of the influence of arousal on performance in sport.	3-4 marks Good analysis of the influence of arousal on performance in sport. Some key factors identified and discussed in some detail.
1	1 mark Limited knowledge of the influence of arousal on performance in sport.	1-2 marks Limited analysis of the influence of arousal on performance in sport. Few key factors identified and discussed but in a superficial manner.
0	0 marks Response not worthy of credit.	0 marks Response not worthy of credit.

Question	Mark scheme	AO1	AO2	AO3	Total
4.	<p>Figure 6: Revenue breakdown of major sports leagues, 5-year average (\$m) In April 2020, in response to the coronavirus pandemic, the World Economic Forum stated that ‘no games mean no TV deals and no match day income means no clubs.’</p> <p>Discuss, with reference to this statement, the influence of the media, sponsorship and commercialisation on sport.</p> <p>Banded Answer</p> <p>The content below is indicative of what candidates may discuss but is, by no means, exhaustive:</p> <p>Impact of Commercialisation:</p> <ul style="list-style-type: none"> - Sport as a commodity/sport as a business. Concept of assets (such as players/clubs/stadia/merchandising etc) that can be bought and sold for a profit. - Market forces – supply and demand/those with the most money have the most influence. Effect on transfer fees – e.g., recent £100 million deal with Man City and Jack Grealish. - Led to increased media coverage which has raised profile of women’s sport/which has stimulated participation/increased profile of role models stimulates participation e.g., Dina Asha Smith. Steph Houghton, Emily Scarratt (rugby 7’s). - Revenue Increased revenues for women’s sports – has made sport a potential career for women/ increased prize money/enabled more women’s sports to become professional for example, Women’s Premier League football, Netball Super League, WNBA, women’s golf have all enabled more women to train full time. - Commercial benefits – the selling of sports goods and merchandise can often add to the profits of many local, regional, and national businesses - Golden Triangle – symbiotic relationship between sport, media and sponsorship – the idea that one cannot survive without the other. - Financial fair play and irregularities – influence of business and entrepreneurs. - Americanisation of sport – NBA/Superbowl/ inclusion of baseball in Tokyo Olympics etc. - Others. - However – still huge wage disparities between men and women’s sport. 	4		16	20

Question	Mark scheme	AO1	AO2	AO3	Total
	<ul style="list-style-type: none"> - Deviance – it could be argued that the pressure to achieve success has led to an increase in deviant behaviour in sport and is often highlighted by the media prior to, during and after these major events e.g., doping allegations and controversies, match fixing, hooliganism, violent and aggressive acts etc. - Unequal access – despite numerous regeneration and redevelopment projects many parts of the country do not experience the same facility and transport benefits as the host city and many parts of the host country remains unchanged and unaffected. <p>Impact of the Media:</p> <ul style="list-style-type: none"> - Development of the ‘Cult’ of the celebrity sport star/influence in and out of sport - Impact of social media – twitter/Facebook etc - Power of the media – in shaping sport/s e.g., rule changes, breaks in play for advertising, new formats such as T20 and The Hundred (100 ball Cricket). - Increase in female presenters – presenters/pundits/commentators e.g., Gabby Logan, Clare Balding, Alex Scott now found in traditionally male sports e.g., Match of the Day, football World Cup. Six Nations rugby. - Successful media coverage of major championships/Olympics etc – more funding, better facilities/coaching/equipment - sport in the UK has been given around a 29% increase in funding building up to the Tokyo Olympics to help build on the success of previous games. - More sponsors attracted – foreign investors etc - Growth in spectatorship - Increased entertainment / information for spectators. - Roles of the media – The media informs / educates / entertains / advertises. - The media can inspire / encourage a ‘feel good factor’ / nation building or patriotism. - The media promotes or increases awareness of (minority) sports. - Myths or stereotypes are broken. - Others. - However: - Unsuccessful sports have their funding withdrawn widening the gap. - These presenters are often young/attractive women. 				

