

Examiners' Report  
June 2014

GCE Physical Education 6PE03 01

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June 2014

Publications Code UA039697

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# Introduction

## General feedback

The exam paper was of comparable structure and level to previous papers, offering a fair range of questions that were accessible to all levels though differentiated appropriately. There was no change to the standard of responses of learners.

Candidates accessed all questions and there was no indication that candidates did not have sufficient time to complete the paper appropriately. Most candidates responded within the space provided. Few offered very brief responses. Candidates were at the appropriate level to successfully complete the examination.

There were a number of aspects that would benefit candidates to prepare more effectively for their examination. These include:

The legibility of responses. The ability to read a learner response is vital for accurate marking. Significant numbers of learners either had very small writing or messy writing—both of which proved challenging to examiners. Occurrences of this appeared to be more frequent with examiners commenting frequently. Candidates should be reminded that examiners could only award what they can read.

On the essay questions (questions 8 and 9) in particular, though not exclusively, candidates offer a knowledge-based response to the subject area without specifically addressing the question. It would be beneficial for candidates to focus on the question and maintain this throughout their responses.

Many candidates used additional paper to plan their responses to questions 8 and 9. This can be included within the answer booklet and does not need to be separately attached.

## Question 1 (a)

Q1a Learners responded well to this, with most accessing two of the three available marks and many achieving full marks. The most common responses that were appropriately awarded were:

- Thermoregulation
- A drop in performance including appropriate statistics
- Replacing fluids lost through sweating
- Drop in concentration.

The most able candidates accessed all three marks and responded in clear sentences and/or bulleted points.

The less able referred to a drop in performance though included incorrect statistics or made a generic statement and so were not awarded the marks.

**Answer ALL questions.**

1 (a) Explain why water is an important nutrient for elite sports performers. (3)

It helps to keep the athlete hydrated.  
It helps ~~to~~ with thermoregulation, by helping to control the body's temperature. It helps to remove ~~that~~ waste products more efficiently.  
It helps to improve performance. It ~~lubricates~~ lubricates the athlete's joints.



**ResultsPlus**  
Examiner Comments

The learner has clearly correctly explained 3 aspects included in the mark scheme and is awarded maximum marks.

## Question 1 (b)

Q1b Candidates were able to access this question fully and achieved well. Many were able to access all four marks and some offered more than could be credited. The most commonly awarded responses were:

- Temperature
- Humidity
- Duration of the activity
- Intensity of the activity
- The needs of the individual.

The less able candidates referred to the climate and/or repeated the same aspects such as drinking before, during and after an activity.

(b) Outline **four** factors that need to be taken into consideration when planning a hydration strategy for an athlete. (4)

- 1 Humidity of environment because of the evaporation of sweat
- 2 Wind in the environment because of the evaporation of sweat
- 3 How long ~~intensity of activity~~ the activity will last
- 4 Intensity at which you are working at.



**ResultsPlus**  
Examiner Comments

The learner has referred to four factors and outlined them succinctly. Full marks have been awarded.



**ResultsPlus**  
Examiner Tip

Keep responses precise and ensure one factor can be identified from another.

## Question 2

Q2 Candidates again were well prepared for this question and most responded well, able to access at least six of the nine available marks.

The most common external influences were:

- Home advantage
- Crowd effect
- Presence of others
- Importance of the competition

The most common strategies were:

- Mental rehearsal
- Visualisation/imagery
- Practice in similar conditions
- Positive/self-talk
- Relaxation techniques, including centring.

Some candidates offered the same strategy for different external influences and were credited for this.

Higher-level candidates were able to justify their chosen strategy with lower level responses not including this.

2 Identify **three** external influences that can affect a performer's short-term psychological preparation.

Justify a strategy that could be used to manage each influence.

One external influence could be an high level of anxiety due to the build up of media pressure. Depending on whether the performer is elite or a beginner means that it could positively or negatively affect performance. The performer could use relaxation techniques to decrease anxiety.

Another external influence could be pressure from the performer's coach, this could build up anxiety for the performer. The performer could use self talk to reduce the build up of anxiety.

Finally, an external influence could be family problems, such as a divorce which could have built up a lot of arousal. The performer could use imagery where they look back on past performances which were successful and this could reduce arousal and increase motivation.



**ResultsPlus**  
Examiner Comments

The candidate has produced a well structured response identify three external influences, a strategy and then justifying this. The accuracy of the response, the logical order and the clarity results in maximum marks being awarded.

### Question 3

Q3 Many candidates found this question challenging and included pre-exercise strategies rather than post exercise. This limited the marks the candidates were awarded.

