

GCSE

PHYSICAL EDUCATION

48905: Knowledge and Understanding for the Involved Participant
(Double Award)
Mark scheme

June 2014

Version: 1.0 Final

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.

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1 (a) What is meant by a sprain?

[1 mark]

Award **one** mark for a definition of a sprain.

A ligament has been overstretched or torn or wrenched.

1 (b) Give **one** reason why ice is applied to a sprain.

[1 mark]

Award **one** mark for a reason why ice is applied to a sprain.

- To reduce swelling.
- To numb pain.
- To restrict blood flow to injury or reduce bruising.

2 (a) Using an example, describe what is meant by a closed skill.

[2 marks]

Award **one** mark for correct example and **one** further mark for a correct description of a closed skill.

- When taking a free kick/ it is unaffected by the environment or other external factors.
- When performing a forward roll/ movements are always exactly the same or are not dependent upon the environment.
- When performing a golf drive/ it can be executed at your own pace.

Accept any other suitable response.

2 (b) Explain why fixed practice is best suited to the learning of a closed skill.

[3 marks]

Award **three** marks for explaining why fixed practice is best suited to the learning of a closed skill.

- As the environment or performance situation stays the same/ the actions can be performed in the same way each time/ it creates muscle memory/ through repetition or drills/ it replicates the competitive situation.
- Skill can be repeated/ feedback given/ for adaptation to skill to be made.

2 (c) What is meant by ‘intrinsic knowledge of performance’?

[2 marks]

Award **two** marks for stating what is meant by intrinsic knowledge of performance.

- How well the player performed/ rather than the results or outcome.
- The player can sense or feel/ that the movement is correct.

Accept any other suitable response.

3 (a) Describe the sit and reach test.

[2 marks]

Award **two** marks for describing the sit and reach test. Accept diagrams.

- Sit straight legged with feet flat against the bench or equivalent.
- Reach forward, (place hands) on bench or equivalent.
- Measure or record the distance (from toes).

3 (b) Explain how an increase in flexibility may allow a sportsperson to improve performance in a named physical activity.

[2 marks]

Award **two** marks for correctly explaining how increased flexibility may allow a sportsperson to improve performance in a named physical activity.

- A games player can increase their stride length/ to get into position quicker to receive a pass.
- A back crawl swimmer will have a longer pull/ to go faster or be more efficient.
- A gymnast can perform a difficult move with style/ to gain more marks.

Accept any other suitable response.

4 (a) Explain what is meant by ‘continuous training’.

[2 marks]

Award **two** marks for explaining what is meant by ‘continuous training’.

- Working aerobically or 60-80% of maximum heart rate/ at moderate intensity/ lasting for a long period of time/ with no rest.

4 (b) Explain why continuous training is an effective training method for a long distance runner.

[2 marks]

Award **two** marks for explaining why continuous training is an effective training method for a long distance runner.

- Improves cardiovascular and respiratory systems or capacity of the heart and lungs.
- Prevents lactic acid build up.
- Delays the onset of (muscle) fatigue.
- It is specific or most appropriate (to long distance running).

NB Stamina on its own is insufficient.

4 (c) State what is meant by 'fartlek training' **and** explain why it may be the most appropriate form of training for a games player.

[3 marks]

Award **one** mark for stating what fartlek training is:

- Speed play or training involving changes in speed or distance or terrain or intensity.

Award a further **two** marks for explaining why it is the most appropriate form of training for a games player.

- Replicates many game situations
- Specific example from a games situation eg sprinting for a pass, jogging back to position.
- Uses all the energy systems.

Accept any other suitable response.

4 (d) What is meant by the principle of 'reversibility' **and** state the effect that it may have on performance?

[2 marks]

Award **one** mark for explanation of principle of reversibility and **one** mark for reference to performance deteriorating.

- (When training stops), any gain to the body is lost (use it or lose it).
- Performance will deteriorate or fitness levels will decrease.

NB Need to state effect on performance.

5 (a) Explain the importance of a warm up in helping to prevent injury.

[5 marks]

Award **five** marks for explaining the importance of a warm up in helping to prevent injury.

- Prepares the body for physical activity/ increases body temperature or warms muscles/ improves elasticity of muscles or stretches muscles/ increases range of movement or loosens joints.
- Mental preparation/ improves focus or concentration/ increases alertness/ achieve optimal arousal.

NB Credit reference to a specific injury once.

5 (b) Warm ups and warm downs are important health and safety precautions.

State and explain **two other** health and safety precautions that should be taken when participating in a circuit training session.

[4 marks]

Award **one** mark for stating a health and safety precaution and **one** further mark for the explanation, up to a maximum of **four** marks (2 x 2).

