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GCSE

# Physical Education (Short Course)

48901 Knowledge and Understanding for the Active Participant  
Mark scheme

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4890  
June 2016

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Version 1.0: Final Mark Scheme

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Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Assessment Writer.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this mark scheme are available from [aqa.org.uk](http://aqa.org.uk).

## Marking methods

In fairness to students, all examiners **must** use the same marking methods. The following advice may seem obvious, but all examiners **must** follow it as closely as possible.

1. If you have any doubt about which mark to award, consult your Team Leader.
2. Refer constantly to the mark scheme throughout marking.
3. **Always** credit **accurate, relevant and appropriate** answers.
4. Do **not** credit material irrelevant to the question / stated target, however impressive it might be.
5. If a one word answer is required yet a list is given, take the first answer (unless it is crossed out).
6. If you are considering whether or not to award a mark, ask yourself 'Is this student nearer those who have given a correct answer or those who have little idea?'
7. Read the information on the following page about levels of response mark schemes.
8. Use the full range of marks. Don't hesitate to give full marks when the answer merits them or give no marks where there is nothing creditable.
9. No half marks or bonus marks can be given under any circumstances or BODs.
10. The key to good and fair marking is **consistency**. Once approved, do **not** change your standard of marking.

## Marking using CMI+

All GCSE Physical Education papers will be marked electronically using a software application called CMI+ (Computer Marking from Image). Instead of papers being posted to examiners, student responses are scanned and sent electronically. The software is easy to use, but demands a different approach.

1. Instead of marking paper-by-paper you will mark item-by-item. An item is a part-question. Each time you log on you will need to choose an item to mark.
2. Before you start marking your own items you will need to mark some pre-marked items known as seeds. These ensure you are still applying the same standard set at standardisation. If you are not, you will need to speak to your Team Leader before you can continue marking in order to clarify the correct interpretation and application of the mark scheme.
3. You can annotate items in various ways: underlining, highlighting and adding icons from a drop-down menu. Your Team Leader will tell you which types of annotation to use. Examiners must not add extra annotation as this can be confusing for teachers and students if they request Access to Scripts.
4. As you mark each response (except those for the continuous prose questions), you enter ticks which will automatically total to award a mark in the box at the bottom of the screen. For the continuous prose questions you will enter the mark you are going to award directly into the box at the bottom of the screen. If you realise you have made a mistake you can go back one clip to change the mark.
5. Your assessments will be monitored throughout the marking period. This ensures you are marking to the same standard, regardless of how many clips you have marked or what time of day you are marking. This approach allows senior examiners to ensure your marking remains consistent. Your Team Leader can bring you back to the right standard should you start to drift.
6. If your marking of a particular item is out of line, your Team Leader will contact you as soon as possible to explain where differences are occurring and how this can be addressed.

## Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the average performance for the level. There are marks in each level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

### Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student's answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly level 2 with a small amount of level 3 material it would be placed in level 2 but be awarded a mark near the top of the level because of the level 3 content.

### Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. There will be an answer in the standardising materials which will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the example to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the Indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.

## Assessment of Quality of Written Communication (QWC)

Where students are required to produce extended written material in English, they will be assessed on the quality of written communication.

Students will have to:

- use good English
- organise information clearly
- use specialist vocabulary where appropriate.

QWC is assessed in Section B of the question papers in the level marked answers only.

In level marked answers, the quality of the response is assessed and a mark awarded based on the content. As is sometimes the case, the content may be sound at a particular level but the examiner may not feel that there is quite enough content to raise the mark **within** that level. In this case the examiner should consider the QWC of the answer.

QWC that fulfils the criteria for the level mark awarded should lead to a one mark increase, but where QWC does not fulfil the criteria, the answer should remain at the mark first thought appropriate. QWC **cannot** be used to raise a student's mark into the next level.

In cases where QWC has been used in the award of marks, the examiner should indicate this in a comment box to say 'QWC raised one mark'.

**Section A – Part 1      Multiple Choice**

Award **one** mark for each correct answer.

