



**General Certificate of Secondary Education  
June 2010**

**Physical Education  
Full Course**

**48903**

**Knowledge and Understanding for the  
Active Participant**

**Unit 3**

***Mark Scheme***

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' 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 to download from the AQA Website: [www.aqa.org.uk](http://www.aqa.org.uk)

Copyright © 2010 AQA and its licensors. All rights reserved.

#### COPYRIGHT

AQA retains the copyright on all its publications. However, registered centres for AQA are permitted to copy material from this booklet for their own internal use, with the following important exception: AQA cannot give permission to centres to photocopy any material that is acknowledged to a third party even for internal use within the centre.

Set and published by the Assessment and Qualifications Alliance.

---

**Section A – Part 1 Multiple choice**

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

**1** *All of the following are invasion games **except**:* (1 mark)

Tennis

**2** *All of the following could control physical activities **except**:* (1 mark)

Processes

**3** *The type of strength which can be applied to an immovable object is known as:* (1 mark)

Static

**4** *The part of a balanced diet mainly responsible for muscle growth and repair is:* (1 mark)

Proteins

**5** *In a weight training session, the number of times that you lift the weights is known as:* (1 mark)

Repetitions

**6** *When taking part in training, the minimum heart rate that you need to reach to improve your fitness is known as the:* (1 mark)

Training threshold

**7** *The correct technique for lifting is to:* (1 mark)

Bend at the knees and keep the back straight

**8** *All of the following are environmental factors **except**:* (1 mark)

Physique

**9** *PESSYP stands for:* (1 mark)

Physical Education and Sport Strategy for Young People

**10** *Each of the following is a form of organised competition **except**:* (1 mark)

Seeding

---

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

**11**            *Components of fitness are important for sports performers.*

**11 (a)**        *What is meant by the term 'timing'? Give **one** example from a physical activity where a performer uses timing. (2 marks)*

Award **one** mark for a correct explanation of timing and **one** mark for a correct example from a physical activity.

Timing:

- the ability to produce the correct movement at the optimum time
- the ability to coincide movements in relation to external factors.

Physical activity examples:

- a tennis player timing the service action to hit the ball
- a footballer using timing in order to shoot effectively at the goal
- a cricketer timing their swing for optimum contact with the ball
- golfer/ rounders/ softball, etc.

Accept the above plus any other suitable examples.

**11 (b)**        *What is meant by the term 'agility'? Give **one** example from a physical activity where a performer uses agility. (2 marks)*

Award **one** mark for a correct explanation of agility and **one** mark for a correct example from a physical activity.

Agility:

- the combination of flexibility and speed
- the ability to move quickly, changing direction and speed.

Physical activity examples:

- a hurdler in athletics going over the hurdle
- a soccer, or hockey player, dribbling with the ball
- a gymnast performing a floor routine
- a skier performing a slalom run.

Accept the above plus any other suitable examples.

**12** *Maintaining a balanced diet is essential for all performers.*

**12 (a)** *What is dehydration? How can a performer avoid becoming dehydrated?*  
*(2 marks)*

Award a maximum of **two** marks: **one** mark for correctly explaining what dehydration is and **one** further mark for correctly explaining how it can be avoided.

Examples include:

- having an abnormally low water content in the body/ drink sufficient amounts of water
- rapid loss of water from the body/ drink sufficient amounts of water.

Accept the above plus any other suitable examples.

**12 (b)** *If a performer does not have a balanced diet, they may experience problems. Name **one** of these problems (**not** dehydration). Describe the problem you have named and state how this problem might have been caused.*  
*(3 marks)*

Award a maximum of **three** marks: **one** mark for the correctly identified deficiency, or problem, **one** mark for the description and **one** mark for correctly identifying how it could be caused.

Examples include:

- obesity/ which is being extremely overweight/ which can be caused by eating too much and exercising too little
- anorexia/ which is being extremely underweight/ and is caused by eating insufficient amounts of food
- scurvy/ which causes swollen bleeding gums/ subcutaneous bleeding/ anaemia/ bruising and pain in the joints/ caused by lack of vitamin C/ contained in fruit and vegetables
- rickets/ which is where the bones fail to form and harden/ caused by a lack of vitamin D
- anaemia/ in the blood/ which is an iron deficiency
- fatigue/ shortage of energy/ insufficient carbohydrate
- coronary heart disease/ arteries blocked/ too many saturated fats.

