



GCSE MARKING SCHEME

SUMMER 2024

**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 2024 MARK SCHEME

Question	Mark scheme	AO1	AO2	AO3	Total								
1 (a) (i)	Analyse Figure 1 and complete the table below. 3x1 marks <table><tr><td></td><td>Example</td></tr><tr><td>Type of joint A</td><td>Ball and socket</td></tr><tr><td>Type of joint B</td><td>Hinge</td></tr><tr><td>Type of movement from B to C</td><td>Flexion</td></tr></table>		Example	Type of joint A	Ball and socket	Type of joint B	Hinge	Type of movement from B to C	Flexion			3	3
	Example												
Type of joint A	Ball and socket												
Type of joint B	Hinge												
Type of movement from B to C	Flexion												
1 (b) (i)	Justify using fixed practice for a long jumper 1 mark for a basic justification 2 marks for a more developed justification Long jump is a predominantly closed skill. The environment (long jump) does not change. Repeating the practicing/ routine of a whole skill in order to strengthen the motor programme To overlearn the skills/ perfect the skill		2		2								
1 (b) (ii)	Explain, using examples, the characteristics of a skilled performer 1-2 marks for a basic explanation 3-4 marks for a more developed explanation • Maximum two marks for a list • Skilled performer • Technically good • Consistent • Accurate • Efficient • Confident • Control • Aesthetically pleasing • Uses intrinsic feedback Accept opposites		4		4								
1 (c)	Identify two bones found in the arm 2x 1 marks • Radius • Ulna • Humerus	2			2								

Question	Mark scheme	AO1	AO2	AO3	Total				
1 (d)	Explain why it is important to warm up before performing. 1 mark for a basic explanation 2 marks for a more developed explanation - Increased body temperature improves elasticity of muscles therefore less chance of injury/ - Increased range of movement improves performance e.g. being able to Increase stride length efficiently - Getting mentally prepared ensures ready for the activity ahead (in the zone/ focus) - Motivating - Increased blood flow to muscles increases performance. Accept relevant answers.		2		2				
1 (e)	Contrast the main difference between an eccentric and concentric muscular contraction. <table border="1"><tr><td>Isotonic eccentric</td><td>Isotonic concentric</td></tr><tr><td>Muscle Lengthens under tension</td><td>Muscle shortens under tension</td></tr></table> Accept ends of muscles move further apart / closer together.	Isotonic eccentric	Isotonic concentric	Muscle Lengthens under tension	Muscle shortens under tension		2		2
Isotonic eccentric	Isotonic concentric								
Muscle Lengthens under tension	Muscle shortens under tension								

Question	Mark scheme	AO1	AO2	AO3	Total
1 (f)	Analyse the role technology has in developing elite performance Candidate may analyse the positive and/or negative effects of technology Indicative content • Strategies and tactics data • Makes the performance faster/better etc • Match analysis data / team selection • To make judgements more objective, • To identify strengths and areas for improvements. • Develop training programmes • Movement analysis to prevent injury • Technology can heighten the experience of the spectator which increases revenue. • Can be used as learning tool, new skill/mental picture • Can motivate • Over reliant on technology • Cost and availability • Coaches and athletes tempted to cheat • All about winning /loss of traditions • Can demotivate Accept relevant analysis, however, ensure it is related to performance.	2		4	6
Band	AO1 2 marks	AO3 3-4 marks			
3	No marks awarded in band 3	4 marks Excellent analysis of the role of technology for developing elite performance. Examples must be used.			
2	2 marks Good knowledge of different types of technology for performance.	2 marks Good analysis of the role of technology for performance At the bottom of this band there may not be as much analysis of the role of technology.			
1	1 mark Basic knowledge of different types of technology for performance.	1 mark Limited analysis of the role of technology.			
		4	10	7	21