**1**                      Which **one** of the following activities is in the 'performing at maximum levels' way of thinking group? **[1 mark]**

Competitive swimming or golf (or both)

**2**                      Which **one** of the following statements describes the term 'extension' at a hinge joint? **[1 mark]**

The movement of a limb which increases the angle at a joint

**3**                      Which **one** of the following activities would be **most** suitable for an extrovert? **[1 mark]**

Cheerleading

**4**                      Which **one** of the following is **not** the responsibility of an official in a football match? **[1 mark]**

Setting the start time of the event

**5**                      Which **one** of the following would make an individual's everyday lifestyle **more** active? **[1 mark]**

Getting off the bus a stop early to walk the rest of the journey

**Section A – Part 2      Short answer questions**

**6 (a)**      What is meant by the term ‘agility’? **[1 mark]**

Award **one** mark for stating what is meant by the term agility.

- The ability to change direction or height quickly (and still keep control of the body).
- The combination of flexibility and speed (to change direction quickly).

**6 (b)**      Give **one** example from a named physical activity where a performer uses agility. **[1 mark]**

Award **one** mark for an example of where a performer uses agility.

- Losing a marker in netball.
- Dodging a tackle in rugby.
- Dribbling the ball around an opponent in football.
- V cut in basketball.
- A skier skiing around the poles in a slalom run.

Accept any other suitable response.

**7 (a)**      What is meant by the term ‘aggression’ in sport? **[1 mark]**

Award **one** mark for stating that the term aggression in sport is:

- acting with intent to injure someone (outside the laws of the sport).
- acting forcefully within the rules of the sport to achieve your aim.
- feelings of anger that may spill over into violent action/behaviour.
- a show of hostility to the opposition.

Accept any other suitable response.

**7 (b)** Explain how aggression can be used to improve performance in a named physical activity.

**[2 marks]**

Award up to **two** marks for explaining how aggression can be used to improve performance in a named physical activity.

- A harder punch in boxing/to knockout the opponent.
- Push the opposition backwards in a rugby scrum/ to win or retain the ball.
- Making a stronger tackle in football/ to win the ball.
- Making a stronger tackle in rugby/ to break down an attack.
- Hitting a golf ball harder/to take fewer shots.
- Bowling faster in cricket /increase chance of getting batsman out.
- A harder smash in badminton/to win a point.

N.B.: Response must imply more force.

Accept any other suitable response.

**8** Explain how muscles and bones work together to produce movement.

**[4 marks]**

Award up to **four** marks for an explanation of how muscles and bones work together to produce movement.

- Muscles are attached to bones via tendons.
- The origin is attached to the stationary bone / the insertion is attached to the moving bone.
- Muscles are arranged in (antagonistic) pairs / because they can only pull .
- The agonist or prime mover contracts (shortens)/ and the antagonist, relaxes (lengthens).
- Movement only occurs at a joint, where two bones meet.

NB 1 mark for stating one muscle contracts or shortens, and the other relaxes or lengthens.



**9** State **two** different types of competition used in sport **and** identify **two** advantages of using each competition.

**[6 marks]**

Award **one** mark for stating a type of competition used in sport. Award up to **two** further marks for identifying advantages when using each competition stated. (2x3)

- Knock-out/ quick and easy to organise/ can allow high numbers (as half drop out at each stage)/ high excitement levels as losers are excluded/ standard of competition is high for fear of being knocked out/ can be used for individual or team competitions.
- League/ can cater for a large entry with several divisions/ ensures that everyone has the same number of matches/teams play both home and away or twice/if you lose a game you are not immediately out/best team wins league.
- Ladder/ allows competitors to compete against others of a similar ability/ very simple to operate and administer.
- Combination events/ as many games as you like can be played/ teams get more than one chance to qualify.
- Round Robin/everyone plays each other (once)/ quick and easy to administer/if you lose a game you are not immediately out of the competition.

N.B.: Competition type must be stated to gain credit for advantages.

Accept any other suitable response.

**Section B**

**Questions based on the preliminary material**

**10 (a)** Lucy is travelling further to compete at a higher level and is looking for sponsorship to help with the costs to her parents.

