



**General Certificate of Education (A-level)
June 2011**

Physical Education

PHED3

(Specification 2580)

**Unit 3: Optimising performance and evaluating
contemporary issues within sport**

Report on the Examination

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General

The nature of this paper requires students to display both a broad knowledge of a wide range of theoretical topics and a more in-depth understanding of several areas within each of the three sections of applied physiology, psychology and contemporary influences.

Although the mean average for the paper has decreased slightly compared to last year, this can generally be accounted for by lower marks on two of the extended answer questions, question 1 and question 7. The remainder of the paper produced marks that were broadly in line with expectations.

The extended questions are intended to differentiate between students and offer a stretch and challenge element to the examination. This aim was definitely achieved, as a full range of marks was evident, clearly allowing those students with an in-depth knowledge to access the higher marking bands. It must be remembered that these questions require students to do more than simply put down 14 creditworthy points in order to gain maximum marks. Marks are awarded for the whole of the response and take into account range and depth of knowledge, answering all aspects of the question and the use of good technical language and grammar.

It was pleasing to see the improvement in the quality of the answers for questions that required students to produce a discussion. The vast majority of answers attempted to offer points from both perspectives, which obviously reflects the work that staff have done to develop student awareness of this skill.

A general weakness throughout the paper, which is similar to previous years, was the lack of application of specific theories to applied situations. Too often answers did not supply sufficient detail to gain marks and many were unable to link the relevant theory to the topic area. This should be an area of development as many students could have achieved more marks if they were able to name the correct theory initially.

It is obvious that the students have been well prepared this year and staff have explained the requirements of the paper to them. There were fewer rubric errors than last year and fewer errors when numbering the question that had been attempted.

Section A

Question 01

The question required students to demonstrate their knowledge of angular momentum and the value of the plyometrics training method. A full range of marks were seen, with a large number of students displaying a sound understanding of the concepts. Good answers included the use and explanation of correct technical terms.

The common mistakes in the first part of the question, causing a loss of marks, included not explaining terms such as 'moment of inertia' and 'angular velocity'. Many answers simply described 'tucking up the body to speed up' or 'opening out to slow down', failing to explain the relationship between moment of inertia, angular velocity and angular momentum. Additionally, many students spent considerable time explaining the linear laws of motion, as well as discussing the effect of air resistance and gravity, all of which were irrelevant.

The plyometrics aspect of the question generally showed a sound understanding of the training method. However, some did confuse this with PNF stretching. Many candidates explained the nature of the training, including the eccentric and concentric contractions, and the aspect of fitness developed. Better answers included the role of muscle spindles.

It should be noted that although ‘muscle spindles’ and ‘golgi tendon organs’ are not directly named in the specification, credit will be given for them as part of an answer. Students should be taught the physiological basis as to why specific training methods are effective. However, a direct question cannot be asked on a topic if it is not named in the specification.

Question 02

Students were required to show an applied understanding of the energy systems, specifically in a high intensity activity lasting up to 90 seconds. Many students achieved high marks, showing an excellent knowledge of the production and re-synthesis of energy. Most were able to make reference to the ATP-PC and lactic acid systems supplying the majority of the energy. Often answers included correct technical terms, showing in-depth preparation and revision.

Students lost marks when they simply outlined all pathways, including the aerobic system. This showed a lack of understanding and as a result gained no marks. It should be noted that students must develop an understanding of the relationship between the relevant energy system along with the intensity and duration of exercise. Simply outlining all systems will not be sufficient to gain marks.

Question 03

Students were required to explain how the strength of muscular contraction can be varied depending on the nature of the skill. The responses were mixed with some excellent answers, which were succinct, used technical terms and showed a clear understanding. However, too many answers were vague, referring to different types of skill and practises, or how to use various training methods to improve strength. The most common answer was ‘the all or none law’, but few were able to explain recruiting larger or more motor units, which were the primary reasons for the variation in strength.

Question 04

This question explored the physiological reasons for the use of anabolic steroids. A full range of answers were seen, the most common being for ‘muscle growth’ or for an ‘increase in strength’, as well as ‘being able to train for longer’. Very few linked the use of steroids to increased assimilation of protein.

