GCSE MARKING SCHEME

SUMMER 2025

PHYSICAL EDUCATION - COMPONENT 1
SHORT COURSE
C555U10-1

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

COMPONENT 1 (SHORT COURSE)

SUMMER 2025 MARK SCHEME

Question	Mark Scheme	AO1	AO2	AO3	Total
1a (i)	Identify the main component of fitness being shown by the gymnast in figure 1 Award 1 mark for ticking **flexibility** A Cardiovascular endurance ☐ B Flexibility ✓ C Reaction time ☐ D Speed ☐	1			1
1a (ii)	Define the component of fitness identified in 1a (i). Award 1 mark for correct definition "the ability to move a **joint** through its **full range of movement**" If answer to ai is incorrect but define correctly award the mark for the definition *Accept alternative correct responses*	1			1

Question	Mark Scheme	AO1	AO2	AO3	Total
1a (iii)	Explain why the component of fitness identified in 1a (i) is important for the gymnast Award 1 mark for basic explanation Award 2 marks for a developed explanation If answer to ai is incorrect but can award for correct explanation BASIC - Less likely to suffer from soft tissue / muscular injury - Allows the gymnast to increase their range of movement / stretch further - Allows the performer to achieve a high / good / better score for their routine DEVELOPED **Therefore**: - Allowing the gymnast to stretch further to carry out more complex moves and routines - Allowing the athlete to perform with better technique / form to score better.		2		2
1b	Explain, using examples, how a sports performer applies the principle of overload to their training. Award 1-2 marks for a basic explanation of the FID principle without reference to an example. Award 3-4 marks for a more detailed explanation of the FID principles linked to a sporting example **Indicative Content:** - Frequency – number of sessions / how often a performer trains e.g. a swimmer increases their training from 3 times per week to 4 times per week - Intensity – intensity of training / how hard a performer trains e.g. a rugby player increases their weights during a strength session / an endurance runner includes hills in their training routes / a tennis player reduces their recovery time between sprint shuttle runs etc - Duration of training / how long a performer trains for e.g. a footballer increases the distance of their training run (5km-6km) / a Long Jumper adds more sets or reps to their Plyometrics session.		4		4

Question	Mark Scheme	AO1	AO2	AO3	Total
1c	Identify the correct heart rate calculation to the appropriate term by drawing a line. Award 1 mark for each correct response **Term** / **Heart rate Calculation** maximum heart rate — 80-100 maximum heart rate aerobic training zone — 220-age anaerobic training zone — 60-80% maximum heart rate	3			3
	Total	**5**	**6**		**11**

Question	Mark Scheme	AO1	AO2	AO3	Total
2a	Define each of the following terms: Health Fitness Award 2x 1 mark for each correct definition Health is: "a state of **physica**l, **mental** and **social** wellbeing" Fitness is: "the ability to meet the demands of the environment" **Or** "the ability to perform tasks effectively" Marks can be awarded for definitions even though they might be under the same heading	2			2
2b	Explain why a sedentary (inactive) lifestyle contributes to two consequences identified in 2(b) Award 3 x 1 marks for each correct tick Obesity Stress Poor body image If tick 4 - 1 mark	3			3
2c	Explain why a sedentary (inactive) lifestyle contributes to **two** consequences identified in 2c. Award 1 - 2 marks for basic explanation of each consequence Award 3 - 4 marks for detailed explanation of each consequence - **Obesity**: Sedentary (inactive) lifestyle can cause a person to become overweight because they are not burning off enough of the food that they eat (calories). **This results** in stored bodyfat which leads to obesity and other health problems. - **Stress**: Individuals who lead a sedentary lifestyle don't have opportunity to "escape"/ let off steam/ take their minds off things etc. **This results** in them being consumed by day to day problems adding to increased anxiety and stress levels. **(Stress**: Exercise helps individuals to relax, switch off and feel better in themselves (release of endorphins/ chemicals) which helps reduce stress levels - **Poor Body Image**: Weight gain associated with sedentary lifestyles often causes an individual to dislike their body/ the way they look **This results** in low self esteem, low self confidence and negative thoughts about themselves.		4		4
	Total	**5**	**4**		**9**

<table>
<tr><th>Question</th><th>Mark Scheme</th><th>AO1</th><th>AO2</th><th>AO3</th><th>Total</th></tr>
<tr><td>3a (i)</td><td>Identify the type of synovial joint at A and B in Figure 2

Award 2 x 1 marks for each correct joint type.

