



GCSE MARKING SCHEME

SUMMER 2025

**PHYSICAL EDUCATION - COMPONENT 1
FULL COURSE
C550U10-1**

About this marking scheme

The purpose of this marking scheme is to provide teachers, learners, and other interested parties, with an understanding of the assessment criteria used to assess this specific assessment.

This marking scheme reflects the criteria by which this assessment was marked in a live series and was finalised following detailed discussion at an examiners' conference. A team of qualified examiners were trained specifically in the application of this marking scheme. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners. It may not be possible, or appropriate, to capture every variation that a candidate may present in their responses within this marking scheme. However, during the training conference, examiners were guided in using their professional judgement to credit alternative valid responses as instructed by the document, and through reviewing exemplar responses.

Without the benefit of participation in the examiners' conference, teachers, learners and other users, may have different views on certain matters of detail or interpretation. Therefore, it is strongly recommended that this marking scheme is used alongside other guidance, such as published exemplar materials or Guidance for Teaching. This marking scheme is final and will not be changed, unless in the event that a clear error is identified, as it reflects the criteria used to assess candidate responses during the live series.

GCSE PHYSICAL EDUCATION FULL COURSE

SUMMER 2025 MARK SCHEME

Question	Mark scheme	AO1	AO2	AO3	Total								
1. (a) (i)	Identify the plane of movement at 'X' in figure 1 Sagittal	1			1								
(ii)	Analyse the movement taking place in the hurdlers leg action in Figure 1. Complete the tables below <table><tr><td>Movement at A</td><td>Extension</td></tr><tr><td>Agonist muscle used</td><td>Quadriceps</td></tr></table> <table><tr><td>Movement at B</td><td>Flexion</td></tr><tr><td>Agonist muscle used</td><td>Hamstrings</td></tr></table> NB award 1 mark for wrong movement but correct agonist for each box.	Movement at A	Extension	Agonist muscle used	Quadriceps	Movement at B	Flexion	Agonist muscle used	Hamstrings			4	4
Movement at A	Extension												
Agonist muscle used	Quadriceps												
Movement at B	Flexion												
Agonist muscle used	Hamstrings												
(iii)	Explain the term antagonistic muscle action 1 mark for basic explanation 2 marks for detailed explanation covering antagonistic and agonistic movements <u>Antagonistic muscle action</u> One muscle contracts The other relaxes to allow movement to occur Use of muscles to explain fine.		2		2								
(iv)	Identify the type of joint at B in Figure 1 Hinge	1			1								
(v)	Identify the classification of lever at the knee joint 3rd class (1)	1			1								

Question	Mark scheme	AO1	AO2	AO3	Total
(b)	Explain why reaction time is important for a sprint hurdler Award 1 mark for a basic explanation of reaction time (knowledge) The time taken to respond to a stimulus Award 2-3 marks for a developed explanation, must relate to the sprint hurdler. Hurdler would need it to react to the gun to get a good start	1	2		3
(c) (i)	Identify one type of flexibility training. 1 mark for one flexibility training method Passive Dynamic Active Static Plyometrics PNF Yoga Or any other relevant flexibility method	1			1
(ii)	Analyse the disadvantages of not performing a warm-up and cool-down as part of a training session on a sports performer. Indicative content The body temp will not be high enough therefore to muscles contractions will not be optimal Vasodilation will not occur optimal therefore oxygen flow to the muscles not sufficient Elasticity of muscles will be reduced therefore the chances of injury increase ROM will be reduced therefore performance will be reduced due to limb extension being reduced Mental preparation will be reduced therefore performers will not be prepared for the task ahead Focus lacking so tactical /skill awareness reduced Motivation lacking to be ready for their race/training. Cool down Removal of waste products won't occur as the heart rate and blood flow will drop therefore not replacing O2 quickly DOMS will be more prevalent as micro tears occur No refuelling – nutrition and hydration within 30mins essential as energy systems will not be replenished All of above means recovery will be slower and training sessions/performance will decrease	2		4	6