Question	Mark scheme	AO1	AO2	AO3	Total
2 (a) (i)	Analyse using Figure 2, the factors that affect participation of young people in physical activity. Indicative content Response will be based around Opportunity, Provision and Esteem, e.g. • peer pressure • transport • Gender • confidence • religion, • economic status, • enjoyment/ability/skill, • family and friends, • school • health and fitness • disabilities • social media • discrimination Accept relevant responses in relation to young people.	2		4	6
Band	A01 2 marks	AO3 4 marks			
3	No marks awarded in band 3	3-4 marks Excellent analysis of the barriers that impact participation for young people. Examples used where relevant. Data must be used in analysis. <i>Note - Increasing is use of data.</i>			
2	2 marks Good knowledge of barriers for young people.	2marks Good analysis of the barriers that impact participation for young people.			
1	1 mark Basic knowledge of barriers for young people.	1mark Limited analysis of the barriers that impact participation.			
Question	Mark scheme	AO1	AO2	AO3	Total
2 (a) (ii)	Identify three negative mental health consequences of being a sedentary individual. 3x1 mark Reduced, • Confidence • Self-esteem • leadership • Depression/ low mood/ less positive feelings • Less motivation • Lower body image • Lose friends • Increased Stress • anxiety Accept relevant responses. Be aware of repeats.	3			3

Question	Mark scheme	AO1	AO2	AO3	Total
2 (b)	Analyse two ways commercialisation of sport has helped improve performance. 1-2 marks for a basic analysis 3-4 marks for a more developed analysis can only be accessed if two ways commercialisation of sport have been analysed E.g. Globalisation of sport e.g. women's football world cup, which has meant more media coverage around the world which has led to increased participation and therefore increased standard of women's football around the world (2) E.g. money from Tv rights has meant clubs are able to invest in a higher standard of coaching staff (2) Accept relevant examples More Money means ... • More Spectators • Increased competitions • Increase participation • Increase in training facilities/equipment • Coaching/ support staff • More publicity for sport • Global exposure due to media/tv allows athletes to gain sponsorship • Technology			4	4

Question	Mark scheme	AO1	AO2	AO3	Total										
2 (c) (i)	Analyse the movements taking place at the shoulder in Figure 3. Complete the tables below: 4x1 mark <table><tr><td></td><td>Analysis</td></tr><tr><td>Movement from A to B</td><td>Abduction</td></tr><tr><td>Movement from B to C</td><td>Adduction</td></tr><tr><td>Agonist muscle at D</td><td>Deltoid</td></tr><tr><td>Plane of movement</td><td>Frontal</td></tr></table>		Analysis	Movement from A to B	Abduction	Movement from B to C	Adduction	Agonist muscle at D	Deltoid	Plane of movement	Frontal			4	4
	Analysis														
Movement from A to B	Abduction														
Movement from B to C	Adduction														
Agonist muscle at D	Deltoid														
Plane of movement	Frontal														
2 (c) (ii)	Identify the flat bone found at E. 1 mark Ribs Sternum Clavicle	1			1										
2 (c) (iii)	Outline the function of flat bones AT E 1 mark Protection Muscle attachment	1			1										
2 (c) (iv)	Compare the functions of tendons and ligaments. 2 x 1 mark Ligament connect bone to bone Tendons connect muscle to bone		2		2										

Question	Mark scheme	AO1	AO2	AO3	Total				
2 (d)	Identify two short term effects of exercise on each of the following systems: 2x1 mark for each system <table><tr><td>Muscular system</td><td> • Increase in temperature of muscles • Increased elasticity of muscles • Increase in muscular contractions • muscle fatigue • Increase of lactic acid </td></tr><tr><td>Cardio-vascular and respiratory</td><td> • Increase in Stroke volume • Increase in cardiac output (Q) • Increase in blood pressure (BP). • Increase in breathing rate • Increase in depth of breathing • Increase in tidal volume • Increase in heart rate </td></tr></table>	Muscular system	• Increase in temperature of muscles • Increased elasticity of muscles • Increase in muscular contractions • muscle fatigue • Increase of lactic acid	Cardio-vascular and respiratory	• Increase in Stroke volume • Increase in cardiac output (Q) • Increase in blood pressure (BP). • Increase in breathing rate • Increase in depth of breathing • Increase in tidal volume • Increase in heart rate	4			4
Muscular system	• Increase in temperature of muscles • Increased elasticity of muscles • Increase in muscular contractions • muscle fatigue • Increase of lactic acid								
Cardio-vascular and respiratory	• Increase in Stroke volume • Increase in cardiac output (Q) • Increase in blood pressure (BP). • Increase in breathing rate • Increase in depth of breathing • Increase in tidal volume • Increase in heart rate								
		11	2	12	25				

