

AQA

A2

**Physical
Education**



Questions and Answers

Questions and answers



This online resource comprises a worksheet with some exam-style questions, a summary of some frequently asked questions and, finally, a sample unit test. Mark schemes, specimen answers and examiner commentaries are provided to clarify what is required and to enable you to assess your answers. These examples, from across the specification, will give you an idea of the kinds of questions you will be asked in the Unit 3 exam paper and will therefore help you with your revision.

Contents

Worksheet	3
Section A	4
Section B	6
Section C	9
Answers/mark schemes	12
Frequently asked questions	19
Applied physiology to optimise performance	19
Psychological aspects that optimise performance	19
Evaluating contemporary influences	22
Sample unit test	24
Section A	25
Section B	26
Section C	27
Answers	28



Worksheet

This worksheet comprises three sections, each worth 28 marks. In each section you must answer part **a** (the compulsory 14-mark question) plus two of **b**, **c** or **d** (worth 7 marks each).

Mark allocations are shown in brackets.

The time allowed for this worksheet is 2 hours.

- e** The first (extended) question in each section is marked using a banded mark scheme. Once the question has been marked, the examiner will look at the answer and place it into one of the bands given in the table below. Remember, the key to success is factual content.

Band range	Band descriptors
11–14	<ul style="list-style-type: none">● Addresses all aspects of the question, demonstrating a wide range and depth of knowledge● Expresses arguments clearly and concisely● Good use of examples to support answer● Few errors in spelling, punctuation and grammar, and correct use of technical language
7–10	<ul style="list-style-type: none">● Addresses most aspects of the question, demonstrating a clear level of knowledge● Attempts to express arguments clearly and concisely● Uses examples to support answer● Few errors in spelling, punctuation and grammar, demonstrates use of technical language although sometimes inaccurately
3–6	<ul style="list-style-type: none">● Addresses some aspect of the question but lacks sufficient depth and knowledge● Limited attempt to develop any arguments or discussions, normally vague or irrelevant● Attempts to use examples although not always relevant● Errors in spelling, punctuation and grammar and limited use of technical language
0–2	<ul style="list-style-type: none">● Addresses the question with limited success● Little or no use of examples● Major errors in spelling, punctuation and grammar, with no use of technical language

Questions and Answers



b What are the main energy sources used by an athlete during a 400 m sprint?

Explain the predominant energy system used during this time.

(7 marks)

.....

.....

.....

.....

.....

.....

.....

.....

c During a game of football, identify the forces that act on a player when he/she is running towards a ball, and describe the effects of forces on the flight of the ball when it is kicked towards a team-mate.

(7 marks)

.....

.....

.....

.....

.....

.....

.....

.....

d Temperature regulation can be a problem during exercise, especially when the activity is very demanding. Why does an increase in body temperature cause problems and how could a marathon runner regulate his/her temperature during a race?

(7 marks)

.....

.....

.....

.....

.....

.....

.....

.....

Questions and Answers



b Attitudes have an important influence on sports performance. What is meant by the term attitude and how are attitudes formed? (7 marks)

.....

.....

.....

.....

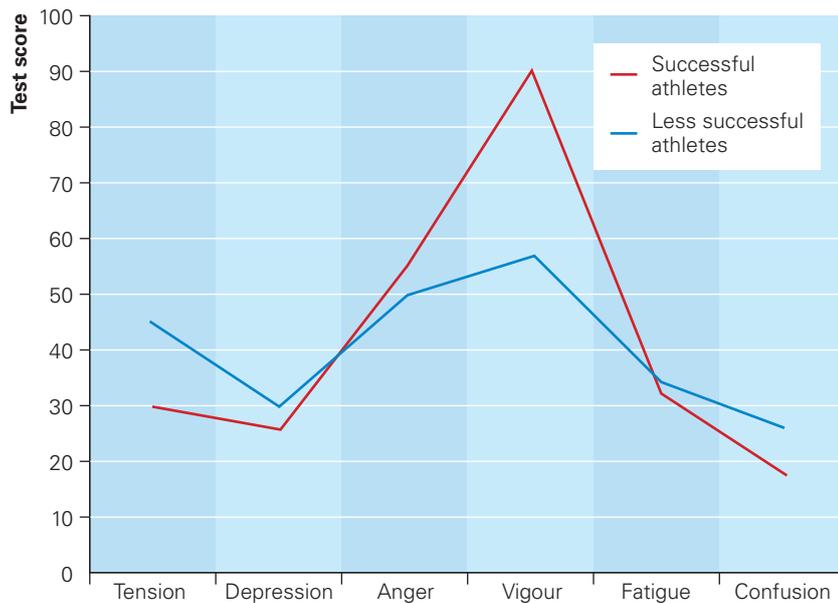
.....

.....

.....

.....

c Morgan's profile of mood states (POMS), shown in the diagram below, is a questionnaire given to performers to establish their relative measures on the six mental health states of fatigue, vigour, tension, depression, anger and confusion.



The profile of mood states

(i) Research has shown that the profile for POMS differs between elite and non-elite performers. Describe these differences. (3 marks)

.....

.....

.....

.....

Questions and Answers



(ii) What are the advantages and disadvantages of using questionnaires to provide psychological information?

(4 marks)

.....

.....

.....

.....

.....

.....

d When taking part in a healthy lifestyle the performer may become part of a group.

(i) How would you distinguish a group from a collection of individuals?

(3 marks)

.....

.....

.....

.....

(ii) Name and explain the stages that lead to group formation.

(4 marks)

.....

.....

.....

.....

.....

.....

Questions and Answers



b (i) The UK has set up a network of institutes for sport in each of the home countries, which form the UKSI. What are the main functions of the UKSI? (4 marks)

.....

.....

.....

.....

.....

(ii) Improving standards of performance through high-quality coaching is important in the UK's attempts to gain more global sports success. How does Sports Coach UK help improve standards of coaching to aid the development of elite performers? (3 marks)

.....