Band	AO1 marks (2 marks)	AO3 marks (4 marks)
3	No marks in Band 3 for AO1	4 marks Excellent analysis on the disadvantages of not warming up AND cooling down and the impact on the sports performer. The response may include the effect on the sporting performance. The answer is balanced and detailed, with the use of examples and terminology Response is well structured using accurate grammar, punctuation and spelling.
2	2 marks Good knowledge reasons for warming up and cooling down	2-3 marks Good analysis on the disadvantages of not warming up AND cooling down. No higher than bottom of this band for discussion of either just warm up or cool down. The answer is balanced, with some use of examples. Response is adequately expressed using reasonably accurate grammar, punctuation and spelling
1	1 mark Limited knowledge of the reasons for	1 mark Limited analysis with a tendency to describe the factors. The response shows some structure but with errors in grammar, punctuation and spelling.
0	0 marks No knowledge of the factors that may have affected activity levels	0 marks Not attempted No analysis

Question	Mark scheme	AO1	AO2	AO3	Total
(d) (i)	Explain how an increase in funding can aid an elite level athletes performance. Award up 2 marks for a basic explanation looking just at the reason. Award up to 3 marks for a developed explanation looking at impact on elite level performance. Access to specialist facilities Improve the existing facilities Able to train full time Access the best coaching / support Able to afford warm weather training Able to buy the best /high spec equipment. Impact on performance to access developed explanation		3		3
(ii)	Outline two disadvantages of the media's influence on sport 2 x1 mark Control e.g. the start times etc Increased pressure on performers Deviance increases Negative role models Elitism Armchair supporters reducing participation Sensationalise sport No privacy if related to sport Minority sports may not get equal publicity	2			2
	Total	9	7	8	24

Question	Mark scheme	AO1	AO2	AO3	Total
2. (a)	Analyse the importance of the anaerobic and aerobic energy systems in a team sport. All energy systems are used in various amounts at differing times Indicative content Anaerobic <u>ATP –Pc-</u> Lasts up to 10secs High intensity/ explosive/ accept percentages Supplies energy faster than all others <u>Lactic</u> 60 -90secs High intensity/accept percentages Waste product is lactic acid Aerobic 2 mins plus Low/medium/moderate intensity/ 60-80% MHR Training the aerobic system increases anaerobic threshold Training increases the VO2 max Analysis should be given in relation to when the energy systems are in use therefore engaging with the q asked. E.G. when is the anaerobic system important...when you are sprinting to intercept the ball in netball etc	2		4	6

Band	AO1 marks (3marks)	AO3 marks (4marks)
3	No marks in Band 3 for AO1	4 marks Excellent analysis of the anaerobic and aerobic energy systems in team games. In this band a comment about the importance must be made. The answer is balanced and detailed, with the use of detailed examples. Response is well structured using accurate grammar, punctuation and spelling.
2	2 marks Detailed knowledge of the aerobic and anaerobic systems	2-3 marks Good analysis of the anaerobic and aerobic energy systems in team games. At the bottom of the band candidate may only focus on either aerobic or anaerobic The answer is balanced, with some use of examples. Response is adequately expressed using reasonably accurate grammar, punctuation and spelling
1	1 mark Basic knowledge of the aerobic and anaerobic systems	1 mark Limited analysis with a tendency to describe the factors. The response shows some structure but with errors in grammar, punctuation and spelling.
0	0 marks No knowledge	0 marks Not attempted No analysis

