Version 1.0

**General Certificate of Education (A-level)**
**January 2012**

# Physical Education PHED1

# (Specification 2580)

# Unit 1: Opportunities for and the effects of leading a healthy and active lifestyle

# *Report on the Examination*

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Registered address: AQA, Devas Street, Manchester M15 6EX.

# PHED1

## Opportunities for and the effects of leading a healthy and active lifestyle

### General

The AQA Specification for AS Physical Education has a single examination, PHED 1. The paper is divided into two sections, A and B. Section A contains six twelve mark questions, two on each of the topic areas of Applied Exercise Physiology, Skill Acquisition and Opportunities for Participation. Section B contains a single 12 mark question covering Applied Exercise Physiology and Skill Acquisition in a practical situation.

There were a number of questions that provided excellent opportunities for differentiation, which allowed the more able students to score higher marks. As is usual with an AS examination paper, there was a large range in the quality of answers from students. Instances of maximum marks for a question were quite rare, although it appeared that most of the candidature was able to achieve marks on most parts of the paper. In general, the topic areas of Applied Exercise Physiology and Opportunities for Participation were where students scored the most marks whereas the Skill Acquisition and Applied Exercise Physiology and Skill Acquisition questions achieved the least marks.

### Question One

This question was concerned with fitness components and the heart.

(a) (i) As has happened previously with this paper, many students were unable to provide an accurate definition of stamina. Statements such as 'being able to keep going' or 'not get tired' were considered too vague. Schools and colleges should identify the acceptable definition from the mark scheme and use that in their teaching. The second part of this question also caused a problem, in that answers such as 'because games last a long time' were also too vague as a long time varies depending on the context in which it is used.

(a) (ii) The majority of students were able to gain marks in this question, as nearly all were familiar with the components of fitness that are important in a game of football. There were some excellent examples of each component from the game, showing good knowledge and understanding. Stamina had already been mentioned in part (a) (i) and so it was not creditworthy here. Equivalents to stamina, such as cardio-respiratory endurance, were also not accepted.

(b) The aspect of the specification being examined in this question appears to have been well taught with many answers being correct, showing understanding of the sequence of impulses when acidity is detected in the blood. It should be noted that a bulleted list of words, such as chemoreceptors, medulla, and SAN, was not accepted as suitable responses. Answers had to be put into context to gain marks, for example 'chemoreceptors detect', 'nerve impulses are sent to the medulla', etc. Some students were confused as to the role of the sympathetic and parasympathetic nervous systems in the cardiac regulatory mechanism.

(c) (i) The majority of students correctly identified the term bradycardia, albeit with a wide variety of spellings.

(c) (ii) For this question, many students correctly identified that more oxygen becomes available to the muscles. However, very few were able to gain the additional mark by describing that bradycardia increased the heart rate range or, more importantly, the idea that a slow heart rate requires less oxygen and therefore a larger proportion of the oxygen in the blood is available for muscles.

## Question 2

This question asked for details about the anatomy of throwing, levers, blood pressure and the arterio-venous oxygen difference.

(a) (i) The anatomy of throwing in this question was typically well answered. Very few students failed to achieve any marks at all and over half of the cohort were able to obtain full marks.

(a) (ii) This question was also well answered with students generally displaying good knowledge and understanding of the first class lever system. However, students need to be reminded to write the labels identifying the components of the lever in full, not just initials.

(b) This question was generally well-known, especially the health causes of high blood pressure. The physiological causes were less well understood, but the idea of the heart contracting was a common, correct response.

(c) This proved to be a good discriminator with only the better students giving a clear explanation of arterio-venous oxygen difference in their answer. Many students gained a mark for suggesting that muscles extract more oxygen but few then went further to explain how this oxygen might affect performance.

## Question 3

Question 3 tested students' knowledge of skill continua, abilities and observational learning.

(a) (i) Many students identified the correct three aspects of the continua. The idea of asking students to supply three correct responses for a single mark is somewhat unusual but it was felt that a single mark accurately reflected the depth of knowledge required to complete this question.

(a) (ii) The majority of students were able to gain some credit on this question as they were able to identify how the continua changed. However, some students lost marks by re-using words in the question. Answers such as 'swimming is a continuous skill because it is continuous' was not given credit.

(b) Around a third of students were able to provide adequate definitions of motor and perceptual ability for this question. The examples provided were often not from a swimming start and again many students used the question as part of their answer, for example 'perceptual ability is the ability to perceive'. Many thought that perception concerned the selection of a motor programme rather than being concerned with an understanding of the environment.

(c) The question asked for an explanation of three parts from the diagram so it was essential to identify which part was being addressed in the answer. There was some confusion among students about the role of motor production, which is not about practising the skill, but rather that it is important for the learner to be physically capable of completing the skill. Once again, it was important not to use words from the question in the answer, for example 'attention is attending to information'.

(d) Student responses to this question were generally good, although attention to detail was necessary to be awarded marks. The simplistic response of 'practise' was considered too vague to deserve credit. Many students attempted to apply factors to improve selective attention rather than improving skill retention.

## Question 4

This question related to stages of learning and response times.