.....

.....

.....

.....

c (i) The start of the twenty-first century has seen increased commercialisation in the UK of sports such as football and cricket. Give reasons to account for such an occurrence. (3 marks)

.....

.....

.....

.....

.....

(ii) What arguments can be used to back up the suggestion that the introduction of huge financially beneficial commercial deals have had a negative impact on the values of sportsmanship and fair play in sport? (4 marks)

.....

.....

.....

.....

.....

Questions and Answers



d (i) A number of initiatives have been put in place with the aim of competing more successfully on the 'world stage' in sport. Give reasons for the use of structured talent identification programmes to support the development of elite performers.

(3 marks)

.....

.....

.....

.....

.....

.....

(ii) The FA was one of a number of national governing bodies established in the second half of the nineteenth century. Why were such NGBs established at this time?

(4 marks)

.....

.....

.....

.....

.....

.....



Section A: answers/mark scheme

Question 1

- a **e** This is the extended question worth 14 marks. A banded method of marking is used for assessment (see page 3). A mark is given for knowledge and then the candidate is placed into a band of marks. These bands are 11–14, 7–10, 3–6 and 0–2 marks. A mark is then awarded according to how the answer relates to the descriptors in each band. These include the quality of your 'written communication', so you need to pay attention to your spelling, punctuation and grammar.

Hyperbaric chambers reduce the recovery time for an injury ✓. The chamber is pressurised to increase the amount of oxygen that can be breathed in ✓ so that more oxygen can be diffused to the injured area ✓. The dissolved oxygen can reduce swelling and repair cells ✓.

Elite sports men and women sleep in oxygen tents as it is the same as being at high altitude ✓ with low levels of oxygen ✓. The low levels of oxygen cause a production of more red blood cells ✓ and haemoglobin ✓. This means that more oxygen can be extracted from the blood for extra energy ✓. Oxygen tents do not decrease recovery time but they do allow performers to maintain levels of fitness ✓.

Ice baths are used after training sessions or matches by elite performers. This involves getting into an ice bath for 5 to 10 minutes ✓. The cold water causes the blood vessels to tighten and drains the blood out of the legs ✓. On leaving the bath the legs fill up with new blood that flushes the muscles with oxygen ✓. The blood that leaves the legs takes away with it the lactic acid that has built up during the activity ✓.

- e** This comprehensive answer covering the physiological reasons for the use of these aids scores 14 out of 14. Questions on this area could also ask about the type of performer who uses the aids and may require you to look at the effectiveness of them.
- b **e** A common mistake when answering this question is to name both the ATP/PC system and the lactate anaerobic system. The question asks for the predominant energy system, so naming both is incorrect and results in no marks. The predominant energy system in use during the 400 m is the lactate anaerobic system and this should be explained.

The energy sources used by the sprinter are phosphocreatine ✓ and glucose ✓. The main energy system is the lactate anaerobic system ✓. This is anaerobic ✓ and glucose is broken down into pyruvic acid ✓. Two ATPs ✓ are formed and lactic acid is the by-product ✓. This system takes place in the sarcoplasm ✓.

- e** This answer makes more than enough points as the correct energy sources are identified and the correct energy system explained.

Questions and Answers



- c **e** This question requires a knowledge of the vertical forces — weight/gravity and reaction — and the horizontal forces — air resistance and friction. Try to make sure that you apply knowledge of these forces to the sporting example in the question.

The forces that act on a player are gravity ✓, friction ✓ and reaction ✓. The force provided by the muscles changes the motion of the ball ✓. The flight path of the ball is affected by gravity, which pulls the ball down to the ground ✓, and air resistance ✓.

- e** This answer scores 6 out of 7. Remember that both vertical and horizontal forces act upon a performer. Air resistance could also have been mentioned here. However, when the ball is in the air, it becomes a projectile and only gravity and air resistance are the relevant forces. The parabolic flight path of the ball could also have been mentioned.

- d **e** There is more emphasis on temperature regulation in the new specification, so make sure you understand it! It is very easy to overlook a relatively small part of the content covered, so relate your revision closely to the requirements of the specification.

Muscle contractions cause heat ✓. This raises core body temperature ✓. As a result, blood viscosity increases ✓ and metabolic processes slow down ✓. Sweating becomes less efficient ✓ and dehydration occurs ✓. Marathon runners regulate the rise in temperature they experience through vasodilation of the blood vessels ✓. Vasodilation is controlled by the medulla oblongata ✓ in the brain. It causes heat to be lost through sweating ✓, radiation ✓ and convection ✓.

- e** This answer scores much more than a max! Questions on temperature regulation usually ask two things: what happens when there is an increase in body temperature and how temperature is controlled.



Section B: answers/mark scheme

Question 2

- a **e** This longer question requires both detailed knowledge and the ability to construct an answer logically. See the explanation of banded marking on page 3. It is a good idea to jot down a few points on the exam paper before you write so that you do not miss any key points. Each theory that explains how aggression is caused should be explained in detail to gain maximum marks. Give your definition of aggression first, then use theory to explain how it is caused.

Aggression in sport is an intent to harm ✓ that is outside the rules ✓ of the game, and is often uncontrolled and reactive ✓ behaviour. An example is a foul tackle in football that is aimed at the player's leg rather than the ball. There are four theories that explain how aggression is caused.

The instinct ✓ theory suggests that an aggressive instinct is innate ✓ and is a product of evolution. This aggressive instinct can surface when players react ✓ to being provoked (e.g. when they are fouled) and some players need only a little provocation!

The frustration–aggression ✓ hypothesis suggests that once our goals have been blocked then a build-up of frustration means that an aggressive inclination is inevitable ✓. If this aggressive tendency can be released in the form of a reaction from the player, then a subsequent calming down or catharsis ✓ might occur once the player has 'let off steam'. If the aggressive tendency cannot be released — perhaps the player is unable to reach the player who committed the foul — an even greater aggressive inclination ✓ can occur. The things that might cause an aggressive inclination in sport include being fouled ✓, a poor decision by the referee or losing the game.