Question	Mark scheme	AO1	AO2	AO3	Total
(b) (i)	Explain why varied practice is used in a team sports 1 mark for basic explanation 2 marks for developed explanation SM for one explaining what varied is Varied practice is performing in changing situation Particularly useful for open skills. Avoid boredom SM of 1 for the application. To be applied to team sports e.g. passing in netball, you could be faced with a 3 v2 situation. You need to practice this but also situations like a 1 v1 situation		2		2
(ii)	Identify one type of practice other than <u>varied</u>. Fixed Whole Part	1			1
(c)	Discuss the of the use of technology for coaches in sport Award up to 2 marks for a basic/one sided discussion Award up to 4 marks for a detailed discussion Advantages Information more objective, accurate and specific Use to give feedback Wide range of information Clear id of needs Allows focus in training Supports tactic id Helps with team selection Disadvantages Information also needs to be qualitative Don't get a full picture, can be misleading Can be reactive Lacks human aspect			4	4

Question	Mark scheme	AO1	AO2	AO3	Total									
(d) (i)	Explain how resting heart rate can be used to assess an athlete's fitness level Award 1 mark for basic explanation Award up 3 marks for developed explanation A fitter athlete would have... Lower resting H.R and therefore be able to pump more blood and O2 to the working muscles as the heart is stronger Lower working HR and therefore able to work for longer without fatigue Quicker recovery so therefore able to maintain skill levels for longer Accept other relevant explanations <i>Could also refer to an athlete being unfit.</i> <i>May also refer to using heart rate to monitor fitness and setting training</i>		3		3									
(ii)	Compare the differences between the anaerobic and aerobic training zones (AO2, 4) 2 x 2 marks Must have direct comparison for both marks <table><tr><td></td><td>Anaerobic TZ</td><td>Aerobic TZ</td></tr><tr><td>Intensity</td><td>80-100% MHR /max /high</td><td>60-80% MHR/ moderate</td></tr><tr><td>Duration</td><td>Short10sec-2/3mins</td><td>Long/ 2/3 mins plus</td></tr></table>		Anaerobic TZ	Aerobic TZ	Intensity	80-100% MHR /max /high	60-80% MHR/ moderate	Duration	Short10sec-2/3mins	Long/ 2/3 mins plus		4		4
	Anaerobic TZ	Aerobic TZ												
Intensity	80-100% MHR /max /high	60-80% MHR/ moderate												
Duration	Short10sec-2/3mins	Long/ 2/3 mins plus												
(e)	Identify the pulmonary circulatory system from the descriptions below carries blood to the lungs to be oxygenated and then back to the heart	1			1									

Question	Mark scheme	AO1	AO2	AO3	Total
(f)	Discuss the impact of a sedentary lifestyle on an individual's physical, mental and social health and well-being Indicative content Benefits Physical health Improvement to, Bone density Increased elasticity of the muscles Hypertrophy of muscles Improved energy system Increased stroke volume Decreased RHR Decrease in bp Increased vital capacity Reduces obesity Mental Enhanced confidence /Stress relief /Feel good factor/ Self worth Social Teamwork /Friendship/ Life skills/ Communication Sedentary lifestyle will cause... Physical Hypertension Increase of some cancers Atherosclerosis Arteriosclerosis Angina etc. Mental Depression Anxiety Social Feeling isolated Lack of social skill Accept relevant responses Look for variations on terminology and some factors being switched to positives or negatives	2		4	6
	Total	6	9	12	27

Band	AO1 marks (2marks)	AO3 marks (4marks)
3	No marks in Band 3 for AO1	4 marks Excellent discussion of how being sedentary will influence PMS well-being. Candidate will draw on how being sedentary is a negative and then how being active will help. The answer is balanced and detailed, with the use of detailed examples Response is well structured using accurate grammar, punctuation and spelling.
2	2 marks Detailed knowledge of P, M and S factors	2-3 marks Good discussion of how being sedentary will influence PMS well being The answer is balanced, with some use of examples. The candidate who only draws upon one side of the discussion will only access bottom of this band. Response is adequately expressed using reasonably accurate grammar, punctuation and spelling
1	1 mark Basic knowledge of P, M and S factors	1 mark Limited discussion with a tendency to describe the factors. The response shows some structure but with errors in grammar, punctuation and spelling.
0	0 marks No accurate knowledge of the factors that may have affected activity levels	0 marks Not attempted No discussion

