A-LEVEL

PHYSICAL EDUCATION

PHED3 – Optimising performance and evaluating contemporary issues within sport
Report on the Examination

June 2016

Version: 1.0
Optimising performance and evaluation contemporary issues within sport

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, psychological aspects and evaluating contemporary influences.

As the specification comes towards the end of its term, it is noted that many of the topics have been previously questioned. As a result, staff and students have become familiar with the content and style of mark scheme. Therefore, it is no surprise the quality of the answers has improved along with the mean mark of the paper.

The extended answer questions are intended to differentiate between students and provide stretch and challenge within the examination. This aim was definitely achieved, as a full range of marks were 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, addressing all aspects of the question and the use of good technical language and grammar. It must be reinforced that the use of a planner or spider-diagram, to outline the points to be included in the answer (whilst useful practice for the student) will not be marked by examiners. This is due to the requirements of the question which are to write in full prose and to put responses into the correct context.

As with recent years it was pleasing to see further 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.

It was also pleasing to see further improvement from previous years in terms of the application of appropriate theories to applied situations. Occasionally students failed to name the appropriate theories but the quality of the answers compared to previous years showed signs of a greater understanding of this requirement in the paper. However, it is obvious that the students have been well prepared this year and staff have explained the requirements of the paper to them.

As in previous reports, it must be pointed out that students must focus on ensuring their handwriting is legible. On numerous occasions examiners attempted to read the student's answer and were unable to credit marks because the writing was illegible.

It is pleasing to see the reduction in the number of rubric errors, with very few occurring.
Section A

Question 1

01
The first of the extended questions tested candidates’ knowledge of the energy systems in an applied context. Many answers contained detailed knowledge of the aerobic and anaerobic systems, displaying excellent factual recall and understanding. Marks were not awarded for naming each system, as this was assumed knowledge but identification of the relevant system was required to be credited with explanation marks. Many answers contained linked explanations of process and outcomes, which was required to be awarded marks. Those who relied on providing key terms with no explanation were not credited with marks. The answers that accessed the higher marks were able to include examples of how the energy systems contributed to the game situation with practical answers; as the question required. Those students who failed to complete this requirement and only contained an explanation of each system were not able to achieve the higher marks. It should be noted that the ability to use examples in the correct context should be developed in preparation for the requirements of the new specifications.

Question 2

02
The question was popular, testing knowledge of the reasons athletes use synthetic erythropoietin (EPO). The majority of candidates produced well-structured responses showing a good understanding of the link between increasing red blood cells and improved oxygen carrying capacity. A small number of students thought EPO was a form of ergogenic aid that enhanced strength and power, showing confusion with anabolic steroids.

03
The second part of the question explored the advantages and disadvantages of altitude training. It was pleasing to see many candidates had a good understanding of the process and provided balanced answers, addressing both aspects of the question. The majority of students achieved either 4 or 5 marks.

Question 3

04
This was one of the less popular questions in the physiology section, but those who attempted it often achieved high marks. The majority of candidates correctly identified fast twitch muscle fibres as the predominant type used in a gymnastic routine. However, fewer were able to explain the functional characteristics, often provided vague answers, rather than focus on speed and force of contraction.

05
This question tested knowledge of the concept of conservation of angular momentum. Candidates provided many high quality responses, explaining the relationships between key terms and applying the knowledge with clear examples indicating how the gymnast change the speed of rotation. Weaker answers failed to gain marks due to poor understanding of moment of inertia, which often referred to ‘being spread out’, which was too vague to be credited with marks.
Question 4

The question focused on a candidate’s understanding of VO2 max and the relationship to aerobic performance. This question has been asked numerous times before and many candidates were able to provide an accurate explanation of the term but there were still a large number of responses that failed to include key terms such as ‘maximum’ volume or omitted a unit of time. The second part of the question proved to be more challenging, with many answers being too vague, referring to ‘improved aerobic performance’ rather than more specific physiological explanations.

The final question explored the candidates’ knowledge of glycogen loading. This proved to be a more difficult question, as many responses were too vague, simply stating that performers should increase their carbohydrate intake rather than outline a specific method. Those that understood the different process gained high marks. In terms of describing the benefits, many were able to identify working at higher intensities for longer periods of time of ‘delay hitting the wall’ but too often answers were not credited with a mark when the response stated ‘increased glycogen stores’ as specific reference to ‘muscle glycogen stores’ was required.

Section B

Question 5

The second extended question focused on the applied use of Attribution Theory and strategies to avoid learned helplessness. It was pleasing to observe a large number of good quality responses, indicating a clear understanding of the concept and how attributions if used correctly can maintain motivation. The best answers not only explained the various loci of causality, stability and controllability, but supported the theoretical knowledge with an applied example. For example, a coach would use an external unstable factor, such as luck, eg ‘the referee’s decisions went against us today.’ A significant number of responses failed to address the context of the question and were not awarded marks for the use of internal stable factor; ability as the answer referred to ‘following success a coach would use ability’. Many students made reference to self-serving bias and correctly explained the term.

It was pleasing to see a large number of high quality responses explaining how to avoid learned helplessness. All points on the mark scheme were accessed. This shows a significant improvement on previous years, as the strategies to improve performance tended to be an area of more limited responses.

Many answers were well structured and staff should be commended on the work they have done to prepare students to provide clear, coherent answers.
Question 6

09
The question required students to evaluate the frustration-aggression hypothesis. Marks were available for general criticisms but the highest marks were only accessible if other theories of aggression were used as a basis for the answer. Many students were able to identify other theories and apply their knowledge to critically evaluate the weaknesses as required. Occasionally marks were not awarded as theories were not correctly named.