The aggressive cue ✓ hypothesis suggests that aggression is caused by certain learned ✓ cues that can be present during the game and that these cues can trigger ✓ an aggressive response once they are encountered. A corner kick in football can trigger the players to start pulling shirts and committing fouls, for example. Such cues have been seen and learned by the players in previous games.

Aggression can also be caused by social learning ✓. Players will copy ✓ the aggressive behaviour of significant others who they hold in high esteem ✓, especially if the aggressive behaviour is reinforced. The fouling of an opponent by a senior player, to prevent a certain score, may be reinforced — behaviour that is copied. The fact that sport is live ✓ makes it more likely to be copied.

- e** Marks are awarded for naming the four theories that cause aggression and describing the key points of these theories. You need to know the theories in detail to gain top marks.
- b **e** This question requires recall of the definition of attitudes combined with an applied knowledge of how such attitudes are formed. You should note that attitudes can be positive or negative, but that a common set of influences leads to their development.

Questions and Answers



An attitude is a state of readiness ✓ or expectation directed at an attitude object. It is an idea charged with emotion ✓. Such attitudes can be learned ✓ from past experiences ✓, such as the enjoyment gained from taking part in a pleasant mountain walk. Attitudes can be learned from the media ✓ in sport, such as negative coverage given to the England football team. Attitudes can be learned from significant others ✓ such as role models ✓ and our parents and friends; if they display positive attitudes to sport then we are likely to follow. If your parents took you to junior football coaching then you are likely to develop positive attitudes to football, especially if you enjoyed it. Positive reinforcement ✓ and making activities fun ✓ and enjoyable could also lead to the development of positive attitudes.

- e** This answer defines attitude clearly, for 2 marks. It then describes the key influences on attitude formation. Reference to positive and negative attitudes could have been made.
- c** **e** This question requires you to recall knowledge using the graph that is given in the question to help you. Use the graph as a base on which to build your answer. The problems with questionnaire methods are the reasons why research into personality is so unreliable.
- (i)** The profile of mood states shows that unsuccessful and successful athletes have similar ✓ mood states apart from the mood of vigour ✓, when it is clear that successful athletes have a much higher ✓ mood rating. The profile of the successful athlete is called the iceberg ✓ profile.
- (ii)** The problem with using a questionnaire to provide psychological information is that the results can be inconsistent, unreliable and therefore invalid ✓. Some athletes will not give reliable answers on a questionnaire because they give a socially acceptable ✓ answer to fit in with their peers and this answer may not be truthful. They may even misunderstand ✓ the question. The advantage of using a questionnaire to measure sports psychology is that it is quick ✓ and efficient and can produce a lot of factual information ✓ in a short time.
- e** The answer to part (i) uses the graph to gain full marks by stating the differences between successful and less successful athletes. There is scope for full marks in part (ii) by listing the advantages and disadvantages of questionnaires.
- d** **e** To answer this question you should list the characteristics of a group and then recall and explain the four processes that lead to the formation of a group in a logical time scale.
- (i)** A group can be distinguished from a set of individuals because it will have an identity ✓, such as a team tracksuit. The group will show communication ✓ and interaction ✓ and will be working to achieve a set of common ✓ goals.
- (ii)** The four processes that lead to the formation of a group are:
- forming — when the group gets together to learn about each other ✓
 - storming — when conflicts and rivalries develop between group members ✓
 - norming — when the group begins to solve its differences ✓
 - performing — when the group starts to work to achieve its common goals ✓
- e** This answer lists four features of a group and then describes the four stages of group formation — ensuring full marks are scored.



Section C: answers/mark scheme

Question 3

- a **e** This is an example of a 'banded' question (see page 3). It is compulsory, so you must try to get as many of the 14 marks as possible. The key thing is to write as many factually correct points as possible, as this will dictate the 'band' you are placed in.

In my answer I will explain how having more free time helped to increase participation in rational recreation from the mid-1850s and talk about the impact of such a development resulting from improved transport links.

Following an initial decline in available free time resulting from industrialisation, there was a gradual improvement for the working classes, who spent less time at work as the years went on, giving them more time ✓ and energy ✓ to participate in sport. Factory owners were kind to workers, giving them paid holidays ✓ and paying for trips to the seaside, which they could not afford themselves ✓. Football for the masses was developed for the Saturday afternoon that workers were granted off ✓.

Working conditions improved at the same time as transport developments occurred, which helped rational sport continue to spread into wider society. Growth of the railway network and the steam train meant that players could travel further ✓, as could fans ✓, with less time spent going from one end of the country to the other ✓. This meant that regular fixtures could be played ✓ (e.g. football on a Saturday afternoon in the winter) and eventually the football league ✓ was set up in the late nineteenth century.

- e** This is a good answer that clearly separates the response into the two main parts set out in the question. It contains a similar number of relevant points for both parts of the question, with good use of practical examples to illustrate some of the points made. It is well written using excellent grammar, spelling and continuous prose, which is important in this compulsory 14-marks banded question. This answer would probably be at the top of the second band or at the bottom of the top band—a total of 10 points (5 from each part) will dictate the band in which it is placed before additional marks are credited for quality of written communication. A few more points could have been made and the answer could have been brought up to date by linking current availability of leisure time and transport issues to their effects on participating in and watching sport.

b (i)

Functions of UKSI. Any four points from:

- increase success in world sport/more medals
- provide high-quality facilities
- provide high-quality coaches
- provide performance lifestyle advice
- work closely with NGBs in the development of talent
- links to Sports Colleges to progress talent
- coordinate research and development, drawing together best practice from across the world to apply to sports excellence in the UK



(ii)

Any three points from the following. Sports Coach UK helps by:

- providing coaching workshops/development of High Performance Coaching
- running the Coaching for Teachers scheme (leads to better quality sports coaching in schools by teachers)
- producing books and DVDs to improve knowledge of coaching (sold by Coachwise Ltd)
- working closely with other organisations to develop highly skilled coaches (e.g. NGBs and specific resources to meet their needs)
- providing a support network of regional Coach Development Officers
- aiming to develop infrastructure/structured coaching system in UK in preparation for 2012
- leading and developing more professional coaching policies/setting higher national standards of coaching

c (i)

Reasons for increased commercialisation of sport. Any three from:

- sports are attractive to media/sponsors due to higher playing standards
- professional organisations/NGBs/management structures are now more evident to maximise commercial revenues
- a profit-making motive is evident (positive benefits from links to sport)
- increased media coverage of sport
- changed style of media presentation (e.g. based more on entertainment for whole family/specialist sports channels, etc.)
- increased merchandise sales as a result of higher media profile of sport

(ii)

Any four of the following. Values of fair play/sportsmanship less likely due to:

- winning becoming far more important (e.g. Lombardian ethic)
- increase in pressure to be successful and get product promoted as much as possible
- more likely to break contract to compete/cheat/be deviant
- more likely to resort to drug taking
- more prosecutions occurring due to foul play
- gamesmanship more common (e.g. time wasting)

- **e** The emphasis of the question requires links mostly to behaviour in the actual sporting arena as opposed to off-the-field activities such as being paid more.

d (i)

Any three of the following. Talent identification programmes help in the following ways:

- screening of all potential performers
- can help direct individuals to the most appropriate sport(s)
- leads to cooperation/partnership between organisations involved in elite sport
- accelerates the programme of development
- it is a good use of funding/resources
- it ultimately means an improved chance of winning more medals



(ii)

Any four of the following. NGBs were established because:

- of higher numbers of participants
- lots more teams were forming
- there was a need for nationally agreed rules
- leagues/competitions were required
- public school old boys wanted to maintain 'amateur traditions' in sport
- to deal with the threat from professionalism



Frequently asked questions

Applied physiology to optimise performance

Energy systems

Questions on energy systems are always a popular choice. 'Intensity' and 'duration' are key words when deciding which energy system the question is asking for. High-intensity activities lasting up to 10 seconds, such as the 100 m, will use the ATP/PC system. High-intensity activities lasting over 10 seconds, such as the 400 m, will use the lactate anaerobic system and activities involving lower intensity work and longer duration use the aerobic system. Once you have decided which energy system is in use (or it may be a mix), then it is relatively straightforward to identify the energy sources:

- phosphocreatine — ATP/PC system
- glycogen/glucose/carbohydrates — lactate anaerobic system
- glycogen/glucose/carbohydrates/fats/triglycerides/fatty acids/proteins — aerobic system

Muscles

Questions are frequently asked on the characteristics of muscle fibre types. If the question asks for fast-twitch characteristics, learn the following as they are probably the most straightforward to remember: low number of mitochondria, low myoglobin, low capillary density, low triglyceride stores, high glycogen stores, high PC stores and low fatigue resistance. These characteristics can be used for slow-twitch fibres — just reverse them!

Specialised training

There are often questions on relatively small parts of the specification, such as glycogen loading, temperature regulation, muscle spindle apparatus and its role in proprioceptive neuromuscular facilitation (PNF) and plyometrics — so make sure your revision is thorough.

In the past there have been individual questions on muscle spindle apparatus. However, this topic area will now be covered only in conjunction with PNF and plyometrics.

Mechanics of movement

Frequently asked questions for biomechanics involve forces, impulse and angular motion. Questions on forces are usually related to Newton's laws of motion and their application to physical activity, and knowledge of the forces that act on a body through the use of vectors and free body diagrams. Impulse questions usually involve definitions, such as 'What do you understand by the term impulse?' Angular momentum questions usually ask the candidate to comment on differing body positions and how they affect the speed of the spin. This requires knowledge of the relationship between angular momentum, moment of inertia and the speed of the rotation.

Psychological aspects that optimise performance

Leadership

Questions on leadership are common and tend to follow a pattern of asking for a definition (such as 'What do you understand by a prescribed or an emergent leader?') and then asking for some explanation of a related theory (such as that of Chelladurai or Fiedler). A definition question will require simple recall — so learn your key terms. The explanation of theory requires recall and application. You may well be asked to describe the key points of the theory and then to apply it using an example. In Chelladurai's model, for example, there are three factors that

Questions and Answers

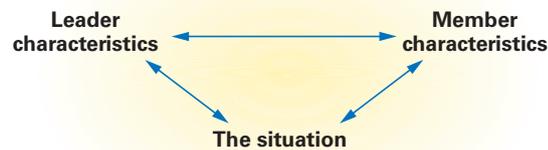


affect leadership and you should be able to give sporting examples that help to explain each one. The examiners will often want you to explain how the choice of leadership style is affected by the three factors outlined in the Chelladurai theory. The trick is to know each style of leadership and explain how and when it is best used.

Sample question

A leader is described as someone who influences you to achieve your goals.