**10 (a) (i)** Explain why a gambling company may not be an acceptable sponsor for Lucy.

**[2 marks]**

Award up to **two** marks for explaining why a gambling company may not be an acceptable sponsor for Lucy.

- Illegal or underage/ could become addicted/ which could cause financial problems for Lucy/ and it is a bad image for Lucy or the club/ not associated with good (positive) lifestyle.

**10 (a) (ii)** Identify **two** benefits a sponsor would expect to receive as a result of sponsoring Lucy.

**[2 marks]**

Award up to **two** marks for identifying the benefits a sponsor would expect to receive as a result of sponsoring Lucy.

- Increased revenue or increased sales.
- Increased profile by association with successful performer.
- Advertising of the company.
- Cheaper than TV advertising.
- Tax benefits.
- A good relationship developed with the local community.

**10 (b)**

By taking part in a lot of physical activity Lucy has developed good agility and flexibility.

State **two** other components of physical fitness that Lucy would need when taking part in a cross country race **and** describe how each component could improve her performance.

**[4 marks]**

Award **one** mark for stating an appropriate component of fitness and **one** further mark for describing how it could improve her performance up to a maximum of four marks (2x2).

- Dynamic strength or muscular endurance/ to be able to work continuously without tiring throughout the race.
- Explosive strength or power/ to get a fast start to the race or sprint up the start of a hill climb.
- Cardiovascular endurance (stamina)/ the heart and lungs can maintain energy supply efficiently throughout the race.
- Speed/ to sprint at the end of the race.
- Coordination/ limbs working together to produce a fluent and efficient running action.
- Balance/ staying upright when running on uneven terrain in cross country.
- Reaction time/ getting a good start to the race.
- Timing/ to accelerate and sprint past an opponent to win the race.

**10 (c)**

Explain how John could use training zones to help improve Lucy's performance in an 800 m race.

**[4 marks]**

Award **four** marks for an explanation of how John could use training zones to help improve Lucy's performance in an 800m race.

Award maximum **two** marks where no reference to how training zones improve Lucy's performance.

- Training needs to be in the anaerobic training zone **OR** 80-90% of maximum heart rate/at a high intensity/ for a maximum of 60 seconds/ resulting in increased lactic acid tolerance/ allowing Lucy to compete at her top speed for a longer time/ and have a sprint finish at the end of the race.
- Training also needs to go above the aerobic threshold **OR** 60-80% of maximum heart rate/ for at least 15 minutes/ at low to moderate intensity/ resulting in a more efficient cardiovascular or cardiorespiratory or circulatory system/ support the anaerobic system to allow Lucy to run more quickly.

N. B. Explanations given must clearly link to the correct training zone.

<b>10 (d)</b>	<p>As a cross country runner Lucy uses fartlek training as part of her training programme.</p> <p>Explain how Lucy could apply the principles of training in her fartlek training sessions in order to improve her performance in cross country.</p> <p><b>(Answer in continuous prose)</b></p>	<b>[8 marks]</b>
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### Marking instructions

Read the **whole response** and use the following grid to select the level that **best** describes the student's work. If you feel that there is not quite enough content to raise the mark awarded **within** the level, you should consider a mark for QWC.

<b>Level 3</b>	<p><b>Detailed and accurate</b></p> <p>Demonstrates detailed knowledge and a thorough understanding of how Lucy could apply the principles of training in her fartlek training sessions in order to improve her performance in cross country running. Answers should include <b>three</b> explanations, <b>two</b> of which must be detailed.</p> <p><b>NB Two</b> detailed explanations (maximum 6 marks).</p> <p>Students spell, punctuate and use the rules of grammar accurately and use a wide range of specialist terms precisely.</p>	<b>6-8 marks</b>
<b>Level 2</b>	<p><b>Sound and generally accurate</b></p> <p>Demonstrates sound knowledge and understanding of how Lucy could apply the principles of training in her fartlek training sessions in order to improve her performance in cross country running. Answers should include <b>two</b> sound explanations.</p> <p><b>NB One</b> detailed explanation (maximum 3 marks).</p> <p>Students spell, punctuate and use the rules of grammar with reasonable accuracy and use a range of specialist terms appropriately.</p>	<b>3-5 marks</b>
<b>Level 1</b>	<p><b>Basic</b></p> <p>Demonstrates basic knowledge and understanding of how Lucy could apply the principles of training in her fartlek training sessions in order to improve her performance in cross country running.</p> <p><b>NB</b> A list of the principles of training with no explanation or application to fartlek training (maximum 1 mark).</p> <p>Students spell, punctuate and use the rules of grammar with some accuracy and use a limited number of specialist terms.</p>	<b>1-2 marks</b>
	No creditworthy material.	<b>0 marks</b>