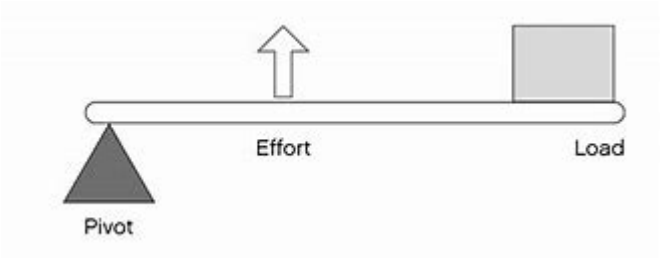
<table><tr><th>Joint</th><th>Type of synovial joint</th></tr><tr><td>A = knee</td><td>Hinge</td></tr><tr><td>B = shoulder</td><td>Ball & Socket</td></tr></table></td><td>2</td><td></td><td></td><td>2</td></tr>
<tr><td>3a (ii)</td><td>Name one bone found at each of the joints.

Award 2 x 1 marks for ONE correct bone at each joint

<table><tr><th>Joint</th><th>Name of bone</th></tr><tr><td>A = knee</td><td>Femur / Tibia/patella</td></tr><tr><td>B = shoulder</td><td>Scapula / Humerus/Clavicle</td></tr></table>(do not accept knee cap)</td><td>2</td><td></td><td></td><td>2</td></tr>
<tr><td>3a (iii)</td><td>Analyse the cricketer in Figure 2 to answer the following:

Award 5 x 1 marks for each correct answer.

<table><tr><td>The movement occurring at A</td><td>Flexion</td></tr><tr><td>The muscle causing movement at A</td><td>Hamstrings (hamies)</td></tr><tr><td>The antagonist muscle at A</td><td>Quadriceps (Quads)</td></tr><tr><td>The movement occurring at C</td><td>Extension</td></tr><tr><td>The muscle causing movement at C</td><td>Gluteus Maximus (Glutes)</td></tr></table></td><td></td><td></td><td>5</td><td>5</td></tr>
<tr><td>3b (i)</td><td>Figure 3. A third class lever

Identify whether the following statement is true or false

“The knee is a third class lever”

Award 1 mark for
TRUE</td><td>1</td><td></td><td></td><td>1</td></tr>
</table>

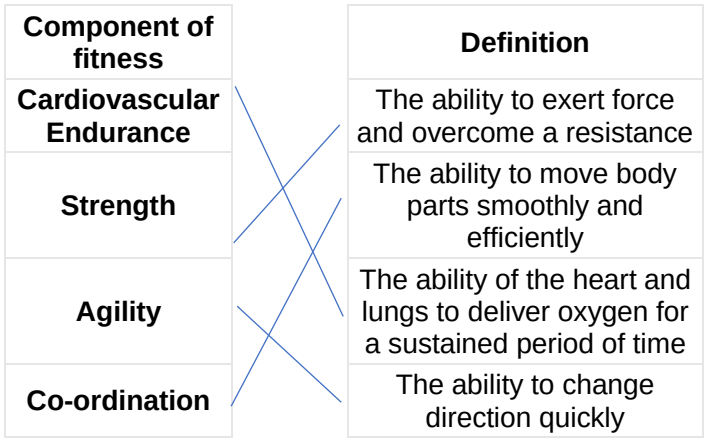
Question	Mark Scheme	AO1	AO2	AO3	Total
3b (ii)	Identify whether the lever system at the knee has mechanical advantage. Tick ✓ one box only Award 1 mark for A Mechanical advantage ☐ B Mechanical disadvantage ✓	1			1
	Total	**6**		**5**	**11**

Question	Mark Scheme	AO1	AO2	AO3	Total
4a (i)	Figure 4 A graph representing the heart rate of a sports performer during a training session. Identify, using Figure 3, the method of training. Award 1 mark for INTERVAL Training	1			1
4a (ii)	Justify your reasons for identifying the method of training in 4(a)(i). Award 1-2 marks for a BASIC justification Award 3-4 marks for a DEVELOPED justification linked to graph data • work interspersed with periods of recovery (rest) **shown by** up and down pattern of HR • High intensity work periods**,** low intensity recovery (rest) periods **shown by** fluctuating HR pattern between (110-180bpm • Anaerobic work **shown by** 80%+ MHR (>160bpm) If 4a(i) incorrect but correct justification based on 4a(i) you can award the marks		4		4
4b	Evaluate the use of continuous training by marathon runners. **Indicative Content:** Description: • No rest • Long duration/ period of time (20mins+) • Low/ moderate intensity • Steady state • Submaximal (60-80% MHR) Benefits: • Improves aerobic fitness/ energy system • Improves cardiovascular and muscular endurance • Health benefits • Builds a base for training other fitness components • Lower level of stress placed on the body than interval/ fartlek training • Reduced risk of (acute) injury Drawbacks: • Time consuming • No variety/ boredom • Limited range of fitness components developed • Doesn't improve anaerobic fitness / energy systems • No opportunity for high intensity training • Increased risk of **chronic / overuse** Injuries (e.g. stress fractures)	2		6	8
	Total	**3**	**4**	**6**	**13**