- (i) **What do you understand by the terms 'prescribed leader' and 'emergent leader'?** (2 marks)
- (ii) **Figure 1 shows the three factors affecting leadership.**



Using Figure 1, discuss the idea that leaders need to be adaptable in their approach. (6 marks)

Answers

- (i) A prescribed leader is appointed by an outside source. An emergent leader comes from within the group.
- (ii) Leaders need to change their style according to:
- leader characteristics:
 - personality
 - preferences
 - situation:
 - danger
 - time
 - type of task
 - group:
 - size
 - ability
 - hostility

The relationship between arousal and performance

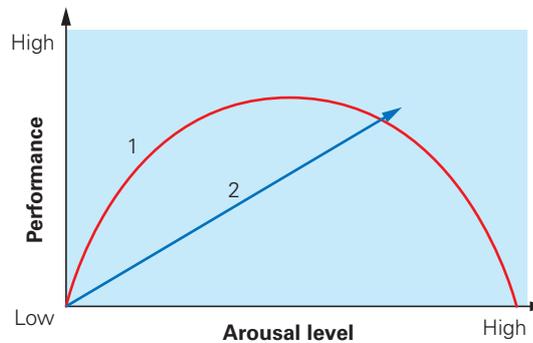
This popular topic often involves questions that are related to graphs or diagrams. For example you may be given the graph of drive theory or the inverted U theory and asked to explain the effects that increased arousal can have on performance. Often there will be an element to the question that asks you to account for changes or adaptations to the general theory, such as the different levels of arousal that provide optimum performance for a novice and an expert according to the inverted U theory, and the effects of the dominant response on drive theory. The key to success is to learn the theories, to remember the theory of drive reduction, and to be able to draw and interpret the graph. Remember to mention all the relevant points. Quite often you will be asked to give practical examples to make your point, so make sure that you always give an example.

Questions and Answers



Sample question

An elite performer's motivation may be affected by his/her level of arousal. The diagram below shows two graphs that may be used to explain how arousal varies during performance.



Briefly explain the two theories shown in the diagram and compare their effectiveness in describing the relationship between arousal and sporting performance in differing tasks.

(7 marks)

Answers

One mark each for naming the correct theories:

1 = inverted U theory

2 = drive theory

5 additional marks for explanation:

Drive theory:

- increases in motivation result in increases in drive/arousal
- increases in drive result in increases in probability of good performance
- linear/straight line/proportional relationship
- but not realistic — cannot keep improving
- increase in arousal = increase in likelihood of dominant response
- if dominant response is well learned/expert performer this will lead to increase in performance/elite/expert performance

Inverted U theory:

- initially, as arousal increases so does performance
- up to optimal level of arousal, which is moderate
- gives maximal level of performance
- further increases in arousal result in decreases in performance
- gross skills require higher levels of arousal/fine skills lower level of arousal
- simple skills can be performed at high arousal, complex skills best at low arousal

Group cohesion

Questions on group cohesion tend to focus on a definition of cohesion with particular reference to the differences between task and social cohesion — and then an explanation of how these two types of cohesion affect group performance. The key to success is to learn what is meant by task and group cohesion and then to apply these two concepts to sport, remembering that task cohesion can be more important. Another regular question asks for the influences on group cohesion. You should bear in mind that the factors that make up the faulty processes in the group according to Steiner, such as coordination problems, social loafing and motivational problems, can also influence cohesion.

Questions and Answers



Sample question

Team game players tend to play and train as a group in order to improve their participation in sport.

What do you understand by the term 'group cohesion'? Discuss whether cohesive groups are always more successful.

(7 marks)

Answer

One mark each for:

- forces tending to keep members within a group
- commitment to common goals
- task cohesion is about achievement
- social cohesion is about integration
- not clear whether success leads to cohesion or cohesion leads to success
- usually cohesive groups lead to success
- task cohesion is more important than social cohesion — a group can excel with task cohesion alone
- social cohesion leads to good relationships
- best results are when both task and social cohesion are present
- many other factors are involved in success apart from cohesion, e.g. personality, ability, leadership

Evaluating contemporary influences

World Games and their impact on the state and the individual

This topic contains a number of popular question areas. A large number of organisations are listed in the specification, which could form the basis for 3- or 4-mark questions linked to their functions in developing talented performers. For example:

What are the functions of UK Sport/Sports Coach UK/Institutes of Sport in developing elite performers?'

The funding of sports excellence has long been a debated topic. For example:

Why should millions be invested in sport as opposed to education or health?

Popular questions also relate to ways in which the National Lottery, SportsAid and World Class Performance Pathways are funding elite performers in their quest for gold. For example:

Explain the structure of World Class Performance Pathway funding and its role in developing elite performers.

World Games events such as the Olympics also form the basis of popular exam questions. For example:

Identify the key characteristics of World Games events such as the Olympics.

Hosting the Olympics is beneficial to the individual, the country and the government. Discuss.

The Olympic ideal and modern-day sport

This topic contains a lot of sports history, charting the development of modern-day sport from the mid-nineteenth century onwards. The Industrial Revolution is a key influence in such developments and is likely to feature prominently in exam questions. For example:

How did the Industrial Revolution influence the development of sport in the nineteenth century?

Questions and Answers



Key 'players' like public school old boys, the middle classes and the church could also feature prominently in exam questions. For example:

How and why did the church/middle classes/'old boys' develop sport?

Sporting attitudes and ethics, formed in the past and under pressure from commercial forces in the modern-day sporting world, are also likely to feature as questions in the Unit 3 exam. For example:

**Using examples, explain the meaning of the terms 'sportsmanship' and 'gamesmanship'.
To what extent is the 'contract to compete' relevant in modern-day sport?**

Sport, deviancy and the law

This topic focuses on deviancy in sport and the resultant increase in legal proceedings to settle disputes in the world of sport. The relationship between deviancy and the law comes up regularly in questions. For example:

Why is there an increasing need for protection from the law during a sports performer's career?

Causes, solutions and implications of violence among performers and spectators give the potential for lots of questions. For example:

Describe the possible causes of football hooliganism and the ways in which authorities and clubs have tried to control it.

The continued use of drugs by high-level sports performers gives the potential for lots of possible questions, such as:

**Outline the arguments for and against legalising drug taking in sport.
Why do sports performers continue to take drugs despite their obvious negative health consequences?**

Commercialisation and modern-day sport

This final topic deals mainly with the golden triangle and how sports, sponsorship, commercialism and the media are all linked in a mutually beneficial way. These links are likely to feature prominently in possible questions. For example:

**Explain how elite sport has been influenced by sponsors, the media and commerce.
Outline the factors that contribute to a performer being marketable in the modern-day sports world.**

The development of sports technology is a key contemporary influence in elite sport and questions are likely to be set linking the effects of such technology on performers, coaches, spectators etc. For example:

Discuss the impact that technology has had on the performer, coach and spectator in modern-day sport.