Question	Mark scheme	AO1	AO2	AO3	Total
3 (a) (i)	Analyse, using the data in Figure 4, the athlete which has the lowest level of fitness, giving the reasons for your answer. 1 mark for • Athlete C (SM) 2 x 1 mark for • Higher RHR • Lower MSFT result. • Poor comparison to norm			3	3
3 (a) (ii)	Identify the component of fitness that the Multi Stage fitness test MSFT measures. 1 mark (Cardio vascular/aerobic) endurance Stamina	1			1

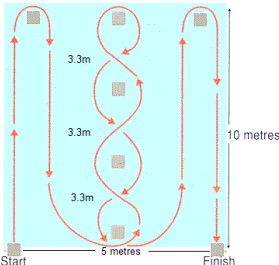
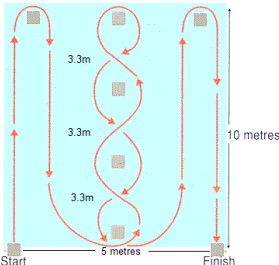
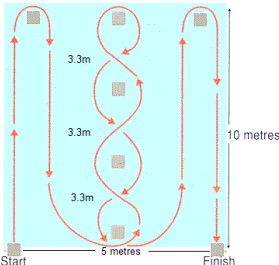
Question	Mark scheme	AO1	AO2	AO3	Total
3 (a) (iii)	Evaluate, using your knowledge of training methods and training zones, how you can improve the fitness of the least fit athlete above. Indicative content Training method Continuous /aerobic training methods Reasoning why that has picked that low intensity long duration – development endurance e.g. continuous and fartlek Training Zone Must work a-Aerobic activity 60- 80% of MHR In the aerobic zone Unfit not too much pressure on heart submaximal Fat burning Raise the anaerobic threshold Work above the aerobic threshold MHR 220-age SPOV	2		4	6
Band	A01 2 marks	A03 4 marks			
3	No marks awarded in band 3	3-4 marks Excellent evaluation of the training methods and zones to improve cardiovascular fitness. This band MAY see mention of SPOV, or part of, to improve CV fitness. Must evaluate how the least fit athlete's fitness is improved.			
2	2 marks Good knowledge of training zone and method.	2 marks Good evaluation of the training methods and zones to improve cardiovascular fitness. At the bottom end they may only have a basic response or only 1 area evaluated.			
1	1 mark Basic knowledge of training zone and method.	1mark Limited evaluation of the question asked.			
Question	Mark scheme	AO1	AO2	AO3	Total
3 (a) (iv)	Identify, apart from fitness testing, one other way that health can be measured? 1 mark Calorie input and expenditure Questionnaire Screening BMI monitoring blood pressure heart rate monitoring	1			1

Question	Mark scheme	AO1	AO2	AO3	Total
3 (b)	Explain why progression and overload are vital principles of training. 1-2 marks for a basic explanation (inc FIT) 3-4 marks for a more developed explanation of progression and overload Gradual progression to avoid injury. To see progression for motivation therefore adherence. So you improve. Too much progression/ overload could mean an injury. Too little progression/overload loss of motivation. Accept any suitable example.		4		4
3 (c)	Justify the need to be both fit and healthy 1-2 marks for a basic justification 3-4 marks for a more developed justification Health is defined as a state of complete mental, physical and social well-being; not merely the absence of illness or infirmity. Fitness is the ability to meet the demands of the environment. You can be fit but not healthy. You can be healthy but not fit. You need both to be healthy and fit.		4		4
3 (d) (i)	Name two types of stretching (3) 2x1 mark • Active • Static • Passive • Dynamic • PNF	2			2
3 (d) (ii)	Identify two other methods, apart from stretching, that can be used to aid recovery. 2x1 mark • Ice baths • Cryotherapy • Diet • Massage • Compression clothing • Active recovery • Hydration • Sleep	2			2

