



**General Certificate of Secondary Education
June 2011**

Physical Education 48905

(Specification 4890)

**Unit 5: Knowledge and Understanding for the
Involved Participant (Double Award)**

Final

Mark Scheme

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Section A – Short answer questions

1 (a) Lifting equipment correctly is important.

State **four** safety measures that should be considered when lifting and moving heavy sports equipment. *(4 marks)*

Award **one** mark for each safety measure, up to a maximum of 4 marks.

- Bend knees.
- Straight back or don't bend your back.
- Keep equipment close to body or close to centre of gravity.
- To keep weight balanced.
- Do not attempt to carry anything that is too heavy - obtain help from another person.
- Have a firm grip.
- Face the way you are to travel.
- Repeat the action when lowering the equipment.
- Possible hazards eg slippery floors or other equipment nearby.
- Other considerations eg distance or time span.
- Appropriate safety footwear.

1 (b) Explain how a warm-up before any form of physical activity can help to prevent injury. *(2 marks)*

Award **two** marks for how.

- Prepare the body for activity/ physical or mental preparation.
- Increases body temperature eg warm muscles.
- Improves elasticity of muscles eg stretches muscles.
- Increases range of movement.
- Increases oxygen flow to the muscles/ increase blood flow.
- Improved psychological preparation/ focus and concentration.
- Perform skills to be used in the actual activity/ to get used to conditions and the environment.

NB no marks awarded for types of injuries or prevention of injury.

2 (a) Using an example, explain what is meant by 'whole practice'. *(2 marks)*

Award **one** mark for an explanation of whole practice and **one** mark for explaining a relevant example.

- A complete performance of the learnt skill.
- Repeating the complete or whole action eg throwing or catching (in isolation not game).

Any example involving the whole skill (not split into parts) eg dribbling.

2 (b) Explain how whole practice could improve your performance in a skill or technique of your choice. *(2 marks)*

Award **two** marks for explaining how whole practice can improve performance.

- Performer appreciates the flow/ sequence/ or feel of the complete movement.
- Simple or easier to carry out/ can enable quicker learning.
- Good for simple skills/ performer can repeat it over and over again.
- Prevents boredom as the performer is completing the whole movement/ so concentration is maintained.

Accept any other suitable response.

NB no marks awarded for variable or open skills ie skill must be shown in isolation.

2 (c) (i) Other than whole practice, name another type of practice. *(1 mark)*

Award **one** mark for naming another type of practice.

- Part/ fixed/ variable/ whole-part-whole.

2 (c) (ii) Using **two** examples, explain how the type of practice you named in **2 (c) (i)** could be used in learning a new skill or technique. *(4 marks)*

Award **one** mark for how each type of practice is used, and **one** mark for each qualified example.

Examples include:

- Part – suited to complex skills/ which have several parts/ breakdown the skill into parts to aid learning or triple jump – hop, step, jump.
- Fixed – suitable for closed skills/ where the environment stays the same/ actions can be performed in the same way each time/ eg golf tee shot, penalty kick, forward roll.
- Variable – suited to open skills/ where the conditions change during the execution of the skill/ used in invasion game practices to replicate situations that may occur in a game eg football, netball.
- Whole-part-whole – The whole skill is practised first/ then it is broken down to practise each element/ and then is put back together again, eg tennis serve – toss, swing, hit, follow through or thigh, neck and throw.

3 (a) Explain **why** Chris should use appropriate verbal communication when coaching beginners. *(2 marks)*

Award **two** marks for explaining why the use of appropriate verbal communication is important when coaching beginners.

So that the beginner can understand the instructions/ advice/ technical terms/ the description is clear or precise/ key words/ no offensive or abusive language/ suitable volume/ simple language/ appropriate to age/ ability of beginners/ to ensure safety.

3 (b) Identify **two** examples of non-verbal communication and explain **how** Chris could use these when coaching beginners. *(4 marks)*

Award **one** mark for each relevant example and **one** mark for explaining how each non-verbal communication could be used when coaching beginners.

- Demonstrations or videos or DVDs or pictures/ so they can see what the skill or technique looks like/ must be accurate/ attainable so they can pick up the key cues.
- Gestures or signals/ positive or negative feedback dependent on action.
- Whistle/ arm waving/ could signal danger therefore stop activity.
- Manual guidance/ so they get the feel of the movement/ correct a movement.
- Eye contact/ positive or negative feedback dependent on action.

4 (a) State and explain **three** reasons why someone would want to participate in a physical activity. *(6 marks)*

Award **one** mark for stating why someone would want to participate in a physical activity and **one** additional mark for explaining why.