Accept the above plus any other suitable examples.

**13** *Playing fairly, by the rules, is important when taking part in physical activities.*

**13 (a)** *Explain how rules keep participants safe.* (2 marks)

Award up to **two** marks for explaining the role which rules play in relation to safety.

Examples include:

- this can ensure that play is safe so that dangerous techniques are not used/ without this there would be no defined boundaries of acceptable behaviour
- if someone does not abide by the rules/ they can be prevented from taking a further part in the activity/ or even stopped from starting in the first place if they are inappropriately dressed or wearing incorrect equipment/ so they don't get hurt.

Accept the above plus any other suitable examples.

**13 (b)** *What might happen if a specific safety rule was not enforced? Give **one** example.* (2 marks)

Award up to **two** marks for an actual example of what could happen if a rule was not enforced.

Examples include:

- if fingernails were not cut in netball games/ opponents could be scratched if any physical contact occurs
- a dangerous, illegal technique, such a spear tackle in rugby/ could result in a serious injury for an opponent
- wearing any type of jewellery during activity, such as a belly bar in trampoline/ can result in a serious injury such as a tear wound
- not wearing shin pads when playing soccer/ could result in a serious injury such as a cut or break.

Accept the above plus any other suitable examples.

**14**      *The Healthy Schools Programme has been introduced nationally into schools.*

**14 (a)**      *Explain what the Healthy Schools Programme is.*      (2 marks)

Award up to **two** marks for a correct explanation of the Healthy Schools Programme. Reference to a programme which improves or develops fitness and health award **one** mark only.

- A long-term government initiative/ designed to make a significant difference to the health and achievement of children and young people.
- Young people should then be able to make informed health and life choices/ in order to reach their full potential.
- It involves a whole school approach/ to physical, emotional and social wellbeing focused on four core themes.

Accept the above plus any other suitable examples.

**14 (b)**      *There are four core themes in the Healthy Schools Programme. Name **two** of the four core themes and describe their importance.*      (4 marks)

Award **one** mark for each of the four core themes named correctly (maximum of 2) and **one** further mark per core theme for describing it:

- **personal, social and health education**/ incorporating Sex and Relationship Education/ also the five national outcomes of 'Every Child Matters' for children/ making a positive contribution to economic wellbeing
- **healthy eating**/ to give the confidence, skills, knowledge and understanding to make healthy food choices/ ensure that healthy and nutritious food and drink is available across the school day./ Working with School Food Trust to support healthy eating
- **physical activity**/ making sure this contributes significantly to the 'being healthy' national outcome for children/ that young people are provided with a range of opportunities to be physically active
- **emotional health and wellbeing**/ linked to the five national outcomes for children and young people/ helping children and young people understand and express their feelings/ build their confidence/ and emotional resilience/ and therefore their capacity to learn.



---

<b>16</b> (b) Describe <b>one</b> disadvantage of using the 'knock-out' format (2 marks)
--

Award up to **two** marks for correctly describing a disadvantage of knock-out competitions.

Examples include:

- a team may only play one game/ there are no second chances available
- a good team may get knocked out in early rounds/ if you play the strongest team in the first round
- some teams will get more games than others/ this would be unfair
- could be unfair/ because you might be away which is harder for most teams.

Accept the above plus any other suitable examples.

<b>17</b> A lot of sport is shown on television.
--

Describe the ways in which the director of a televised sports programme could influence how sport will be seen by television viewers. (3 marks)

Award up to **three** marks for correctly describing the influence that a director might have on the programme for the viewers not the sport.