Question	Mark scheme	AO1	AO2	AO3	Total
3. (a)	Identify the type of movement, at the shoulder (A), Circumduction	1			1
(b)	Justify why the tennis serve is placed at point B on the continuum above 2 marks for the theory content, 1 mark for the relationship to a tennis serve. Is more difficult. E.g. throwing the ball up at the correct height Include complicated movements that require high levels of co-ordination and control. E.g. correct contact with the ball and correct footwork Has many subroutines / parts E.g. tennis serve has the toss, strike, placement etc Require making judgements and decision-making. E.g. where is the opposition stood on the court		3		3
(c)	Discuss the advantages and disadvantages of the use of verbal guidance when teaching a tennis serve 2 marks for positives 2 marks for negatives Advantages Helps learners to progress through the stages of learning and is helpful in developing and refining skills for more advanced performers. Good for giving technical and tactical points Verbal guidance works well with visual guidance Can be given before, during or after practice and performance. It is quick to give and can be repeated easily. Can give clear instructions/ communication Disadvantages Can be confusing on its own. Can also be too much info for some stages of learning to take in Language that is too complex may confuse learners. Can lose focus and concentration if used on own Usually needs visual to accompany it Doesn't allow for a mental image			4	4

Question	Mark scheme	AO1	AO2	AO3	Total
(d) (i)	Explain, using sporting examples, the stages of information processes below. 1 mark for explanation, 1 mark for e.g. (accept any relevant example) Input All information received by the senses. (e.g. see the GK coming away from his line) / taking in the stimulus DM- The brain processes the information received and makes a decision (e.g. decide to chip the GK over his head) Output- Action taken as a result of the brain's decision (Chip the ball)		6		6
(ii)	Outline three ways effective feedback should be delivered by a coach. 3 x 1 mark Accurate / Concise / Immediate / Easy to understand / Truthful / Constructive / Positive / clear Be careful of repeats	3			3
(e)	Identify two components of SMART targets 2 x 1 mark Specific Measurable Agreed / Achievable Realistic Timed	2			2
(f) (i)	Explain, using a sporting example, how the skeleton provides protection. 1 mark for a basic explanation 2 marks for a detailed explanation (as below) E.g. During Rugby the skull provides protection to the brain to reduce impact when tackling		2		2
(ii)	Name one other function of the skeleton other than protection Blood cell production Support / stability / structure Movement Storage of vitamins / minerals Attachment	1			1
	Total	7	11	4	22

Question	Mark scheme	AO1	AO2	AO3	Total
4. (a)	Evaluate, using the data above, factors that may have affected activity levels. Max of 2 marks to be awarded for knowledge Must use the data for full marks Indicative content Focus on the increased opportunity, provision and esteem of • Equipment/ facilities improvement • Improved coaching and admin staff / coach education • Government / NGB/ Sport England focus on improved participation e.g. We are undefeatable, join the movement etc. • Transport improvement • Family/ friend support • Cheaper activities becoming more popular e.g. free swim, jogging (couch to 5k), LA funding, Covid etc. • Society more aware of health benefits, walking football etc. • Role models – Olympics, Paralympics etc. • Funding of sport e.g. LA funding ,Covid etc. • Media attention • Religious or cultural beliefs being highlighted in the media to encourage participation • Positive school experience / focus on physical literacy • Illness/injury/pandemic • Technological advancements Focus on a particular target groups may occur (gender, race, disability) and strategies for increased involvement. Personal experiences may be drawn upon	2		6	8