- Avoid over-stressing the body/ use appropriate weight or exercises.
- Use correct technique/ to avoid a specific injury eg strained back.
- Ensure access to appropriate equipment/ to avoid a specific injury eg pulled muscle.
- Remove dangerous objects in training area/ trip hazard.
- Secure collars on weights/ ensure equipment secure/ so does not fall.
- Ensure stations are not too close to each other/ to avoid collisions.
- Ensure the floors are not wet/ so it is not a slip hazard.
- Drink water during session/ to avoid dehydration through sweating.

Accept any other suitable response.

6 (a) State **one** form of visual guidance.

[1 mark]

Award **one** mark for stating one form of visual guidance.

- Demonstrations
- DVDs
- Signals
- Gestures

Accept any other suitable response.

6 (b) Explain how visual guidance may help in the learning of a new skill.

[3 marks]

Award **three** marks for explaining how visual guidance may help in the learning of a new skill.

- The learner can see the perfect model or correct technique.
- The learner is able to copy or repeat the skill.
- The learner forms a mental image of the skill.
- The learner picks up key cues.
- The learner understands various signals and gestures.
- Visual guidance is the most effective when learning a new skill.

Accept any other suitable response.

7 A skilful performer needs to be in the correct physical and mental state when performing.

State and explain **two** ways in which a coach could help a performer to prepare mentally, in order to meet the demands of a competition.

[4 marks]

Award **one** mark for stating how a coach could help a performer to prepare mentally in order to meet the demands of competition and **one** further mark for the explanation, up to a maximum of **four** marks (2x2).

The coach could help a performer through:

- mental rehearsal/ going through an activity in the mind before the activity or to re-create this in actual performance
- visualisation/ create positive pictures of previous success during the activity or visualise successful outcome
- focusing or blocking out distraction or blocking out negative thoughts/ to concentrate only on performance
- relaxation techniques/ to clear mental tensions or reduce pressure or stress
- listening to music/ to motivate or relax the performer
- a pep talk/ to give the performer confidence.
- tactics or game plan/ to give the performer knowledge of expectations.

NB Accept warm up.

Accept any other suitable response.

8 (a) State and explain **two** different ways in which a high protein diet could help to improve a sportsperson's performance.

[4 marks]

Award **one** mark for stating and **one** further mark explaining each way a high protein diet may help to improve a sportsperson's performance, up to a maximum of **four** marks (2x2).

- Repair or recovery of muscle or tissue/ return to training or competition earlier.
- Growth of muscle or increased strength/ exert more power or eg when throwing a javelin.
- Reduces storage of fat or helps lose weight/ more effective performance as not carrying surplus weight.

8 (b) Using an example from a named physical activity, explain why a sportsperson may consume more fat in his/her diet in order to improve performance.

[3 marks]

Award **one** mark for the example and a further **two** marks for why a sportsperson may consume more fat in his/her diet.

- Marathon/ as a high energy source/ delay tiredness.
- Open water swimming/ as an insulator or to keep warm/ to be able to swim for longer.
- Long distance cycling/ slow release energy/ improve performances in latter stages.
- Rugby prop forward or sumo wrestler/ as additional weight/ more pressure on opposition.

Accept any other suitable response.

9 People take part in physical activities for different reasons.

State **three** reasons why people choose to take part in relaxing activities, such as yoga.

[3 marks]

Award **one** mark for stating each reason why people choose to take part in relaxing activities, such as yoga.

- Enjoyment or fun.
- Company or social benefits.
- Maintain or improve health/ lower blood pressure.
- Mental benefits/ release of stress/ keeps mind active.
- Sense of achievement or personal fulfilment.
- Low intensity activity/ less physically demanding.
- Maintain or improve fitness/ flexibility/ balance.
- Non-competitive.

Accept any other suitable response.

10 (a) State **two** benefits of providing high carbohydrate meals at Fairwoods.

[2 marks]

Award **two** marks for stating the benefits of providing high carbohydrate meals at Fairwoods.

- Main energy source.
- Slow release energy/ so visitors can complete all of the activities throughout the day or delay the onset of fatigue.

10 (b) (i) What is meant by 'hypothermia' **and** how is it caused?

[2 marks]

Award **one** mark for the definition of hypothermia.

- Rapid or excessive cooling of the body or the temperature of the body falls below 35 degrees Celsius.

Award **one** mark for the cause of hypothermia.

- Prolonged exposure to cold or cold and windy weather or cold and wet weather or immersion in cold water.

10 (b) (ii) State **two** actions that should be taken by an instructor, in order to help someone suffering from hypothermia.

[2 marks]

Award **two** marks for stating the correct actions that should be taken by an instructor, in order to help someone suffering from hypothermia.