Reasons for choosing different types of activities:

- enjoyment or fun/ satisfaction/ feel good factor
- social or company/ play with friends in a team/ meet people with similar interests
- maintain or improve fitness/ to improve performance
- relaxation/ relief from stress
- excitement/ challenge/ adrenalin rush
- competition/ provides an opportunity for success/ a challenge/ play or perform at a high level
- financial/ occupation/ professional
- stress management/ relief from tension
- anger management/ improves emotional health and well-being
- ability/ if they are good at the activity
- aesthetic/ satisfaction and feeling of achievement/ opportunity to perform
- health reasons/ to lose weight/ to improve body image.

NB The mark for explaining the reason for participating in a physical activity does not need to come from the same bullet point as the mark for stating why.

Accept any other suitable response.

4 (b) What is 'Fartlek training' and explain how it is an effective method of training for a games player? *(3 marks)*

Award **one** mark for explaining what Fartlek training is.

'Speed play' or changing speed/ change in distances/ change in terrain/ change in times of exercise/ with rests in the same session/ includes walking, brisk walking, jogging, sprinting and fast steady running in the same session as in games.

Award **two** further marks for explaining why it is an effective method of training for a games player.

Replicates many games, competitive situations or invasion games/ uses all energy systems/ change of pace.

4 (c) In nearly all sports, balance is an important component of fitness.

Describe the stork stand test and explain how it could be used to improve performance in a physical activity. *(4 marks)*

Award **two** marks for describing the stork stand test.

- Stand comfortably upright with your hands on hips
- stand on one leg
- place toes against the knee of the other leg
- raise heel and stand on your toes
- balance for as long as you can
- without either your heel touching the ground
- or moving your other foot away from your knee
- time is recorded
- and compared to standardised tables.

Award **two** further marks for explanation of how the test can be used to improve performance.

- A test can improve balance within a performance in other sports/ eg kicking a ball, balancing on a beam.
- Use the results to compare with previous tests/ or standardised tables.
- Adjust training accordingly.
- Set goals or targets.
- Assess how successful your training has been.
- Identify strengths or weaknesses.

5 (a) Other than warming up, name **three** safety precautions you should take before starting a weight training session. *(3 marks)*

Award **one** mark for correctly naming a safety precaution, up to a maximum of 3 marks.

Safety precautions include:

- seek professional help
- go through an induction programme
- wear appropriate clothing
- remove jewellery
- ensure you have access to appropriate equipment
- safe equipment, eg collars secured
- know your limits
- understand principles of training
- use correct technique
- ensure the floor surface is safe
- sufficient height
- ensure spotter is available
- hydration
- complete a risk assessment.

Accept any other suitable response.

5 (b) For **one** of the safety precautions you named in **5 (a)**, describe **one** problem if it is not followed. *(2 marks)*

Award up to **two** marks for highlighting the problem if the precaution is not followed.

- Seek professional help or go through an induction programme – ensure correct technique/ know how to use equipment properly/ to avoid injury.
- Wear appropriate clothing or no jewellery – avoid being caught in weights or machines/ to prevent injury.
- Ensure you have access to appropriate safe equipment – to ensure safe practice/ safe progression.
- Know your limits or understand the principles of training – avoid injury/ ensure progression.
- Use correct technique – to prevent muscle strain.
- Ensure the floor surface is safe – to prevent slipping/ falling over equipment.
- Sufficient height – available to stop equipment hitting the ceiling/ and falling on the performer.
- Ensure spotter is available – to take the strain off the weight/ and prevent injury.

In this part we are only giving marks if the candidate has made an attempt to explain the safety procedure and has also made an attempt to state potential problems. No marks can be given if the candidate has simply repeated without explanation of part (a).

5 (c) Describe a suitable warm-down after an intensive training session, and explain how this would help the performer to recover quickly. *(6 marks)*

Award up to **two** marks for describing a suitable warm-down.

- Aerobic phase – jogging or walking.
- Stretch phase – static (or gentle dynamic) stretching/ holding each stretch for 10 seconds.
- Each phase should last 5 to 10 minutes.

Award a further **four** marks for explaining how this would enable a performer to recover quickly.

Explanation:

- reduce the stresses on the body
- prevent muscle soreness (DOMS)
- allow muscles to relax
- gradually decrease body temperature
- reduce the chance of dizziness or fainting
- stops blood pooling
- gradually reduces adrenalin in the blood
- stretches or lengthens the muscles
- remove lactic acid (from muscles) or waste products
- encourage blood flow to previously active muscles
- breathing rate reduced
- heart rate reduced
- reduce carbon dioxide in the body/increase oxygen intake.

5 (d) (i) Explain what is meant by 'hypothermia'. *(2 marks)*

Award **two** marks for definition.

- Rapid or excessive cooling of the body
- through cold water
- cold weather
- to below 35°C.