Common mistakes included discussing psychological and social reasons for the use of steroids, all of which were not credit worthy as the question clearly states ‘physiological reasons’. It should be noted that there are several areas on the specification which may overlap in different sections and students should be encouraged to direct their responses accordingly.

Question 05

Students were required to outline the function and process of the fast component of the recovery process. The question was deliberately open ended allowing students to gain credit for naming the EPOC process and the alactacid/alactic component. A number of answers included this information. Large numbers were able to gain at least two marks and the most common answers were re-synthesis of ATP/PC and re-saturation of myoglobin with oxygen, which showed a good understanding of the function of the fast component. However, fewer students were able to explain the process and many discussed repayment of the oxygen debt and removal of lactic acid, which were not worth marks.

Question 06

The question focused on the prevention of ‘delayed onset of muscle soreness’ or ‘DOMS’. The majority of students achieved two marks, usually stating ‘warm-up/cool down/stretching’ and ‘ice baths’. Some went into great detail to explain the use of ice baths, by repeating the mark scheme from last year, which included too much detail and was not worth marks. It may be worth pointing out to students that if the question names a specific term, it should be explained in detail. However, in a question such as this where there are multiple answers, the same level of depth is not required. As a general rule and point of good examination technique, students should be encouraged to explain a key term to ensure they access the mark.

Section B

Question 07

The second extended answer question explored student knowledge of the concept of group cohesion and strategies to improve performance. The vast majority of students displayed a good understanding of ‘cohesion’ and were able to differentiate between ‘task’ and ‘social’ cohesion. However, many failed to develop the discussion into which was the most relevant and why. There was also an awareness of Steiner’s Model of Group Productivity, but many answers gave incorrect terms and did not identify the ‘faulty process’ involving ‘co-ordination and motivation’ as the main causes.

As with the Question 1, marks were lost by not explaining key terms, for example social loafing and the Ringelmann Effect. Numerous answers also included Tuckman’s Model of Group Formation, which was irrelevant. The extended questions are a challenge but students can waste a considerable amount of time if they attempt to write down everything they know about a topic area; they must attempt to develop the skill of recognising the focus of the question and the relevant theories linked to it.

The strategies to improve cohesion were generally well answered, although some responses were not creditworthy. For example, a significant number of answers merely included last year’s mark scheme, which was linked to stress management techniques. Students have to consider the question carefully. Whilst some of the answers may appear to be similar to previous questions, there are very often changes in the wording or the context. Therefore, discussions should take place in preparation for the examination, which include question analysis and developing an understanding of the command words rather than simply practising past papers and learning mark schemes.

Question 08

This question was about achievement motivation. It was not a question that many students chose to answer, with those who attempted it gaining few, if any marks. Apart from naming ‘personality’ with ‘need to achieve’, or ‘need to avoid failure’ as an alternative, the understanding of the concept being linked to the situation, taking into account the incentive value and probability of success, was evident in very few answers.

Question 09

As this question was linked to Question 8, it was also answered by a small number of students. Once again, the concept of 'approach behaviour' appeared to be poorly understood. It is disappointing to note the lack of understanding of a topic that has been questioned frequently on legacy question papers but still fails to produce many good quality responses. It appears that many students are unable to progress beyond Nach or Naf personality types and develop their knowledge into an applied situation to improve performance. Students should be encouraged to apply their theoretical knowledge to practical situations in order to access higher marks.

Question 10

The question focused on different types of anxiety that may occur. This was answered well by the vast majority of students, with many understanding the command words of 'identify and explain', both of which were required to achieve one mark. Most were able to give accurate descriptions of the type of anxiety. One area in which students often lost marks related to just stating that 'trait anxiety' was inherited or genetic, which did not explain how it affected the performer.

Question 11

This was the first time that 'home field advantage' has been directly questioned as it is a new topic on the specification. As a result the quality of the responses was mixed. Whilst many students attempted to include both perspectives in their answers, there was limited evidence of a clear understanding of the topic. Most answers included the idea that the number of home fans helped with confidence and support but the pressure or expectation to succeed could be a hindrance.

Numerous responses again included evidence from last year's mark scheme, outlining the concept of social facilitation. Whilst this was worth credit, an in-depth answer discussing the comparison between elite and novice performers was irrelevant. Many answers included comments about 'not having to travel' and 'not being tired because of travel', which again were irrelevant. At times, it was difficult to determine whether the comments were referring to the home team or the away team.