- Provide them with extra layers of clothes.
- Seek shelter.
- Get them to consume warm or hot food or drink.
- Remove their wet clothing and replace with dry clothing.
- Insulate them with extra blankets or foil or sleeping bags.
- Seek warmth from another person.
- Seek medical help for them.

Accept any other suitable response.

10 (c) Explain how wearing the appropriate clothing in a water-based activity would make it safer for the individual taking part.

[3 marks]

Award **three** marks for explaining how wearing the appropriate clothing in a water-based activity would make it safer for the individual taking part.

- Wet suits – protect from elements/ reduce cuts and grazes or hypothermia/ helps you float.
- Dry Suits – keep dry/ warm/ helps you float.
- Life jackets – keep afloat/ head above water/ protect against collision.
- Helmets – protects against head injuries/ concussion/ which will prevent drowning.
- Gloves – better grip/ protection against blisters or friction/ insulation.

Accept any other suitable response.

NB Answers must relate to appropriate clothing for marks to be awarded.

<p>10 (d) Harry must carry out a risk assessment for first aid and emergency arrangements at his centre.</p> <p>Explain the actions that an instructor should take if a member of a group fractures a leg during an activity at Fairwoods.</p> <p>(Answer in continuous prose)</p> <p style="text-align: right;">[6 marks]</p>

Please use the following criteria to award a mark for both the content and the Quality of Written communication (QWC) based on the following information.

Level 3	<p>5 – 6 marks Detailed and accurate</p> <p>Demonstrates detailed knowledge and thorough understanding of the actions that should be taken if a member of a group fractures a leg during an activity at Fairwoods.</p> <p>Answers should include at least two detailed explanations.</p> <p>NB One detailed explanation and one sound explanation (maximum 5 marks).</p> <p>Students spell, punctuate and use rules of grammar accurately and use a wide range of specialist terms precisely.</p>
Level 2	<p>3 – 4 marks Sound and generally accurate</p> <p>Demonstrates sound knowledge and understanding of the actions that should be taken if a member of a group fractures a leg during an activity at Fairwoods.</p> <p>Answers should include at least two sound explanations</p> <p>NB One detailed explanation (maximum 3 marks)</p> <p>Students spell, punctuate and use rules of grammar with reasonable accuracy and use a range of specialist terms appropriately.</p>
Level 1	<p>1 – 2 marks Basic</p> <p>Demonstrates basic knowledge and understanding of the actions that should be taken if a member of a group fractures a leg during an activity at Fairwoods.</p> <p>NB A list of actions with no explanation (maximum 1 mark).</p> <p>Students spell, punctuate and use rules of grammar with some accuracy and use a limited number of specialist terms.</p>
0 marks	No creditworthy material

QWC is part of the award of marks in levels marked questions only. In levels marked answers the quality of physical education is assessed and a level mark awarded based on the content. As is sometimes the case, the physical education may be sound at a particular level but the examiner may not be sure as to whether there is quite enough 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 should lead to a rise in the mark but where QWC does not fulfil the criteria, the answer should remain at the mark first thought appropriate.

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'. QWC cannot be used to raise a student's mark into the next level.

Examples of content could include:

- support and bandage or splint fractured leg, prevent further damage or injury
- search for and control any bleeding, avoid loss of blood
- attempt to seek medical help (mobile phone), raise the alarm quickly, gain access to medical help ASAP
- keep patient comfortable and still, avoid further damage, reduce stress
- keep patient warm
- talk and reassure patient, keep patient conscious
- Send two of the group to seek help (note grid references or landmarks), in case one gets injured
- know escape routes off mountain, in case of impending danger
- use survival bags, shelters, keep patient and rest of group warm and dry
- use bright colours or flares to attract attention, alert a response
- get them out of water, drowning, avoid other obstacles (boats, etc).

Example answers

Level 3 (6 marks)

If a member of a group fractures a leg whilst on an activity the instructor must seek medical help straight away. Depending on where the accident happens this will be by mobile phone, flares or sending two people to get help. This will ensure the person gets treatment as soon as possible to minimise further injury and assist recovery. The patient will need to be kept comfortable and still to avoid any further damage. The instructor should keep the patient warm (use of clothing, survival bags or nearby shelter), talk and reassure them so they do not panic and bring on further stress. The injured leg may be supported or splinted depending on the severity of the fracture. If it is an open wound, any bleeding will need bandaging and elevation to avoid any loss of blood. Although the injured person should be kept still, if they are in immediate danger they may need moving to a safer place. Knowledge of the surroundings and various escape routes would help in reducing any further danger to the injured person and other members of the group as they can be quickly moved to safety.