Lower level candidates were able to access two marks by referring to hypertonic drinks and carbohydrate drinks/gels. Some also referred to cool down activities though many didn't refer to more than two of these three areas. Many referred to creatine and carbohydrate loading and generically to the window of opportunity but did not relate this to carbohydrate. This was not credited.

More able learners detailed correctly consuming carbohydrate within the two-hour window. The most common responses to access the marks were a maximum of two marks for carbohydrate, a maximum of two marks for drinking fluids and then a cool down however very few candidates achieved more than four marks.

3 In the recovery phase after exercise, what strategies can an athlete use to enhance the restoration of ATP, PC and glycogen stores?

In the lactic acid stage of recovery (fast component) ATP and PC stores are replenished. This can be sped up through the use of an active recovery or a cool down. Restoration of glycogen can be sped up through carb loading in the week leading up to an event or consuming carbohydrates in the 'window of opportunity' of a few hours after exercise. Drinking hyper tonic drinks which contain glucose can help to restore glycogen. Also having energy / glucose gels and bars. Athletes can also use supplementation such as creatine which helps to increase PC stores this helps with the restoration of ATP as ~~#~~ phosphate is used in the endoenermic reaction to convert ADP back into ATP.



#### ResultsPlus Examiner Comments

Though this learner has referred to some pre exercise strategies (and not been awarded for this) they then have referred correctly to post exercise strategies in full. They also state the window of opportunity and the consumption of carbohydrates. Many learners did not refer to carbohydrate and so limited the marks they were awarded.



#### ResultsPlus Examiner Tip

Read the question fully such as pre exercise, to avoid irrelevant responses that do not receive credit.

## Question 4

Q4 Many candidates found this question challenging and confused adaptations and benefits. Many responded with a benefit as an adaptation and then offered a sporting example as the benefit and so were not awarded marks for this.

Also many learners responded with general cardiovascular adaptations that are not specific to plyometrics such as increased cardiovascular efficiency. This was not credited.

Lower level candidates were able to access two marks by including muscle hypertrophy leading to increased strength. A few then did respond further with stronger ligaments and tendons leading to a reduced injury risk.

More able learners detailed correctly adaptations such as increase in rate of fibre recruitment and increased elasticity of fibres and tendons.

Very few candidates achieved more than six marks.

4 List **four** adaptations that a long-term programme of plyometric training might be expected to develop.

For each adaptation suggest a benefit for sporting performance.

Muscular hypertrophy - this will increase the athlete's strength and power.

Increased ~~fibre recruitment~~ muscle fibre recruitment - this will increase force production.

Increased muscle elasticity - this will improve the athlete's flexibility and range of movement.

Increased strength of tendons / ligaments - this reduces ~~chance~~ chance of injury and improves range of movement.

~~Delayed onset~~

Delayed Doms - reduced fatigue and more efficient removal of ~~lactate~~ lactic acid.

Increased muscular endurance - reduces fatigue and muscles can work harder and for longer.



**ResultsPlus**  
Examiner Comments

A well structured response logically answering the question in full. Easy to follow and using technical language effectively. A worthy response of high credit.

## Question 5

Q5 Candidates on the whole responded well to this question though were able to explain Nach more effectively than Naf.

The more able candidates were able to clearly define achievement motivation and then fully explained this without repetition.

The less able did not attempt to define or simply stated it was motivated by achievement, so re-ordering the words. Some candidates referred to intrinsic and extrinsic motivation and so were not awarded any marks for this.

5 Define the term **achievement motivation** and explain its effects.

achievement motivation is the drive within the performer to achieve success for the sports sake. This involves the performance, the result and also the means by which is achieved, and also the characteristics of the performer whether they are introvert or extrovert, it can also be separated by to types of achievers such Nachs, or NAFs, Performers who need to achieve (Nachs) are performers who may not be afraid to lose and want to try things, they accept feedback and are not also settled by success but by the means by which is achieved, methods. Other performers need to avoid failure (NAFs) they may feel afraid of defeat and play conservatively in order to achieve, they may not be open to experimental methods to succeed, may be pressured to winning and don't like receiving feedback.



**ResultsPlus**

**Examiner Comments**

This candidate responds to the question in order offering a definition and then explaining the effects correctly. The sentence structure and logical presentation that is clearly legible ensures full marks are awarded.

## Question 6

Q6 Candidates had prepared well to respond fully to this question and were able to access all eight marks. Responses were well structured and had clearly been well taught and learned. Most learners accessed at least half marks or more and showed a strong understanding of the topic. Some candidates required more space to answer this question and this was a reflection of the level of knowledge. Candidates did offer more than the maximum marks would allow to be credited.