5 (d) (ii) Describe the actions to be taken when someone is suffering from hypothermia.
(2 marks)

Award **two** marks for correct actions.

- Provide extra layers of clothes.
- Seek shelter.
- Eat warm or hot food.
- Warm or hot drink.
- Remove wet clothing.
- Replace with dry clothing.
- Insulate with extra blankets or foil or sleeping bags etc.
- Seek warmth from another person.
- Seek medical help.

Accept any other suitable response.

Section B – Questions based on the preliminary material

<p>6 (a) Graeme will carry out a risk assessment before the athletics competition.</p> <p>Name three potential hazards that performers may face during the athletics competition. <i>(3 marks)</i></p>

Award **one** mark for each potential hazard, up to a maximum of 3 marks.

Examples include:

- slipping on a wet track or approach or throwing area
- falling on an uneven track or approach
- obstacles or protruding objects on track or approach
- being hit by a discus, hammer, shot or javelin
- hitting an obstacle such as a hurdle or high jump bar or stands
- landing on a hazard in the long or triple jump
- falling or dropping or hitting someone else with a javelin, hammer or discus when carrying.
- insufficient padding on high and pole vault landings
- weather conditions - too hot/ too wet
- inappropriate clothing or kit or footwear.

Accept any other suitable response.

<p>6 (b) State two qualities that an organiser such as Graeme should possess, and explain how each would enable him to be effective in that role. <i>(4 marks)</i></p>

Award **one** mark for each quality stated and **one** mark for an explanation.

- Organisational skills or planning and preparation/ eg skills to organise timetable of events.
- Communication skills/ eg to be able to explain to athletes and officials what is required for events (running order).
- Leadership skills/ eg to manage a group of officials/ organise food stalls.
- Knowledge of the rules/ eg knows what equipment is needed or how to set it up etc.
- Management of competition once it is underway/ eg adaptability/ modification/ communication throughout the day.
- Time management/ so the event runs smoothly or does not over run.
- Persuasive/ influencing colleagues or athletes or spectators.

Accept any other suitable response.

6 (c) (i) State **three** types of food that should be available from the food and drink stalls.
(3 marks)

Award **one** mark for each suitable food type or an example of the food type, up to a maximum of 3 marks. (No repetitions)

- Carbohydrates or pasta or rice or baked potatoes or cereal or energy bars.
- Protein or meat or fish or pulses or nuts or eggs or poultry.
- Fats
- Water or fluids.
- Fruit or salad or vegetables.
- Vitamins
- Minerals
- Fibre

Accept any other suitable response.

6 (c) (ii) Explain how a balanced diet can help to improve an athlete's performance.

(Answer in continuous prose)

(6 marks)

Award up to **six** marks for explaining how a balanced diet can help to improve an athlete's performance.

Examples of content could include:

- a balanced diet will meet demands of an active sportsperson
- to maintain the correct weight for an efficient performance
- provide a ready source of energy, any excess stored as glycogen, good for slow release energy, therefore able to sustain activity for longer (accept fast and slow release energy)
- aids body growth, repairs muscular damage to aid recovery, useful after event
- ensure hydration to maintain water or fluid levels and replace water lost due to exercise. Also assists transportation of nutrients, allows blood to flow more easily, important as body demands more oxygen, heat control and waste removal.
- reduce fast food, fatty foods and simple carbohydrates to maintain weight
- fruit or vegetables are important for minerals and vitamins to aid the body processes
- fats to be taken in moderation as they are used as secondary source of energy and in insulation or bulk in certain sports.

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

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 say 'QWC raised mark to show an upward trend'. QWC cannot be used to raise a candidate's mark into the next level.

Level 3	<p>5 – 6 marks Suitable balanced diet justified or fully described. At least three components fully explained to clearly show how each can help to improve an athlete's performance. Candidates spell, punctuate and use rules of grammar accurately and use a wide range of specialist terms precisely.</p>
Level 2	<p>3 – 4 marks Suitable balanced diet justified with some description. Two components fully explained to show how each can help to improve an athlete's performance. NB one fully explained or two with some explanation (maximum 3 marks) Candidates 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 Suitable balanced diet justified with limited description. At least one component with limited explanation to show how it can help to improve an athlete's performance. NB If balanced diet is explained with no reference to how it can help to improve an athlete's performance (maximum 1 mark) Candidates spell, punctuate and use rules of grammar with some accuracy. Limited use of a range of specialist terms.</p>
0 marks	No creditworthy material

Example Answers

Level 3 (6 marks)