Question	Mark scheme	AO1	AO2	AO3	Total						
3 (e)	Explain the function of the following nutrients: 2x1 mark <table><tr><th>Nutrient</th><th>Function</th></tr><tr><td>Carbohydrate</td><td>Main source of energy</td></tr><tr><td>Protein</td><td>Growth and repair</td></tr></table>	Nutrient	Function	Carbohydrate	Main source of energy	Protein	Growth and repair		2		2
Nutrient	Function										
Carbohydrate	Main source of energy										
Protein	Growth and repair										
		8	10	7	25						

Question	Mark scheme	AO1	AO2	AO3	Total												
4 (a) (i)	Identify, using Figure 5, the following classification of skills. 2x1 mark <u>Tick one box only for each of classification.</u> <table><tr><td></td><td>Self paced skill</td></tr><tr><td>Jogging</td><td>✓</td></tr><tr><td>Goalkeeping save</td><td></td></tr></table> <table><tr><td></td><td>Externally paced skill</td></tr><tr><td>Jogging</td><td></td></tr><tr><td>Goalkeeping save</td><td>✓</td></tr></table>		Self paced skill	Jogging	✓	Goalkeeping save			Externally paced skill	Jogging		Goalkeeping save	✓	2			2
	Self paced skill																
Jogging	✓																
Goalkeeping save																	
	Externally paced skill																
Jogging																	
Goalkeeping save	✓																
4 (a) (ii)	Identify the types of muscle fibre that would be predominantly used for jogging and a goal keeper save. 2x1 mark <table><tr><th>Activity</th><th>Muscle fibre type</th></tr><tr><td>Jogging</td><td>Slow /Type 1</td></tr><tr><td>Goalkeeping save</td><td>Fast/ Type 2</td></tr></table>	Activity	Muscle fibre type	Jogging	Slow /Type 1	Goalkeeping save	Fast/ Type 2	2			2						
Activity	Muscle fibre type																
Jogging	Slow /Type 1																
Goalkeeping save	Fast/ Type 2																
4 (a) (iii)	Justify, using a specific skill, the reasons why it is placed at the open end of the continuum. 2x1 mark <table><tr><th>Classification</th><th>Sporting example</th><th>Justification</th></tr><tr><td>Open ★</td><td>Wind surfing Passing in a rugby match</td><td>Skill is unpredictable Changes to environmental factors</td></tr></table> Accept any relevant example.	Classification	Sporting example	Justification	Open ★	Wind surfing Passing in a rugby match	Skill is unpredictable Changes to environmental factors	1	1		2						
Classification	Sporting example	Justification															
Open ★	Wind surfing Passing in a rugby match	Skill is unpredictable Changes to environmental factors															
4 (a) (iv)	Justify, using a specific skill, the reasons why it is placed at the closed end of the continuum. 2x1 mark <table><tr><td>Closed ★</td><td>Vault Forward roll</td><td>Skill is predictable Not affected by environment</td></tr></table>	Closed ★	Vault Forward roll	Skill is predictable Not affected by environment	1	1		2									
Closed ★	Vault Forward roll	Skill is predictable Not affected by environment															