Sample unit test

This section provides some example examination questions, with answers and examiner comments. The aims are:

- to explain how marks are awarded
- to show the sorts of questions that might be asked
- to help you test your own understanding by answering the questions yourself before looking at the answers and comments
- to help with your learning and revision by showing you what you need to know

The Unit 3 exam is a 2-hour written exam. It is worth 50% of the total A2 mark and 30% of the total A-level mark. It comprises three sections on the three main areas of the specification: Applied physiology to optimise performance, Psychological aspects that optimise performance, and Evaluating contemporary influences.

In each section you must answer the compulsory 14-marks question, plus two of the three 7-mark questions. The compulsory question is marked using a banded mark scheme. See page 3 for an explanation of banded marking.

Questions and Answers



Section A

You must answer question 1(a) **and two** questions from 1(b), 1(c) or 1(d).

Question 1

- a Name the energy sources and the main energy system used to regenerate ATP by a triathlete during competition. Name two illegal ergogenic aids that a triathlete might use, explaining how each can help performance and the disadvantages associated with their use.** (14 marks)
- b Describe the sliding filament theory of muscle contraction.** (7 marks)
- c Glycogen loading is often used by endurance performers. What do you understand by the term glycogen loading and what are the advantages and disadvantages to the performer?** (7 marks)
- d At the end of a team game, players may experience EPOC. Define EPOC, give the functions of the fast and slow components of EPOC and explain how these functions are achieved.** (7 marks)

Questions and Answers

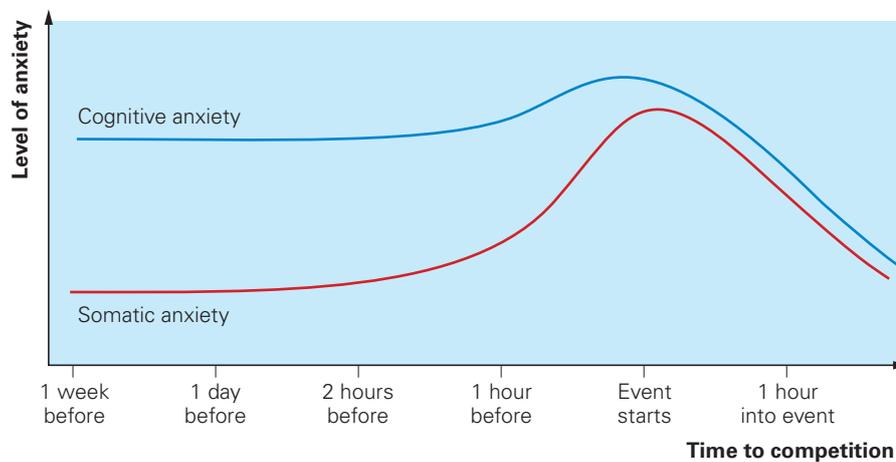


Section B

You must answer question 2(a) **and two** questions from 2(b), 2(c) or 2(d).

Question 2

- a** In the approach to a competition a performer may begin to show signs of cognitive and somatic anxiety. The graph below shows the levels of cognitive and somatic anxiety felt by a sports performer in the build-up to competition. What do you understand by the terms 'cognitive anxiety' and 'somatic anxiety'? Describe the differing effects of cognitive and state anxiety on performance and discuss measures you could use to manage both these types of anxiety in the build-up to competition. (14 marks)



- b** One aspect of personality is achievement motivation. What are the characteristics of an individual with a motive to achieve success? How could a coach make sure that such motives are maintained? (7 marks)
- c** Participation in sport is often linked to effective leadership. Fiedler (1967) suggested that the effectiveness of a leader depends on the extent to which the leader's style fits the situation the team is in. Name the two styles of leader that Fiedler identified and describe the different situations in which each style is most effective. (7 marks)
- d** 'The performance and behaviour of sports performers may be affected by their personalities.' Discuss this statement, using suitable examples, with reference to both trait and interactionist theories of personality. (7 marks)

Questions and Answers



Section C

You must answer question 3(a) **and two** questions from 3(b), 3(c) or 3(d).

Question 3

- a** A target of reaching fourth in the 2012 Olympic medal table has been set for all organisations involved in developing talent in Great Britain. Outline the initiatives being put in place to develop excellence and improve the chances of Team GB maintaining, or even improving on, fourth place. (14 marks)
- b** (i) In July 2008, Dwain Chambers tried to get a court of law to overturn the BOA's decision to ban him from the 2008 Beijing Olympics due to a positive drugs test and subsequent performance ban. Give reasons why elite performers may feel the need for protection from the law during their sports careers. (4 marks)
- (ii) Television is having a major influence on sport in the twenty-first century. Identify how sport has changed to meet the demands of television. (3 marks)
- c** (i) '100% ME' is a UK Sport initiative designed to encourage elite sports performers to 'win fairly and cleanly'. Despite such initiatives, there continues to be a number of positive drugs tests in a variety of different sports. Why do some performers continue to take performance-enhancing drugs? (4 marks)
- (ii) Sporting attitudes vary among sports performers. Using examples to illustrate your answer, explain the difference between 'sportsmanship' and 'gamesmanship'. (3 marks)
- d** (i) High-level sport often involves violent acts between players for a variety of reasons, such as frustration with an official's decision or provocation from an opponent. What effect might this violent behaviour have on others? (4 marks)
- (ii) As sport became more rationalised from the mid-nineteenth century onwards, the church provided a range of leisure opportunities for the general population to get involved in (e.g. they set up teams and provided facilities to play in, such as church halls). Why did they do this? (3 marks)



Section A answers

- 1 a **e** This extended, banded-mark question requires you to apply your knowledge of the specification across the whole topic area. Include as many relevant answers as possible, because the number of correct responses will decide which band you are placed in.