A balanced diet is essential to an athlete if they are to perform to their potential. A balanced diet would enable an athlete to maintain the correct weight for an efficient performance and to meet the demands of the performance. A balanced diet will provide an athlete with a ready source of either fast or slow release of energy through eating carbohydrates. Carbohydrates will improve performance by giving the athlete either a burst of energy for an explosive event or sustained energy for a long distance event. Protein is essential for growth and repair, which will enable the athlete to train hard and develop strength but also to aid recovery after training or competitions. Fats are also important as a secondary source of energy, particularly to benefit a performer over long periods. Hydration is essential to replace water lost during exercise. This will help with many bodily functions such as the transportation of nutrients and heat control. Loss of water has a dramatic effect on performance therefore it is important to stay hydrated if you wish to perform at your best. A balanced diet will enable an athlete to improve performance as exercise places great demands on the body. We have to fuel our bodies so that they can work at optimum levels and recover efficiently. It is important to take in the correct amounts otherwise any excess may be detrimental to performance.

Level 2 (3 marks)

A balanced diet is important to an athlete so that they can improve their performance. A balanced diet will supply energy through carbohydrates and fats. These are important because if your energy levels fall, athletic performance will also fall. Protein will also improve performance. Protein helps in the growth and repair of muscles meaning you will have more strength for your event and recover more efficiently, therefore improving performance. When exercising you lose water through sweating so it is important to drink water/fluids to replace this. A balanced diet should also include fruit and vegetables (5-a-day) so that the body is supplied with minerals and vitamins. All these will help the body to work at its best. This will help improve performance.

Level 1 (1 mark)

A balanced diet is really important to an athlete. It is made up of carbohydrates, protein, fats, vitamins and minerals, fibre and water. Carbohydrates will give you sufficient energy so that you can perform to your best throughout your event. Protein will help growth and repair. When you exercise you sweat so you need to replace the water.

(0 marks)

A balanced diet is important to an athlete so that they can improve their performance. A balanced diet will include carbohydrates, proteins and fats. They should also eat fruit and vegetables and drink water.

<p>6 (d) Explain what Graeme could do to improve the athletics competition for next year.</p>
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(Answer in continuous prose)

(5 marks)

Award up to **five** marks for explaining how Graeme could improve the athletics competition for next year.

Examples of content could include:

- monitor or evaluate the competition by the use of questionnaire or feedback to improve competition
- speak to a variety of people, including performers or parents or coaches or officials or food stall holders and spectators to gain feedback
- gain more local sponsors for next year which would bring in more money and prizes
- increase facilities and amenities, higher level of competition
- increase security and stewards to improve health and safety
- raise profile through local media or personalities to increase spectators and participants
- increase the number of stall holders, more revenue for equipment, coaches and transport
- charge or raise entry fees to raise revenue for equipment, coaches and transport
- increase alternate stall holders.

Do not accept repeat explanations

Accept the above plus any other suitable examples.

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

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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 say 'QWC raised mark to show an upward trend'. QWC cannot be used to raise a candidate's mark into the next level.

Level 3	5 marks At least two examples fully explained to show how the athletics competition could be improved next year. Candidates spell, punctuate and use rules of grammar accurately and use a wide range of specialist terms precisely.
Level 2	3 – 4 marks At least two examples with some explanation to show how the athletics competition could be improved next year. NB If only one example given and fully explained (maximum 3 marks) Candidates spell, punctuate and use rules of grammar with reasonable accuracy and use a range of specialist terms appropriately.
Level 1	1 – 2 marks At least one example with limited explanation to show how the athletics competition could be improved next year. NB A list of examples with no explanation (maximum 1 mark) Candidates spell, punctuate and use rules of grammar with some accuracy. Limited use of a range of specialist terms.
0 marks	No creditworthy material

Example Answers

Level 3 (5 marks)

There are many ways in which Graeme can improve next year's athletics event. One way would be to fully monitor or evaluate how the competition was organised and run. He will have his own opinions, but he could get competitors, coaches and spectators to fill in a questionnaire to provide additional feedback. He could look to raise the profile of future competitions by gaining more sponsors, which will enable him to offer greater prize money which in turn will attract better competitors and hence a higher level of competition. If this is the case, he may need to look at increasing the number of stall holders and possibly increasingly the facilities and services to enable the competition to run efficiently and safely. Alternative stall holders, such as bouncy castles may be attractive to young children after they have completed their events.

Level 2 (3 marks)

Graeme could improve next year's competition in a number of ways. He could look to attract higher profile athletes which will either bring in more spectators (and money) and he will be able to charge higher entry fees. With the extra money he could improve the equipment at the club and for next year's event. He could also look to improve his advertising, both locally and over a wider area so that more people are aware the event is being staged.

Level 1 (2 marks)

Graeme could look to gain more money next year by charging higher entry fees or by increasing the number of stall holders who have to pay to sell their goods.