Question 12

The concept of leadership formed the basis for this question. Students were required to provide a three part answer, for which many obtained maximum marks.

However, at times there appeared to be a limited understanding of the term 'characteristics', with many students stating 'respected' and 'role model' rather than points such as 'confident', 'inspirational' and 'approachable'.

Generally students were correct in their description of a prescribed leader, although there was some confusion at times, as some indicated this was a new leader to the group who was brought in to sort out problems and improve the performance of the group. The common mistake for the emergent leader involved students merely stating the leader came from within the group rather than making the distinction that they would be elected by the group. This is quite an important difference because a prescribed leader could also come from within the group.

Question 13

The question explored student understanding of the theories relating to changing attitudes. The vast majority of students attempted to name a theory, indicating the advice from previous Examiner Reports has been implemented. Those students who knew the theories of either 'persuasive communication' or 'cognitive dissonance' did well, often obtaining full marks.

However, there are still a significant number of students who are unable to apply the correct theories to the relevant topic area. Many quoted the 'social learning theory', 'attribution theory' or 'attribution retraining', all of which were not credit worthy.

Section C

Question 14

The third extended answer question focused on the changing nature of sport with reference to a suggested decline in sportsmanship since the 19th Century. Again it was pleasing to see a large number of good discussion answers, which displayed a clear understanding of the concept. Many students were able to explain the shift from amateurism to professionalism and the possible reasons for an increase in gamesmanship and deviancy. The agree aspect of the discussion tended to produce better answers than the disagree perspective. The part of the question outlining the strategies used by sporting authorities to promote fair play was generally well done.

As with the other extended answer questions, marks were occasionally lost by not explaining key terms, for example sportsmanship, gamesmanship, amateurism and athleticism.

Question 15

This question required students to explain the relationship between the law and maintaining the safety of the players. Generally the answers focused on the prevention of violent play and protection from violent spectators, but few were able to access the full marks.

The misunderstanding by a number of students involved confusing the 'legal law' and 'sports laws or rules'. Additionally, so many discussed the intrusion into private life and protection from the media, both of which were irrelevant as the question focused on 'safety during play'.

Question 16

The issue of hooliganism formed the basis for this question, specifically the consequences for clubs and sporting authorities. There were many good quality answers, showing an in-depth understanding of the topic.

Those candidates who failed to achieve many marks tended to make similar mistakes. Often the answers did not provide sufficient depth to be awarded marks due to not explaining the consequences fully with students making simple statements such as 'the sport will have a poor reputation', 'negative image' or 'lose funding'. Some answers also included the range of strategies to combat or minimise hooliganism, which was not worth credit.

Question 17

This discussion question involved displaying knowledge of the advantages and the disadvantages of commercialisation for the performer and the sport. There were many high quality answers, frequently producing marks of 5, 6 and 7. There was a tendency for students to gain more marks for giving advantages.

There was often confusion between the terms 'commercialisation', 'sponsorship' and 'media'. Whilst the three areas are similar and overlap, there are distinct differences of which the student should have a clear understanding. Often marks were able to be awarded due to the nature of the question, but a more explicit question may not have allowed this to happen.

Question 18

The question looked at the role of Sportscoach UK. This was very poorly answered, with many students failing to gain any marks, as their answers were far too vague and lacking any understanding. Many responses simply gave broad information such as providing facilities, funding and support to help coaches improve. As with previous questions concerning the role of sporting organisations, only a detailed knowledge will yield good marks but this is beyond the capability of many students. Whilst it is difficult to keep up to date with the ever changing nature of the different organisations, students should have a basic awareness of the initiatives of each one in order for it to fulfil its primary aim.

Question 19

The final topic investigated the effectiveness of testing for drugs and banned substances. Many students gave a balanced discussion, which was pleasing as it showed an awareness of the issues. The most common advantage was to ensure fair play, but there was little evidence of more in-depth knowledge beyond this basic point. On this occasion more marks were obtained through explaining the disadvantages.

Some students included answers which referred to sport being less entertaining if drugs were banned and there would be fewer world records being broken, both of which were not worthy of credit.

Mark Ranges and Award of Grades

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