## Indicative Content

- Fartlek training involves periods of exercise at different intensities (walk/jog/sprint). Speed, distances covered and the amount of time exercising change. The terrain (flat/hills) trained on can also be alternated to change intensity of the session.

**NB** Students will not be given credit for this on its own but how the principles of training are applied to it.

## Principles of Training

- Principle of **specificity** could be applied by making the work specific to the activity.
  - Sessions should be carried out on different terrain.
  - Sessions should be carried out at intensities similar to the level used in a cross country race. Therefore the sprint section should be at race speed with jog/walk sections used for recovery.
  - Sprint finishes could be used at the end of a period of fartlek training to simulate the end of a cross country race.
  - Session could be done with a group of athletes so when carrying out the sprint section race conditions would apply with Lucy having to develop tactics to finish at the front.
- Principle of **progression** could be applied by gradually building up the workload and allowing the body to adapt at each small step.
  - Increasing the working time 5 minutes to 6 minutes not going from 5 minutes to 25 minutes.
  - Increasing the distance covered 800 m to 1000 m.
  - Only increasing when body is coping with distance/time being worked.
- Principle of **overload** could be applied by ensuring the body is challenged to work harder than it usually does.
  - By increasing the frequency or the number of fartlek sessions undertaken in the week/month.
  - By increasing the intensity of the fartlek sessions by increasing the amount of sprinting; increasing the speed of the sprinting or the jogging; increasing the distance covered in the fartlek session.
  - Time can be manipulated by increasing the working period; decreasing the jog/walk periods whilst increasing the sprint sections.
- Principle of **tedium** considered in relation to motivation.
  - Vary the distances/intensity worked at.
  - Vary the location of the sessions e.g. use local hills.
  - Vary the day or time of day.
  - Vary the people Lucy is training with.

**NB** If frequency, intensity and time are given they will be classed as overload and deemed as only one of the principles of training.

### GCSE PE (Short Course- 48901) assessment objectives and specification coverage grid

Question Number	Assessment Objectives		Specification Section	Marks	Auto (A) / General (G) / Expert (E) marked
	AO1	AO3			
1	1		3.1.1 Range of activities	1	A
2	1		3.1.2 Health, Fitness and a healthy active lifestyle – Anatomy and Physiology	1	A
3	1		3.1.1 The demands of performance - personality	1	A
4	1		3.1.1 The roles of the active participant	1	A
5	1		3.1.2 Health, Fitness and a healthy active lifestyle	1	A
6(a)	1		3.1.2 Health, fitness and a healthy, active lifestyle-agility	1	E
6(b)	1		3.1.2 Health, fitness and a healthy, active lifestyle-agility	1	E
7(a)	1		3.1.1 Demands of performance - aggression	1	E
7(b)		2	3.1.1 Demands of performance - aggression	2	E
8	4		3.1.2 Skeletal system	4	E
9	6		3.1.3 Competitions	6	E
10(a)(i)	2		3.1.3 Sponsorship	2	E
10(a)(ii)	2		3.1.3 Sponsorship	2	E
10(b)	2	2	3.1.2 Health, fitness and a healthy, active lifestyle-types of fitness	4	E
10(c)		4	3.1.2 Training- Heart Rate Zones	4	
10(d)	3	5	3.1.2 Training	8	E
<b>Total marks</b>	<b>27</b>	<b>13</b>			
<b>TOTAL</b>				<b>40</b>	