Question	Mark scheme	AO1	AO2	AO3	Total									
4 (b) (i)	Identify the component of fitness defined below. 1 mark Co-ordination.	1			1									
4 (b) (ii)	Justify, using a sporting example, the importance of the component of fitness defined in 4 (b) (i). 1 mark for a basic justification 2 marks for a more developed justification To be able to hit a ball in the correct direction during a tennis match. To be able to kick a ball effectively and score a goal in a football game. To use more than one limb efficiently e.g. catch a ball and land with correct footwork in netball.		2		2									
4 (c) (i)	Define each component of fitness, and provide a relevant sporting example in the table below. 2x2 marks <table><tr><th>Component of fitness</th><th>Definition</th><th>Sporting example</th></tr><tr><td>Balance</td><td>Ability to maintain equilibrium/stability/c entre of mass over base of support (or similar definition)</td><td>Handstand Arabesque Accept relevant e.g.</td></tr><tr><td>Agility</td><td>Change direction at speed</td><td>Dodging in netball Sidestep in rugby</td></tr></table>	Component of fitness	Definition	Sporting example	Balance	Ability to maintain equilibrium/stability/c entre of mass over base of support (or similar definition)	Handstand Arabesque Accept relevant e.g.	Agility	Change direction at speed	Dodging in netball Sidestep in rugby	2	2		4
Component of fitness	Definition	Sporting example												
Balance	Ability to maintain equilibrium/stability/c entre of mass over base of support (or similar definition)	Handstand Arabesque Accept relevant e.g.												
Agility	Change direction at speed	Dodging in netball Sidestep in rugby												

Question	Mark scheme	AO1	AO2	AO3	Total										
4 (c) (ii)	Name and describe a recognised fitness test used for each of the components of fitness listed in the table below. 2x3 marks 1 mark for name of test 2 marks for description <table><tr><th>Component of fitness</th><th>Name of the test</th><th>Brief description of test</th></tr><tr><td>Balance</td><td>Stork stand 1 mark</td><td>Remove the shoes and place the hands on the hips, non-supporting foot against the inside knee of the supporting leg. Raise the heel to balance on the ball of the foot. The stopwatch is started as the heel is raised from the floor. 1 mark for a basic description 2 marks for a more detailed description</td></tr><tr><td>Agility</td><td>Illinois agility T test 1 mark</td><td> Lie face down on the floor at the “Start” cone. On “GO” and start the stopwatch. Jump to your feet and run the course around the cones to the finish. Stop the stopwatch and records the time when the athlete passes the “Finish” cone. 1 mark for a basic description 2 marks for a more detailed description Accurate diagram (2) </td></tr></table>	Component of fitness	Name of the test	Brief description of test	Balance	Stork stand 1 mark	Remove the shoes and place the hands on the hips, non-supporting foot against the inside knee of the supporting leg. Raise the heel to balance on the ball of the foot. The stopwatch is started as the heel is raised from the floor. 1 mark for a basic description 2 marks for a more detailed description	Agility	Illinois agility T test 1 mark	 Lie face down on the floor at the “Start” cone. On “GO” and start the stopwatch. Jump to your feet and run the course around the cones to the finish. Stop the stopwatch and records the time when the athlete passes the “Finish” cone. 1 mark for a basic description 2 marks for a more detailed description Accurate diagram (2)	6			6	
Component of fitness	Name of the test	Brief description of test													
Balance	Stork stand 1 mark	Remove the shoes and place the hands on the hips, non-supporting foot against the inside knee of the supporting leg. Raise the heel to balance on the ball of the foot. The stopwatch is started as the heel is raised from the floor. 1 mark for a basic description 2 marks for a more detailed description													
Agility	Illinois agility T test 1 mark	 Lie face down on the floor at the “Start” cone. On “GO” and start the stopwatch. Jump to your feet and run the course around the cones to the finish. Stop the stopwatch and records the time when the athlete passes the “Finish” cone. 1 mark for a basic description 2 marks for a more detailed description Accurate diagram (2)													
4 (c) (iii)	Identify the component of fitness each test measures in the table below (4) 4x1 mark <table><tr><th>Fitness test</th><th>Component of fitness measured</th></tr><tr><td>Alternate hand throw</td><td>Co-ordination</td></tr><tr><td>Ruler drop test</td><td>Reaction time</td></tr><tr><td>1 rep max</td><td>Strength</td></tr><tr><td>Sit and reach</td><td>Flexibility</td></tr></table>	Fitness test	Component of fitness measured	Alternate hand throw	Co-ordination	Ruler drop test	Reaction time	1 rep max	Strength	Sit and reach	Flexibility	4			4
Fitness test	Component of fitness measured														
Alternate hand throw	Co-ordination														
Ruler drop test	Reaction time														
1 rep max	Strength														
Sit and reach	Flexibility														
		19	6	0	25										