One mark for each of the following (up to 8 marks):

- aerobic/with oxygen
- glucose/glycogen/carbohydrate
- glycolysis
- broken down to form pyruvic acid
- fats/triglycerides/fatty acids/glycerol
- beta oxidation
- mitochondria
- Krebs cycle
- electron transport chain
- ATP produced

One mark for each of the following (up to 6 marks):

HGH:

- artificially produced hormone
- increases muscle mass and causes a decrease in fats
- heart and nerve diseases
- glucose intolerance
- high levels of blood fats

EPO:

- artificially produced hormone
- increases haemoglobin levels
- increases the oxygen-carrying capacity of the blood
- can result in blood clotting
- stroke/death

- b **e** This is a new topic area. If you find it difficult to learn, try breaking it down into small manageable chunks and then link them together. It is easy to muddle the names of all the proteins, so thorough learning is the key to success.

One mark for each of the following (max 7 max):

- Each sarcomere contains actin and myosin.
- These slide across one another and connect or make a crossbridge.
- ATP is needed to form a crossbridge.
- Troponin and tropomyosin cover the binding sites of the actin.
- The release of calcium from the sarcoplasmic reticulum
- attracts the troponin,
- neutralises the tropomyosin,
- releases the binding sites on the actin allowing a crossbridge to occur.
- Crossbridges constantly attach, detach then reattach.



- c **e** Glycogen loading is an example of how to prevent or overcome fatigue. Questions on glycogen loading are usually straightforward. They tend to ask for a definition and the advantages and disadvantages of this method.

One mark for each of the following:

- dietary restriction of carbohydrates
- days 6, 5 and 4 before competition — high-intensity work, low carbohydrate intake
- days 3, 2 and 1 before competition — low-intensity work/tapering
- increased carbohydrate intake
- allows more glycogen to be stored than normal (sub max. 4 marks)

Advantages (up to 2 marks):

- increased glycogen synthesis
- increased glycogen stores in the muscle
- delays fatigue
- increases endurance capacity

Disadvantages (up to 2 marks):

- water retention, which results in bloating
- heavy legs
- affects digestion
- weight increase
- irritability during the depletion phase
- alters the training programme

- d **e** Make sure you don't confuse EPOC with oxygen debt. Oxygen debt refers to just the fast and slow replenishment stages whereas EPOC is a global term encompassing oxygen debt and other processes that take place to return the body to normal. The wording of this question is straightforward and should leave you in no doubt as to what the answer should include. However, exam questions on EPOC are often not so obvious and may ask about the importance of taking in extra oxygen.

One mark for each of the following (max 7 marks):

- excess post-exercise oxygen consumption

Fast component:

- restoration of ATP and PC
- resaturation of myoglobin with oxygen

Slow component:

- removal of lactic acid/lactate

Achieved:

- through taking in extra oxygen
- can oxidise lactic acid
- to carbon dioxide and water
- converted to glycogen/glucose
- converted to protein



Section B answers

- 2a **e** In this question you are given the graph to help you. Look at it carefully and then apply your knowledge. The shape of the graph gives a clue to the answers. The anxiety control measures can be listed and then briefly explained.

One mark for each of the following (max 14 marks):

- Somatic anxiety is physiological.
- Cognitive anxiety is psychological.

Graph:

- Cognitive anxiety increases gradually in the days prior to competition.
- Once competition starts, cognitive anxiety fluctuates.
- Somatic anxiety increases rapidly in the hours before an event.
- Somatic anxiety decreases during the event.

Measures:

- relaxation techniques
- biofeedback
- positive self talk
- mental rehearsal
- imagery
- visualisation
- goal setting
- positive reinforcement

- b **e** Questions on achievement motivation usually require you to list the characteristics of a 'need to achieve' personality and of a 'need to avoid failure' personality. To help you differentiate, try to think of 'need to achieve' as competitive and confident. A coach will want to promote such characteristics during training, so think of the tactics the coach could use, such as fostering success, to get answers to the second part of the question.

One mark for each of the following:

Individual characteristics:

- competitive approach to competition
- accepts challenge
- takes risks
- confident
- attributes success internally
- responsible for own actions
- welcomes feedback

(sub max. 4)

Coach could:

- allow early success
- then set realistic goals
- point out similar ability role models
- use positive reinforcement

(sub max. 3)

- c **e** When you construct an answer to a question on Fiedler's model, try to remember that good and bad situations require autocratic leadership and don't forget to

Questions and Answers



mention the democratic approach for a moderate situation. For good situations use the term 'most favourable' and for bad situations try 'least favourable'.

One mark for each of the following (max 7 marks):

- task orientated/autocratic
- person orientated/democratic

Autocratic is best when:

- situation is most favourable
- task is clear
- group relationships are good
- leader is strong

Autocratic is also best when:

- situation is least favourable
- task is unclear
- relationships are hostile
- leader is weak
- there is danger
- the group members are novices

Democratic is best:

- in moderately favourable situations

- d **e** To help you differentiate between trait theory and interactionist theory, think of trait behaviour as staying the same and interactionist behaviour as changing.

Trait theory. One mark for each of the following (up to 4 marks):

- inherited characteristics/born with/innate/genetic
- stable/enduring
- same behaviour in a variety of situations
- behaviour is predictable
- e.g. extrovert in all situations

Interactionist theory. One mark for each of the following (up to 4 marks):

- $B = f(PE)$ /behaviour is a function of personality and environment
- inherited trait amended by environment/situation
- change environment = change behaviour
- e.g. normally calm but becomes aggressive in sport (boxer)

Section C answers

3 a One mark each for any of the following points:

UK Sport:

- UK Sport is responsible for development of sports excellence in the UK.
- It has a 'no compromise' funding policy.
- Funding comes from the Lottery, SportsAid and NGBs.
- Examples of funding include: TASS (Talented Athlete Scholarship Scheme)/ TASS 2012/WCPP (World Class Performance Pathways).
- Funding allows full-time devotion/training for sport.
- It runs talent identification schemes (e.g. Sporting Giants).