Examples include:

- there can be a very positive influence as all of the action can be shown/ from fair and unbiased angles./ They can also influence the commentators or summarisers to be fair in their commentary and show a balanced content./ They can decide to not show disruptive aspects/ such as streakers on the pitch/ so that this sort of behaviour is not encouraged
- they can have a negative influence as they may choose to show certain parts of the action/ they can even edit shows or programmes which can give a false impression of the actual events./ They can choose to focus on poor attitudes/ or even poor behaviour by fans, to sensationalise certain aspects and give a sport, or individual a bad name
- can have a positive influence by using effects such as action replays or different camera angles, or microphones by the pitch or ref link.

Accept the above plus any other suitable examples.

**Section B – Questions based on the preliminary material**

**18 (a)** *John has chosen to take GCSE PE. Describe **two** benefits that he is likely to get. (4 marks)*

Award up to **two** marks for each clearly described benefit.

Examples include:

- physical benefits/ such as improved levels of fitness/ better body shape/ improved skill or performance levels/ better health or maintaining an active lifestyle
- academic benefits/ such as a good examination result/ gaining a qualification
- gaining a qualification/ which could lead to a further qualification or onto future employment in the area
- increased knowledge/ theoretical or practical examples of this
- emotional benefits/ such as greater self-esteem/ and emotional health and wellbeing.

Accept the above plus any other suitable examples.

**18 (b)** *How could John improve his performance levels in football? Remember his school is committed to their Physical Activity Policy and would have good provision. (6 marks)*

Award up to **six** marks for identifying improvements which could be made.

Examples include:

- core PE provision/ with all benefits which would ensure regular participation in a variety of activities which could include specific options in a Key Stage 4 option block. This could be linked with reference to both/either PESSCL and PESSYP and the benefits this is likely to bring about
- whole school policies/ cross curricular links and the specific benefits this might bring
- GCSE option time/ and the opportunities to carry out additional theory and practical work when the activity is being covered
- links to local sports clubs which could include the local soccer club or academy/ to receive specialist coaching
- outside visits to specific providers/ to use different or better facilities
- extra-curricular clubs and provision/ which could enable John to develop his skills in terms of training or team play
- positive staff attitudes/ offering encouragement to bring about improvement
- make use of school facilities to train
- improve levels by training, eg working on skill level
- improve levels by training, eg working on fitness levels
- improve levels of performance by observing live or recorded performances
- improve levels of performance by increasing knowledge and understanding of the game/ through adopting different roles, eg officials understand the rules
- make use of school facilities to train.

There could be one or two of the above points which are expanded upon or more than one of the particular aspects identified.

Accept the above plus any other suitable examples.

**18 (c)** *John has decided to be assessed as an official in football. State and describe three ways in which John could be effective as a football official. (6 marks)*

Award up to **six** marks for correctly stating and describing ways in which he could be effective as a football official.

Examples include:

- having a thorough working knowledge of the rules/ and applying these consistently
- working well under pressure/ to make and enforce decisions despite disagreement from players and supporters
- thinking and reacting quickly/ to make and apply decisions immediately
- having good observation skills/ to ensure they are aware of what is happening at all times
- having a good level of physical fitness/ to keep up with play across the pitch
- having good communication skills/ to make himself understood by all players and officials.

Accept the above plus any other suitable examples.

**19** *In order to be assessed in the Fitness and Health activity area, John has decided to plan a training programme.*

**19 (a)** *Explain how John would calculate his maximum heart rate. (2 marks)*

Award up to **two** marks for correctly explaining how the training threshold is worked out:

- 220 minus age (which is 15) = 205

**19 (b)** *Identify the different training zones and explain how John can use them to get the most out of his training programme. (6 marks)*

Award up to **six** marks for correctly explaining the training zones possible. Consideration also needs to be given to using these to improve endurance levels by increasing heart and breathing rates.

- Anaerobic Training zone/ working at 80–90% of the calculated maximum heart rate/ for a short period of time or at a high intensity.
- Aerobic zone/ working at 60–80% of the calculated maximum heart rate/ which should be maintained for at least 15 minutes for maximum effects or at a low intensity.
- Training threshold/ aerobic threshold/ lower limit of aerobic zone/ must go above this to see benefit.
- Anaerobic threshold/ upper limit of aerobic zone.
- The intensity of the work is linked to the zones.