Band	AO1 marks (2marks)	AO3 marks (6marks)
3	No marks in Band 3 for AO1	5-6 marks Excellent evaluation of the data and valid conclusions are drawn about increased activity levels and factors that would increase it. The answer is balanced and detailed, with the use of examples and data Response is well structured using accurate grammar, punctuation and spelling.
2	Detailed knowledge of factors that affect activity levels.	3-4 marks Good evaluation of the data and valid conclusions are drawn upon about increased activity levels and factors that would increase it. With some use of examples. Response is adequately expressed using reasonably accurate grammar, punctuation and spelling
1	1 mark Basic knowledge of factors that affect activity levels.	1-2 marks Limited evaluation with a tendency to describe the factors. The response shows some structure but with errors in grammar, punctuation and spelling.
0	0 marks No accurate knowledge of the factors that may have affected activity levels	0 marks Not attempted No evaluation

Question	Mark scheme	AO1	AO2	AO3	Total																						
(b) (i)	Identify the main nutrient used during aerobic exercise. Carbohydrate	1			1																						
(ii)	Name the nutrient which aids development of muscle tissue for muscular strength. Protein	1			1																						
(iii)	Draw a line to Identify the correct outcome to each of the energy balance equations below Top right=balanced weight Middle = weight gain Bottom right = weight loss	3			3																						
(c)	Compare the characteristics of muscle fibres in the table below Must use direct comparison 3 x 2 marks <table border="1"><tr><td>Fast twitch</td><td>Slow twitch</td></tr><tr><td>White</td><td>Red</td></tr><tr><td>Uses anaerobic energy system</td><td>Uses aerobic ES</td></tr><tr><td>Fast contraction speed</td><td>Slow contraction speed</td></tr><tr><td>High force of contraction</td><td>Low force of contraction</td></tr><tr><td>explosive</td><td>Non-explosive</td></tr><tr><td>No oxygen</td><td>oxygenated</td></tr><tr><td>Less red blood cells</td><td>More red blood cells</td></tr><tr><td>Large (fibre) size</td><td>Small (fibre) size</td></tr><tr><td>Fewer mitochondria</td><td>More mitochondria</td></tr><tr><td>Low resistance to fatigue / tire quickly</td><td>High resistance to fatigue / fatigue slowly</td></tr></table> Can have a direct sport but award only once	Fast twitch	Slow twitch	White	Red	Uses anaerobic energy system	Uses aerobic ES	Fast contraction speed	Slow contraction speed	High force of contraction	Low force of contraction	explosive	Non-explosive	No oxygen	oxygenated	Less red blood cells	More red blood cells	Large (fibre) size	Small (fibre) size	Fewer mitochondria	More mitochondria	Low resistance to fatigue / tire quickly	High resistance to fatigue / fatigue slowly		6		6
Fast twitch	Slow twitch																										
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Question	Mark scheme	AO1	AO2	AO3	Total
(d)	Draw a line to identify the cardiovascular term to the correct value at rest.	4			4
(e)	Identify two long-term effects of exercise on <u>each</u> of the following systems <u>Muscular –skeletal</u> Muscular hypertrophy Increased bone density / strength Increased joint stability Increase muscle elasticity / flexibility Increased strength muscle Increased endurance of the muscles <u>Cardio-respiratory</u> Decreased RHR Increase min ventilation Capillarisation of blood vessels Reduced BP Greater vital capacity Decreased breathing rate Increase tidal volume Increase Stroke volume Increased endurance Cardiac hypertrophy Accept relevant responses	4			4
	Total	15	6	6	27