Institutes of Sport:

- Institutes of Sport have been set up in the home countries (e.g. EIS).
- These contain high-quality facilities, coaches, sports science support, performance lifestyle advice
- Training camps/development squads have been set up.
- Academies of sport/centres of excellence have been created.
- Individual scholarships have been awarded (e.g. through sports colleges/universities).

Sports Coach UK:

- Sports Coach UK initiatives, e.g. High Performance Coaching, World Class Coaching System, UK Coaching Certificate, UK Coaching Framework

Other:

- Sporting Champions (provide role models to aspire to)
- Junior Athlete Education
- School Sport Champion/UK School Games (via Youth Sport Trust)
- NGB Whole Sport Plans
- BOA preparation camps prior to Olympics/Olympic Medical Institute for treatment of injured athletes

- e** The first question in each section of the A2 exam is a compulsory 14-mark 'banded mark' task, which will be linked to relevant factual content as well as quality of written communication. In banded questions it is important to make as many relevant points as possible because it is *factual content* that will dictate the band you are placed in. For example, if you are top band, 11 marks out of the 14 will be for factual content, with the other 3 marks available for quality of written communication. In answering this question, it is important that you outline/briefly explain initiatives aimed at developing sports excellence in the run-up to London 2012.

b (i)

One mark for each of the following (up to 4 marks):

Elite performers and the law:

- appeals against NGB decisions/drugs tests
- equal opportunities/protection from racism
- protection from fans (during/after games)
- protection from media intrusion (into private life)
- legalities of sponsorship deals
- contracts with employers/Bosman ruling
- violence/foul play by an opponent (i.e. compensation claims)

- e** It is important at A2 to explain your answers as clearly as possible, rather than using simple one-word bullet points (e.g. violence, protection, sponsorship). One-word answers may hint at credit-worthy points but are not expressed clearly enough to earn marks on the A2 paper. The answers given above are the minimum detail required to earn marks.

(ii)

One mark for each of the following (up to 3 marks):

How sport has changed due to television:

- more/longer commercial breaks

Questions and Answers



- change seasons (e.g. rugby league)
- more use of coloured clothing, sponsorship on clothing
- altered starting times, change of days (e.g. Super Sunday Premier League football on Sky, Six Nations Rugby on BBC TV)
- rule changes, competition structure changed (e.g. score on every point in badminton, tie break in tennis)
- increased focus on entertainment as part of sporting spectacle (e.g. music, cheerleaders in 20/20 cricket and rugby league)
- use of technology (e.g. third umpire, Hawk-Eye)

e Sometimes the number of marks earned by an answer is less than it should be because answers are written from the wrong angle! This question starts by linking television to its influence on sport as its opening statement, but the actual question set is about how sport has changed to meet the demands of television, so it is better to answer it from the *sport* perspective. Relevance is the key to success!

c (i)

One mark for each of the following (up to 4 marks):

Reasons why performers take drugs:

- physiological advantages (e.g. decrease tiredness, build muscles, increase endurance)
- to decrease pain, mask injury
- psychological reasons (e.g. steady nerves, increase aggression)
- pressure to win from others (e.g. coaches)
- for the fame/rewards/kudos of winning
- belief that everyone else is doing it/it levels the playing field
- belief they will get away with it, ineffective testing

e While you may feel the need to express your opinions on drug taking in sport, it is important to focus on the actual demands of the question. In this case, why do we still have large numbers of sports performers willing to risk all by taking drugs? As there is no specific number of points asked for, you should look to make around six relevant statements that are sufficiently different to earn marks and avoid too much repetition. For example, 'for the rewards, fame and kudos' would earn only one mark, not three! It is also important to give the detail necessary to earn marks. For example, 'to increase fitness' would be a bit too vague, but if you named a component or explained it you would get a mark: 'Taking drugs would have physiological advantages *such as building muscles*.'

(ii)

One mark for each of the following (up to 3 marks)

Sportsmanship:

- fair play/play by unwritten rules
- e.g. shake hands at end of a game, kick ball out of play if opponent is injured

Gamesmanship:

- stretching rules to absolute limit/art of winning by 'cunning means'
- e.g. time wasting, sledging



- e** It is important when examples are asked for that you actually include them in your answer or you risk losing marks. When using examples, it is important to relate them to the point you are making in your answer. In this question, there are two distinct parts that you should make clear in your answer by use of a table or clearly distinguishable paragraphs linked to (i) sportsmanship, and (ii) gamesmanship.

d (i)

Effects of player violence on others:

- negative role models/others copy
- gives a negative image to the sport/certain sports
- may lead to crowd trouble
- may affect a performer's career if it leads to a serious injury
- has a negative impact on the team if an individual is punished (e.g. sent off/banned)
- a decline in spectators attending fixtures decreases income to clubs

- e** It is important to read the question carefully and then re-read it so you answer it correctly. When in a rush, a common error is to scan read a question, pick up on a key 'buzz word' and write all you know about it, but no marks can be earned for irrelevant answers. In this case, you might see the words 'violence' and 'players' and focus on why players become violent in sport. However, the examiner will only credit answers on their mark scheme, which will focus on the potential effects of violence on 'others' such as young children, families, etc.

(ii)

Why the church became involved in sport:

- social control/temperance movement
- improve working-class morals
- improve health of the working classes
- increase church attendance/church recruitment
- develop Muscular Christianity

- e** There are only five possible answers given from which you are trying to gain 3 marks, so it is important that you make a variety of points that are clearly distinct from one another. If you dwell on a point for too long (e.g. 'social control/temperance movement/keep people away from drink') everything you write will be relevant and factually correct but will only earn 1 mark due to the repetition of a similar point. Repetition is the 'enemy' that you need to avoid if you want to be successful in your A2 PE exam.