**19 (c)** *Plan and describe an appropriate training programme for John. Include all the relevant principles of training, except training zones.*

**(Answer in continuous prose)**

**(8 marks)**

Award up to **eight** marks for both outlining and explaining an appropriate programme which could be designed and implemented.

NB Responses should relate to a training programme and not individual sessions.

Examples include:

- initial consideration of the age factor, as John is only 15 there may be concerns over certain aspects of weight training taking into account health and safety aspects
- consideration of the various principles of training to include specificity, progression, overload (to include frequency, intensity and duration or reference to the FIT acronym), reversibility, repetition and sets, training thresholds and rest and recovery (**max one mark** for stating the principles of training)
- specific training methods to be considered and possibly employed, such as weight training, circuit training or even combination training and skills training relevant to a specific activity
- time scales to be considered and the factor of availability of facilities/equipment, etc
- the advantages and disadvantages of the available training programmes and emphasis on fitness/skills techniques
- personal/individual factors specific to John such as gender, physique, his activity levels, etc
- levels of preparation and quality of teaching received in order to help prepare him to work on this programme/ also possible resources available to assist with this learning.

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.**

QWC is part of the award of marks in the questions requiring continuous prose answers only. In these answers the quality of the content is assessed and a level mark awarded accordingly to that content. As is sometimes the case, the knowledge of 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 the rise in the mark but where the 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 saying 'QWC raised mark to show an upward trend'. QWC cannot be used to raise a candidate's mark into the next level.

---

Level 0 = 0 marks	Inappropriate answer showing no clear outline and description regarding the training programme chosen.
Level 1 = 1–2 marks	Candidates' answers show basic justification for the training programme chosen. Candidates spell, punctuate and use the rules of grammar with some accuracy and use a limited number of specialist terms appropriately.
Level 2 = 3–5 marks	Candidates' answers show reasonable justification for the training programme chosen. Candidates spell, punctuate and use the rules of grammar with reasonable accuracy and use a range of specialist terms appropriately.
Level 3 = 6–8 marks	Candidates' answers show good justification for the training programme chosen. Candidates must consider at least <b>two</b> aspects of designing a training programme. Candidates spell, punctuate and use the rules of grammar accurately and use a wide range of specialist terms precisely and adeptly.

- 19 (d)** *Safety is an important part of a training programme. Describe the safety aspects that John should consider before and during training, and explain why they are important.*

**(Answer in continuous prose)**

**(8 marks)**

Award up to **four** marks for each safety aspect correctly identified and explained why they are important.

Examples include:

- using a correct warm up/ in order to prepare the body for exercise/ to prevent possible injuries/ such as muscle pulls
- activity specific rules such as having spotters when weight training when lifting free weights/ using correct technique
- general safety rules such as ensuring the training area is fit to use/ equipment is in good condition and safe/ removal of jewellery/ wearing the correct clothing and equipment
- diet related safety considerations such as keeping fluid levels maintained/ to avoid dehydration
- include rest or activity periods/ in order to prevent fatigue.

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.**

QWC is part of the award of marks in the questions requiring continuous prose answers only. In these answers the quality of the content is assessed and a level mark awarded accordingly to that content. As is sometimes the case, the knowledge of 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 the rise in the mark but where the 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 saying 'QWC raised mark to show an upward trend'. QWC cannot be used to raise a candidate's mark into the next level.

Level 0 = 0 marks	Inappropriate answer showing no clear outline and description regarding the safety aspects chosen.
Level 1 = 1–2 marks	Candidates' answers show basic justification for the safety aspects chosen. Candidates spell, punctuate and use the rules of grammar with some accuracy and use a limited number of specialist terms appropriately.
Level 2 = 3–5 marks	Candidates' answers show reasonable justification for the safety aspects chosen. Candidates spell, punctuate and use the rules of grammar with reasonable accuracy and use a range of specialist terms appropriately.
Level 3 = 6–8 marks	Candidates' answers show good justification for the safety aspects chosen. Candidates spell, punctuate and use the rules of grammar accurately and use a wide range of specialist terms precisely and adeptly.