Question	Mark scheme	AO1	AO2	AO3	Total
	<ul style="list-style-type: none"> - Media coverage/pressure – leading to many athletes withdrawing from competition for mental health reasons e.g., Niaomi Osaka and Simone Biles. - Participation decline – despite participation figures rising during major events, participation figures in the UK are continuing to decline year on year/easier and cheaper to stay at home at spectate. - Media control of sport / timing or scheduling of events - Increased exposure of negative role models - Unequal funding when sponsorship reflects company image - Too much emphasis on winning /pressure to perform Lombardianism / loss of ‘traditional’ sport. - Copying or being influenced by the bad behaviour of (negative) role models. o Irresponsible press coverage / myths and stereotypes reinforced. - Media intrusion or media demands. - Pay per view means not everyone can see all events. - Minority sports (still) get limited coverage / are less marketable. - Delays for television match officials (TMOs) may put performers off or disrupt a game. <p>Impact of Sponsorship:</p> <ul style="list-style-type: none"> - Sponsorship is the funding of individuals, teams, events or kit to increase brand awareness / company exposure / to make profit. - Sponsorship of individual athletes, e.g., Andy Murray and Castore Clothing. - Sponsorship of teams, e.g., IQONIQ and Wigan Warriors. - Sponsorship of events, e.g., Betfred Challenge Cup – Rugby League - Sponsorship of facilities, e.g., Emirates Stadium. - Sponsorship Increased for female athletes-enabled more to train and play sport full time made sports career more financially viable for female athletes. - Sport can be traded / sold to different media outlets / companies that want their brand associated with a particular sport. - Intertwined with the golden triangle – the interdependence of sport, sponsorship and the media - Others. 				

Question	Mark scheme	AO1	AO2	AO3	Total
	<ul style="list-style-type: none"> - However – this is lucrative in relatively few sports e.g., tennis, golf, football, netball. - Withdrawal of sponsorship – if athletes or sports are unsuccessful during major sporting events their support is often withdrawn as a result or does not generate the expected level of funding. - Spectators / supporters may disagree with corporate sponsors ethics - More costly for spectators – rise in ticket costs/season tickets/merchandising/pay per view etc. - Unequal funding from sponsorship deals - Some athletes / sports are more marketable than others - Pressure to perform on individual / team performers/maintain / please sponsors - Can lead to deviance / illegal aids / violence - Performer must attend promotional events / is limited to specific kit or equipment – can be fined for not promoting their sponsor e.g., Naomi Osaka - \$15,000 fine for skipping her news conference at Roland Garros. <p><i>Accept any other appropriate influences on sport pf the media, commercialisation and sponsorship.</i></p>				

Band	AO1 4 marks	AO3 16 marks
3		<p data-bbox="1102 248 1278 277">11-16 marks</p> <p data-bbox="927 282 1442 416">Excellent discussion of the positive and negative influences of the media, sponsorship and commercialisation in sport.</p> <p data-bbox="927 450 1437 517">Detailed and reasoned judgements are made.</p> <p data-bbox="927 551 1433 719">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 data-bbox="560 736 703 766">3-4 marks</p> <p data-bbox="365 770 858 871">Good knowledge and understanding of the media, sponsorship and commercialisation in sport.</p>	<p data-bbox="1110 736 1270 766">5-10 marks</p> <p data-bbox="927 770 1422 904">Good discussion of the positive and negative influences of the media, sponsorship and commercialisation in sport.</p> <p data-bbox="927 938 1449 1072">Judgements are made but not always evidence based. Discussion tends to be one-sided, concentrating on either the positive or negative impacts.</p> <p data-bbox="927 1106 1437 1274">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>
1	<p data-bbox="560 1290 703 1319">1-2 marks</p> <p data-bbox="365 1323 858 1424">Limited knowledge of the media, sponsorship and commercialisation in sport.</p>	<p data-bbox="1118 1290 1262 1319">1-4 marks</p> <p data-bbox="927 1323 1422 1458">Limited discussion of the positive and negative influences of the media, sponsorship and commercialisation in sport.</p> <p data-bbox="927 1491 1426 1659">Discussion is one-sided and is superficial. The response shows basic use of technical terminology. Writing shows some errors in grammar, punctuation, and spelling.</p>
0	<p data-bbox="568 1677 695 1706">0 marks</p> <p data-bbox="365 1711 890 1812">No knowledge and understanding of the media, sponsorship and commercialisation in sport.</p>	<p data-bbox="1134 1677 1246 1706">0 marks</p> <p data-bbox="927 1711 1422 1845">No discussion of the positive and negative influences of the media, sponsorship and commercialisation in sport.</p>

Component 2: Assessment objectives mark allocation

	Q1	Q2	Q3	Q4	TOTAL
AO1	14	5	13	4	36
AO2	12	6	3	0	21
AO3	11	0	21	16	48
TOTAL	37	11	37	20	105

* 6 marks for quantitative skills - 3c (3) & 3e (3)