Level 2 (4 marks)

If a fractured leg occurs, the instructor must get medical help as soon as possible. Firstly they would try and call for assistance and if this was not possible (as they may be in the mountains) they would send someone, preferably two people to get help. The instructor would keep the patient warm, still and comfortable to avoid any further injury. Any obvious injury would be treated (such as bleeding) so that the injured person is as comfortable as possible and they do not lose too much blood which will make the situation even worse.

Level 1 (2 marks)

The instructor needs to get help as quickly as possible, probably by using a mobile phone. They need to make the patient comfortable and treat any injury that they may see or the patient is complaining about. If the injury is as a result of canoeing or sailing, they must get them out of the water.

10 (e)	<p>Explain the interpersonal skills that could help Harry to develop an effective team of people at Fairwoods.</p> <p>(Answer in continuous prose)</p>	[6 marks]
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Please use the following criteria to award a mark for both the content and the Quality of Written Communication (QWC) based on the following information.

Level 3	5 – 6 marks	Detailed and accurate
		<p>Demonstrates detailed knowledge and thorough understanding of the interpersonal skills that could help Harry to develop an effective team of people at Fairwoods.</p> <p>Answers should include at least two detailed explanations.</p> <p>NB One detailed explanation and one sound explanation (maximum 5 marks).</p> <p>Students spell, punctuate and use rules of grammar accurately and use a wide range of specialist terms precisely.</p>
Level 2	3 – 4 marks	Sound and generally accurate
		<p>Demonstrates sound knowledge and understanding of the interpersonal skills that could help Harry to develop an effective team of people at Fairwoods.</p> <p>Answers should include at least two sound explanations.</p> <p>NB One detailed explanation (maximum 3 marks).</p> <p>Students spell, punctuate and use rules of grammar with reasonable accuracy and use a range of specialist terms appropriately.</p>
Level 1	1 – 2 marks	Basic
		<p>Demonstrates basic knowledge and understanding of the interpersonal skills that could help Harry to develop an effective team of people at Fairwoods.</p> <p>NB A list of interpersonal skills with no explanation (maximum 1 mark).</p> <p>Students spell, punctuate and use rules of grammar with some accuracy and use a limited number of specialist terms.</p>
0 marks	No creditworthy material	

QWC is part of the award of marks in levels marked questions only. In levels marked answers the quality of physical education is assessed and a level mark awarded based on the content. As is sometimes the case, the physical education may be sound at a particular level but the examiner may not be sure as to whether there is quite enough 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 should lead to a rise in the mark but where QWC does not fulfil the criteria, the answer should remain at the mark first thought appropriate.

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'. QWC cannot be used to raise a student's mark into the next level.

Examples of content could include:

- cooperation in order for everyone to work well together
- adaptability in order to help out in different roles
- delegation in order to spread workload, best people in most appropriate jobs, not doing too much himself
- mediation in order to maintain harmonious working conditions, relationships between staff
- listening and responding to others to ensure all staff have a voice (not to be autocratic)
- control and presence in meetings to maintain control but enable members of the team to make a contribution
- personal qualities like fairness, so everyone is treated equally and feels part of the team.

Example answers

Level 3 (6 marks)

The most important interpersonal skill for Harry would be team working. This involves cooperation, delegation and adaptability. Delegation involves putting together an effective team where everybody works to their strengths. With the best people doing the most appropriate jobs Harry will maximise the chances of successful outcomes. When people are aware of others strengths they appreciate each other and cooperate well and work together as a team, as together everyone achieves more, which is teamwork. Harry must also listen and respond to others to ensure that all staff have a voice. He needs to listen to their ideas so that each individual feels valued as a part of the team and are supportive of each other.

Level 2 (4 marks)

To develop an effective team Harry will need the interpersonal skill of delegation. By giving everyone a role at Fairwoods that they are good at, they will support each other and work as a team. Harry will also need to have good persuasion skills to influence the staff at Fairwoods to sort out any disagreements so that he can maintain harmony so that they can keep working together.

Level 1 (2 marks)

If Harry is to develop an effective team of people at Fairwoods he must be supportive and motivated in order for his staff to act in the same way. Being supportive will create a better working environment and encourage teamwork and cooperation.

Assessment Objectives

Question Number	Assessment Objectives		Total Marks
	AO1	AO3	
1(a)	1		1
1(b)	1		1
2(a)	2		2
2(b)	3		3
2(c)	2		2
3(a)	2		2
3(b)		2	2
4(a)	2		2
4(b)		2	2
4(c)	1	2	3
4(d)	1	1	2
5(a)		5	5
5(b)	2	2	4
6(a)	1		1
6(b)		3	3
7	2	2	4
8(a)	2	2	4
8(b)	1	2	3
9	3		3
10(a)	2		2
10(b)(i)	2		2
10(b)(ii)	2		2
10(c)	1	2	3
10(d)	3	3	6
10(e)	2	4	6
Total marks	38	32	70

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