6 Outline the elite sports system that identified and nurtured sports talent in East Germany from 1960 to 1980.

The East Germany wanted to gain international ~~see~~ recognition and success at world games. Their sports system was centralised, state controlled and state funded. They went into primary schools and tested every child for a range of tests i.e. measurements, fitness tests. Those who scored well were sent to national sports boarding schools, where their talent was developed. There was 6 hours of training and 2 hours of academic study per day. They were re-tested and entered into "Spartakiad" which was a mini-olympics. If they scored well, they progressed to the state and national centres. East Germany were the first to breakthrough with sports science; each athlete had their own scientist, doctor and coach. This led to systematic doping. East Germany developed hypoxic chambers and treadmills.

(Total for Question 6 = 8 marks)



### ResultsPlus Examiner Comments

An extremely full response which refers to eight aspects included in the mark scheme. Full marks awarded.



### ResultsPlus Examiner Tip

This learner has not wasted valuable space and time repeating the question and immediately started the response to achieve marks.

## Question 7

Q7 Candidates were able to access at least two marks from the available six on this question. Most candidates were able to achieve four or more.

Higher-level candidates demonstrated a full understanding of centralised and decentralized and were able to give correct examples of each.

Those scoring two marks or less were often confused about these systems and often stated that the UK was centralised. The role of national governing bodies was confused and candidates at all levels were able to explain centralised much better than decentralised.

7 Explain the difference between a centralised and a decentralised approach to the management of elite sport.

A centralised system in elite sport is when ~~the~~ sport is controlled by the state. Sport is funded by the public sector (taxes/lottery). This results in athletes being used as a 'political tool' and rely on their performances for funding. Examples include East Germany or Australia. A de-centralised system is where no single institute takes control. It utilised the Education pathway through colleges. Funding is made from sponsors and has been proven to be highly successful with the USA using this approach and being prospering from it.



**ResultsPlus**  
Examiner Comments

The candidate explains the differences in two structured paragraphs offering an example of each. This therefore is awarded full marks. The differences are clear to distinguish with the structure of the response enhancing this.



**ResultsPlus**  
Examiner Tip

Where a question asks for differences, or contrasting aspects the learner needs to make it clear what they are referring to. Many candidates offered a response where it was unclear if they were referring to a centralised or decentralised approach. This limited achievement.

## Question 8

Q8 Most candidates attempted this question and were able to access some marks.

The majority of candidates were awarded at level 2. These responses fully detailed the theory of recovery with extensive descriptions of ergogenic aids. There was then limited evaluation of the pressures on elite performers with few exploring the role of coach and athlete.

Some learners did focus on the pressures and were able to link this to recovery and so were awarded at level 3. However many at this level then digressed into the impact of drugs on performance and so did not access higher than 13 marks.

Few candidates were able to highlight a range of pressures or offer insight into pressures and so a very limited number accessed level 4.

Candidates would benefit from focusing on the discussion aspect of this question. Many candidates described at great length though did not answer the question fully.

\*8 Discuss how the pressures on elite sports performers in the 21st century have made the concept of recovery a challenge for them and their coaches.

Plan

- more intense - performance levels higher
- tougher on body
- more training
- more matches
- longer seasons
- less breaks
- so no id season - internationals
- money - players who not too '6
- mental pressure from media can exhaust
- sponsorship demands
- change in surface hockey
- bigger impacts - rugby
- money brings temptations

Recovery has become more difficult for a number of reasons.

Elite performers train harder and more often than before this makes recovery more difficult they have more recovery to achieve in a shorter space of

time before next training session or match.

The pressure for more matches largely comes from the media and spectators as they want to see their athletes more regularly. The pressure for more training and more intense training comes from the vast amount of money that is now involved in sport. Owners/sponsors etc want performers to succeed and do everything they can to make that happen.

Sponsors can also make recovery difficult as athletes have commitments to these sponsors and these sometimes can conflict with recovery strategies whereas in the past athletes would not have these commitments or at least not as many.

Change in technology has also made recovery harder. In rugby players are bigger and more powerful than before so the impact when hit each other is greater and therefore tougher on the body. Also the change in surface with Saracens Rugby Club moving from grass

to harder artificial pitch again increase impact on body.

The increase in money mentioned earlier makes recovery harder in some ways as it is tempting for a rich and famous athlete to perhaps go out at night after a big game and enjoy their fame and wealth. This gives less recovery time before the next session as the body would not be getting helpful nutrients for recovery from a bar or club.

Less of an off season, as seasons are lengthened so that interest from spectators stays high more of the year.

gives a smaller window for rest. Combine that with international sport quite often being played in off season further reduces opportunity for recovery. Eg. International hockey players could complete 11 months of the year

However the 21st has also made recovery easier in lots of ways. Compression clothing worn during and after sport speeds up recovery, reducing recovery time. Improved knowledge of physiology aids recovery. Invention of cryogenic chambers ~~boosts~~ boosts recovery so much that multiple training sessions in one day possible.