Band	AO1 (2 marks)	AO3 (6 marks)
3	**No marks**	**5-6 marks** Excellent evaluation of the use of continuous training by the marathon runner To access this band the candidate must have developed/ justified benefits **and** /or drawbacks of continuous training whilst relating them to the performance of the marathon runner. At least 3 benefits and/or drawbacks **linked** to the performance of the marathon runner.
2	**2 marks** More detailed description of continuous training	**3-4 marks** Good evaluation of the use of continuous training by the marathon runner At least 2 benefits and / or drawbacks developed/ justified. At the bottom of this band the candidate is unlikely to have related their response to the performance of the marathon runner.
1	**1 mark** Basic description of continuous training	**1-2 marks** Limited evaluation of the use of continuous training by the marathon runner Maybe one benefit or drawback developed/ justified
0	**0 mark** No attempt	**0 mark** Not attempted Not analysed

<table>
<tr><th>Question</th><th>Mark Scheme</th><th>AO1</th><th>AO2</th><th>AO3</th><th>Total</th></tr>
<tr><td>5a</td><td>Identify the correct definition to the appropriate component of fitness by drawing a line.

Award 4x1 marks for each correctly matched component and definition

 
</td><td>4</td><td></td><td></td><td>4</td></tr>
<tr><td>5b</td><td>Justify, using sporting examples, the importance of two components of fitness named in 5a.

Award 1-2 marks for relevant sporting examples linked to the definitions can access 1-2 with only one component

Award 3-4 marks for relevant sporting examples linked to the definitions that justify their importance

Do NOT accept sporting examples on their own with no explanation

<table>
<tr><th>Component</th><th>Justification</th></tr>
<tr><td>Cardio-Vascular Endurance</td><td>Exemplification A road cyclist requires good cardiovascular endurance to be able to maintain the delivery of oxygen to the muscles to prevent fatigue/ maintain a high work rate to complete the race</td></tr>
<tr><td>Strength</td><td>Exemplification A football player requires good strength in a tackle to be able to hold off overcome their opponent to keep/ win possession of the ball.</td></tr>
<tr><td>Agility</td><td>Exemplification A tennis player requires good agility to be able to change direction quickly to reach the ball and return it to their opponent.</td></tr>
<tr><td>Coordination</td><td>Exemplification A cricket batsman requires good coordination to be able to move the bat and hit the ball into space effectively to successfully score runs for their team</td></tr>
</table></td><td></td><td>4</td><td></td><td>4</td></tr>
</table>

Question	Mark Scheme	AO1	AO2	AO3	Total
5c (i)	Define the term minute ventilation. "Minute ventilation is the amount of air inspired or expired per minute" Also accept ME=TVxBf Minute ventilation = tidal volume x breathing frequency	1			1
5c (ii)	Explain the change to minute ventilation during exercise. Award 1 mark for BASIC explanation • Minute Ventilation **increases** with exercise Award 2-3 marks for DEVELOPED explanation • Increased rate (breath frequency) and depth (TV) of breathing • To increase intake of oxygen / removal of carbon dioxide	1	2		3
5d	Analyse why thermoregulation is important for a sports performer. Award 1-2 marks for a BASIC analysis Award 3-4 marks for a DEVELOPED analysis which links specifically to the effect on performance. **Indicative content:** BASIC – Control body temperature – Cool down/ prevent overheating – Sweating DEVELOPED – Vasodilation of blood vessels close to the skin surface – Vasoconstriction of blood vessels within body – Evaporation – High body temperature leads to dehydration EFFECT ON PERFORMANCE – Maintains optimal performance/ high work rate – Maintains enzyme activity for respiration/ energy production – Reduces fatigue			4	4
	Total	**6**	**6**	**4**	**16**

	AO1	AO2	AO3	Total
Q1	5	6		**11**
Q2	5	4		**9**
Q3	6		5	**11**
Q4	3	4	6	**13**
Q5	6	6	4	**16**
Total	**25**	**20**	**15**	**60**