10
The second part of the question required students to explain the biofeedback method of stress management. Whilst many answers gained maximum marks, a large number were not awarded marks as they were too vague. For example, not stating it was a somatic technique or which physiological measurements were involved.

Question 7

11
The topic of leadership formed the basis for the question. The vast majority were able to explain the role of a leader but whilst many gained maximum marks for their description of prescribed and emergent leaders, many were not awarded marks as answers were too vague. The main discriminator were poor explanations of an emergent leader. Too often students stated ‘an emergent leader emerges from within the team’ rather than making the distinction that the position was gained following a vote by team members. It should be remembered that a prescribed leader can also come from within the existing team, and often does.

12
The question explored knowledge of self-efficacy and a specific component of Bandura’s model; vicarious experience. Many candidates correctly explained the term self-efficacy and were able to state that a vicarious experience involved watching a demonstration or performance of others. However, whilst a large number made reference that the model should be of similar ability there was no indication that this was more likely to make the demonstration more effective.

Question 8

13
The final question in the sports psychology section required an explanation of the difference between social inhibition and evaluation apprehension. Answers produced a full range of marks. Students often correctly identified social inhibition had a negative impact on performance, but this was often not stated for the second term. Also marks were lost as students simply stated ‘evaluation apprehension involves the performance being evaluated’, rather than a judgemental element which had a negative impact on performance. However, it was pleasing to note that few students failed to identify the term that was being discussed.
14 The second part of the question focused on strategies to improve performance if the crowd did have a negative impact. All points on the mark scheme were awarded and it was pleasing to see answers that were logical and well informed. Students structured their answers and often provided more detail than required, which resulted in many maximum marks being awarded. It was pleasing to note that many students did not just make reference to ‘stress management techniques’ but named specific methods.

Section C

Question 9

15 The final extended question tested candidates understanding of the impact of technology on the performer and spectator. Traditionally the socio-cultural extended question has proved to be more testing than the other two sections producing significantly lower marks. Whilst the mean for the question is lower than the other sections, the quality of answers was much improved and as a result the mean for the question increased from previous years.

Many answers were well structured, addressing all aspects of the question, provided a comprehensive balanced discussion. The mark scheme was amended to credit the use of examples to support a statement, e.g. technology has increased the access for people to watch sport, using devices such as ipads or tablets. It also allowed for the use of technology such as ‘hawkeye’ in different contexts, for example, to ensure correct decisions are made, but also to increase the excitement and crowd interaction with the event.

Too often however, students produced answers based on previous mark schemes, especially those linked to the impact of commercialisation and media.

Question 10

16 The question explored students’ knowledge of the historical factors that led to the emergence of national governing bodies. This was the least popular question in the socio-cultural section. Examiners were given freedom to interpret answers, allowing them to link different factors with different explanations, as it was felt there were many ways in which candidates could approach the question. Despite this freedom, many answers failed to identify the points other than codification of rules and the establishment of leagues. Answers often made more reference to the emergence of rational recreation rather than national governing bodies.

17 The final part of the question was based on the role and function of a national governing body in modern day sport. This was a generic question, referring to any governing body and students displayed a good understanding of their function in provided for grass roots through to elite level. The vast majority of students produced good quality answers resulting in high marks.
Question 11

18 The first part of this question required candidates to outline reasons performers take performance enhancing drugs, other than physiological reasons. A limited number of students failed to identify that this required; providing answers that were based on increased muscle mass, faster recovery times, etc. However, the majority were able to correctly identify a variety of social and psychological reasons for their use. The most popular being ‘feeling pressured from other athletes or coaches’, ‘the financial rewards from winning’ and ‘the only way to win is using them as everyone else is.’

19 The question moved onto the discussion regarding the difficulty of sporting organisations implementing a ban on performance enhancing drugs. Many responses showed a sound understanding of the issue but few were able to explore the topic fully and access the highest marks. There was an appreciation of the difficulty of accurate testing and testing keeping pace with new drugs and masking agents. Also common answers including the difficulty of common policies between different sports and countries, and the expense of wide spread testing.

A number of answers made reference to points that were irrelevant and based on previous mark schemes. These included an athlete’s right to choose if they use drugs, the sport being brought into disrepute if athletes are tested positive and drugs are readily available.

Question 12

20 The final question on the examination paper tested knowledge of sporting ethics, specifically ‘sportsmanship’. A definition was not required and many students gained a mark due to slightly inaccurate explanations being supported by an applied example. The explanation of how this positive behaviour is maintained in sport was not as well answered due to vague descriptions. For example, merely stating ‘being punished’ was not deemed to be creditworthy; a specific example such as bans or fine was needed. Many students correctly identified fair play awards, campaigns and use of the Olympic Ideal.

21 The last question explored how the law protects elite performers. Whilst there were many high quality answers, some students misunderstood the focus of the question; their answers referencing the laws of the sport and the involvement of the referee of national governing body rather than the law of the land.

Despite this misinterpretation by a small minority there was a good understanding by a large number of students. Good answers often made reference to protection from violence either as a result of other players or spectators, employment contracts, intrusion into private life and the use of discrimination laws.
Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the [Results Statistics](#) page of the AQA Website.

Converting Marks into UMS marks

Convert raw marks into Uniform Mark Scale (UMS) marks by using the link below.

[UMS conversion calculator](#)