I think that 21st century pressures give athletes less time to recover but 21st century technology ~~enables~~ enables the time available to be used more effectively. (Total for Question 8 = 20 marks)



## ResultsPlus

Examiner Comments

This learner has referred to pressures for both the athlete and coach. They have looked at a range of pressures and contrasted developments that have eased pressure on recovery. The response is well structured. To achieve higher marks this learner needed to focus in greater detail on pressures, including more fully pressures placed on coaches and athletes both as one unit and separately.

## Question 9

Q9 Most candidates attempted this question and were able to access some marks.

The majority of candidates were awarded at level 2. These responses fully detailed the theory of supplementation with extensive descriptions a broad range of supplements. There was limited evaluation of the potential issues with such practice. Some learners did state there was a fine line between legal and illegal supplements though then digressed into the impact of drugs in sport with extensive examples of this.

Some learners did focus on the issues and were to explore aspects such as deviance into illegal drugs, a lack of understanding of supplements and their long-term effects as well as the cost and limited accessibility in some parts of the world and so were awarded at level 3.

Few candidates were able to highlight a range of issues or offer insight into issues and so a very limited number accessed level 4.

Candidates would benefit from focusing on the discussion aspect of this question. Many candidates described at great length though did not answer the question fully.

**\*9 Discuss the reason why elite sports performers might use supplementation in their preparation and highlight the potential issues with such practice.**

*Handwritten notes:*

- naturally drugs
- some legal, others don't, just play stupid
- human achievement?
- technology how energy?
- 5 all forms health risks

*Handwritten text:*

Elite sports performers have used supplementation for many years to attempt to put themselves in the best state during preparation. However use of supplementation does have its critics and issues.

Elite performers use supplementation for a number of different reasons. The first and most straightforward of these is the desired adaptations the supplements can help to achieve. Creatine used during training can help increase ability of short, high intensity movements, can increase the bodies phosphocreatine stores and also aid in muscular hypertrophy. This shows how supplements are used to ensure that athletes do achieve their desired adaptations while preparing and training.

performers will also use supplementations to speed their recovery time. In a time when athletes have to perform in an increasing level of performance the speed at which they can recover, and also the speed which they can achieve

athlete who needs to recover quickly. Supplements also help to give athletes a psychological boost during their preparation. In an elite sporting society where the margins of victory have become smaller and smaller. An elite athlete who has been using supplementations such as Calcium tablets for an athlete who is returning from a bone injury, this supplement may therefore give the athlete the ~~edge~~ desired psychological boost during their preparation to place them in the peak area of arousal and mental preparation for upcoming events.

However, there are a growing number of potential issues with increasing use of supplements by elite performers. Firstly, many have pointed out that there is a very fine line between allowed supplements and banned drugs and that new supplements that have yet been tested fully may give athletes an unfair advantage. Also many previously used supplements have now been banned as drugs such as Amphetamines which were commonly used by cyclists. Another issue some have with supplementation use is that some athletes are able to get hold of them whilst there are ~~other~~ other competing athletes who are not. This prompts some to argue that supplementation therefore is adding to an unfair playing field in some sports and should therefore be banned. Other arguments state that supplementations stop sport being about human achievement. Sport was ~~originally~~ originally

started by humans to be a test of human limits and abilities. They therefore argue that supplementations taken by athletes inhibit the ability of sports to test this and therefore ~~shouldn't~~ shouldn't be used in sport. Others have argued that the moving and ever improved technology

now ~~available~~ available to athletes such as improved equipment such as streamline cycle helmets are now enough to give athletes the optimal amount of competitive advantages and that any ~~that~~ taken supplementation or top of this tips that our into an unfair advantage and then therefore should not be used.

To conclude, supplementation is an important part of preparation for both short and long term athlete preparation, supplying athletes with an added competitive edge, however governing bodies must ensure that supplementations only ever give a competitive advantage and not an unfair one. It is plain to see why athletes use supplementations with such large ~~into~~ ~~into~~ incentives to win and I expect this will only continue and increase



**ResultsPlus**

**Examiner Comments**

This response is one of the highest awarded. It includes contrasting views of supplementation and some of the issues arising from their use. It focuses primarily on these issues rather than a description of different supplements. It explores the dangers of supplementation and the pressure key stakeholders are faced with when choosing to supplement or not. It also explores some of the ethical issues. To achieve higher marks the candidate needs to focus more on these issues, developing further the issues.

## **Grade Boundaries**

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