Question	Mark scheme	AO1	AO2	AO3	Total						
5. (a)	Name the method of training that is taking place in figure Circuit Interval	1			1						
(b)	Identify the type of muscular contraction at A when the position is being held. Isometric	1			1						
(c)	Explain how the principles of Specificity and Overload could be applied to the training method in figure 5 KEEP linking to Figure 5 1 mark for knowledge of both principles of training. 2 marks for explanation of specificity 2 marks for explanation overload 1 mark for further amplification of either <table><tr><th>Principle of training</th><th>Explanation</th></tr><tr><td>Specificity</td><td>Training needs to be specific to the sport /sportsperson E.g. The exercises in the circuit can be adapted to the components of fitness important for your sport e.g. squats important for a line out jumper in rugby etc.</td></tr><tr><td>Overload</td><td>Intensity – increase the intensity e.g..... Frequency - increase the amount of times exercise is undertaken per week e.g..... Duration – increase the length of time e.g..... e.g. Accept relevant e.g's Only one of FIT would be needed</td></tr></table>	Principle of training	Explanation	Specificity	Training needs to be specific to the sport /sportsperson E.g. The exercises in the circuit can be adapted to the components of fitness important for your sport e.g. squats important for a line out jumper in rugby etc.	Overload	Intensity – increase the intensity e.g..... Frequency - increase the amount of times exercise is undertaken per week e.g..... Duration – increase the length of time e.g..... e.g. Accept relevant e.g's Only one of FIT would be needed	1	5		6
Principle of training	Explanation										
Specificity	Training needs to be specific to the sport /sportsperson E.g. The exercises in the circuit can be adapted to the components of fitness important for your sport e.g. squats important for a line out jumper in rugby etc.										
Overload	Intensity – increase the intensity e.g..... Frequency - increase the amount of times exercise is undertaken per week e.g..... Duration – increase the length of time e.g..... e.g. Accept relevant e.g's Only one of FIT would be needed										

Question	Mark scheme	AO1	AO2	AO3	Total									
(d) (i)	Define the components of fitness shown in the table below, and give a relevant sporting example for each. <table><tr><th>CoF</th><th>Definition</th><th>E.g.</th></tr><tr><td>Power</td><td>The ability to perform strength movements quickly/ speed x strength</td><td>Jumping in a lineout Sprint start etc.</td></tr><tr><td>Muscular Endurance</td><td>The ability of the muscle or muscle groups to perform overtime without fatigue</td><td>Cyclist pedalling in legs Boxer punching in arms</td></tr></table>	CoF	Definition	E.g.	Power	The ability to perform strength movements quickly/ speed x strength	Jumping in a lineout Sprint start etc.	Muscular Endurance	The ability of the muscle or muscle groups to perform overtime without fatigue	Cyclist pedalling in legs Boxer punching in arms	2	2		4
CoF	Definition	E.g.												
Power	The ability to perform strength movements quickly/ speed x strength	Jumping in a lineout Sprint start etc.												
Muscular Endurance	The ability of the muscle or muscle groups to perform overtime without fatigue	Cyclist pedalling in legs Boxer punching in arms												
(ii)	Name and describe a recognised fitness test used for each of the components of fitness listed in the table below Award 1 mark for naming a relevant, recognised test, 1-2 marks for the description (3 marks max per test) Power Vertical jump Stand side on against a wall, with arm nearest wall reach up and measure the height • Jump as high as possible and mark the wall • Measure the distance between the two marks in cm Standing Broad jump Jump as far as you can from 2 feet, no run up. Measure the distance Muscular endurance 1 min sit up • Perform as many press-ups in 1 minute • Elbows must bend to 90 degrees and then straighten, with the body maintaining a straight position from head to toes 1 min press up Perform as many sit-ups in 1 minute • Lie on your back with knees bent and arms across the chest • Raise body to 90 degrees at the hip, keeping arms across the chest. Please accept other relevant and valid test	6			6									

Question	Mark scheme	AO1	AO2	AO3	Total
(iii)	Improving motivation is one reason for fitness testing. Identify two other reasons for fitness testing. ID strengths and weaknesses Monitor progress / is training working Compare to normative data Setting goals Baseline data Injury recovery	2			2
	Total	13	7	0	20

	Q1	Q2	Q3	Q4	Q5	Total
AO1	9	6	7	15	13	(50)
AO2	7	9	11	6	7	(40)
AO3	8	12	4	6	0	(30)
Total	24	27	22	27	20	(120)