Question	Mark scheme	AO1	AO2	AO3	Total
5 (a) (i)	Identify the Effort and Fulcrum in Figure 6 2x1 mark A = effort B = Fulcrum	2			2
5 (a) (ii)	Explain, using Figure 6 the term load 1 for a basic explanation 2 for a more detailed explanation The load is (resistance) the weight that needs to be moved or resistance placed on a structure In the picture that would be the weight of the dancer		2		2
5 (a) (iii)	Identify the muscle used at A 1 mark Quadriceps	1			1
5 (b) (i)	Visual guidance can be described as: 1 mark When a performer can see the skill being performed as a model to copy.	1			1
5 (b) (ii)	Justify the use of mechanical guidance when learning a new skill. 1-2 marks for a basic justification. 3-4 marks for a more developed justification. To practice the skill safely/ eliminate danger. Get a 'feel' for the movement / kinesthesia. Gives confidence to a learner. Plus e.g. e.g. learning a somersault in trampolining (1).		4		4

Question	Mark scheme	AO1	AO2	AO3	Total
5 (c)	Evaluate the types of feedback used in the three stages of learning Indicative content <u>Types of feedback</u> Intrinsic felt by the performer during a performance. For example, a gymnast during a vault. Extrinsic feedback is provided by external sources during, or after, a performance. It includes what the performer can hear or see e.g. feedback from a coach; comments from team-mates; the actions of opponents. Candidates may use the following: Knowledge of results / knowledge of performance Positive Negative <u>Cognitive stage</u> The performer is inconsistent and makes many mistakes. Need support from the coach to show and tell them what they need to do. Demonstration and repetition needed. Feedback The coach will need to reinforce correct performance through positive feedback. Extrinsic feedback is helpful. <u>Associative Stage</u> The performer begins to understand the requirements of the skills and becomes more consistent. Within their performance there are fewer mistakes, and the performer can concentrate for longer. Feedback More complex information can be processed, and the performer can use intrinsic feedback to further improve. <u>Autonomous Stage</u> The performer is consistent and effective, without any effort. They Able to adapt their performance. They decide on the pace of the skill and activity and nearly always make the correct decisions. Feedback The coach can give detailed feedback and use complex video analysis to refine performance. Performers are efficient at using intrinsic feedback. <i>Feedback in general</i> Feedback needs to be constructive to help the performer to improve their skills. It should be immediate, specific, and accurate.	2		4	6

Band	A01 2 marks	A03 4 marks			
3	No marks awarded in band 3	3-4 marks Excellent evaluation of the use of the types of feedback in relation to the stages of learning.			
2	2 marks Good knowledge of two types of feedback	2 marks Good evaluation of the use of feedback in relation to the stages of learning Award at the bottom of this band may only address either feedback or stages of learning			
1	1 mark Good knowledge of one type of feedback	1 mark Limited evaluation of the feedback and stages of learning			
Question	Mark scheme	A01	A02	A03	Total
5 (d) (i)	Explain the functions of the cardio-respiratory and vascular system. 1-2 marks for a basic explanation 3-4 marks for a detailed explanation 5-6 marks for a developed explanation as above • Transportation of nutrients – to give energy to working muscles • Deliver oxygen to the working muscles to stop fatigue • Remove waste products such as carbon dioxide and lactic acid to allow exercise to continue • Thermoregulation to maintain body temperature and not overheat Vasodilation of blood vessels to allow more blood to muscles Vasoconstriction of blood vessels • Gaseous exchange • Oxygenation of blood.		6		6
5 (d) (ii)	Identify the average tidal volume at rest. 1 mark 0.5 litres	1			1
5 (d) (iii)	Identify the average systolic blood pressure value at rest. 1 mark 120mmHg	1			1
		8	12	4	25

	Q1	Q2	Q3	Q4	Q5	Total
AO1	4	11	8	19	8	[50]
AO2	10	2	10	6	12	[40]
AO3	7	12	7	0	4	[30]
Total	21	25	25	25	24	[120]