(a) (i) For this question, the majority of students identified the correct required stages as cognitive and autonomous. However, some students hedged their bets and listed all three stages with no indication as to which was the initial stage and which was the final stage. Where this occurred, examiners marked the first two responses. Descriptions of the characteristics of the cognitive stage were better understood than the autonomous stage. Many students offered descriptions of the skill rather than the stage and, because of the subsequent question, feedback was not considered a suitable response.

(a) (ii) There were many good answers to this question with students showing knowledge of the types of feedback required at the two stages. Students should be reminded of the need to identify the stage being referred to in the answer.

(b) (i) Most students identified the idea that more choices slowed response time, but few referred to the graph and used the information provided to identify the fact that there was a plateau after 10 choices. The examples given by many students were often irrelevant as they did not refer to the number of choices and its effect on response time. The basic premise is that response time of the receiver increases with the more choices that they face. This means that if their opponent always plays the same shot, then they are providing the receiver with only one choice of stimulus. It's when the opponent uses a variety of shots that the receiver has numerous choices to face and this delayed their response time.

(b) (ii) This question required the answer to refer to the single channel hypothesis so credit was given for explaining this theory. Only a minority of students were able to clearly explain the practicalities of what happens in terms of what is the problem and the effect it has on response time. Credit was given for naming the phenomena as psychological refractory period but no credit was given for the abbreviation PRP.

## Question 5

This question required students to identify the changing aspects of physical education in the past and present.

(a) This question was well answered, with the majority of students aware of the differences between physical education and active leisure.

(b) This question posed problems for the vast majority of students and was poorly understood. This appeared to be because students were confusing the characteristics of post-World War II with the post-Boer war period. Students' wrote about military drill and ex-NCOs rather than 'moving and growing', and the use of newly-provided apparatus. The question referred to physical education before the National Curriculum but many responses referred to the National Curriculum.

(c) This produced many good responses, although few managed to obtain full marks. Students should be aware that to gain the maximum marks, they should not repeat the same point, for example decision making, problem solving and taking responsibility are all the same point. Likewise, teamwork and co-operation are too similar to be awarded separate marks. Relatively few students achieved the fairly obvious mark that taking part in these activities would result in the learning of specific skills.

## Question 6

This question was concerned with sport and its benefits, private sector provision and National Governing Body campaigns.

(a) Many students demonstrated good knowledge but again need to be encouraged not to make their responses too similar, for example organised, structured, NGBs and clubs are too repetitive to warrant separate marks. Students also need to be reminded to be specific in their answers, as 'rules' applies to many types of physical activity. To make rules specific to sport needs qualification such as pre-set rules or official rules.

(b) The majority of students obtained some credit on this question but again a depth of responses is required to ensure there is no repetition. It will help students if they are encouraged to keep referring to the question to ensure that points already identified are not repeated. In this context, 'improves health and fitness' was not credit-worthy.

(c) Many good answers were produced for this question, with many students appearing to have learned responses from previous mark schemes.

(d) Many students again used the question as part of their response, with many suggestions of campaigns, increased media coverage and better access or transport offered as inappropriate responses. In a similar vein, it was obvious that many students had no clear idea of what a NGB does and provided responses such as 'build facilities' and 'increase funding'. The idea of sports equity targets and the redirecting of funding to specific target groups, such as inner city areas, were only occasionally provided as responses. The ubiquitous 'use of role models' invariably gained credit, even for the weaker students.

## Question 7

This question asked students to talk about training principles and the use of command style teaching. The banded mark scheme used for this stretch and challenge aspect of the examination requires students to do more than simply put down 12 creditworthy points to gain maximum marks. Marks are awarded for the whole of the response, taking into account a range and depth of knowledge, answering all (both) areas of the question and the use of good technical language and grammar.

Many students seemed restricted in their responses as the question involved a group of AS PE students. Students may have then made the assumption that such a group could not possibly be beginners or learners and therefore failed to use these thoughts in their responses. The use of a group of AS PE students is the norm for this question and such a group can easily be novices when it comes to any aspect of the Applied Exercise Physiology and Skill Acquisition in a practical situation question, especially when it comes to the Skill Acquisition component. AS PE students can easily be being taught things that they have never encountered before, or that they have yet to clearly grasp. Similarly, the stating of assumed knowledge of the subjects in terms of the time available to train or coach them, the number of students involved, and the facilities available cannot and should not be made.

The FITT principles were often stated as frequency, intensity, time and type (tedium was also often stated and credited), but students rarely explained what these words mean. Simply stating that 'F stands for frequency and you should increase the frequency' was not credited as the student had not explained what frequency means. The role of these factors in inducing overload was not well-understood by most students and the idea of overload, on which the FITT principles are hung, was not understood by many, with responses such as the 'dangers of overloading' being quite common. To gain credit, students needed to state and describe the FITT principles and explain how they are used to produce overload and then explain how overload benefits the performer. The concept of specificity was invariably limited to stating that training needed to be 'specific to their sport', which was considered to be too vague to be worthy of credit. Training needs to be skill-specific, movement-specific, energy system-specific, muscle fibre-specific, duration-specific and intensity-specific.

The command style of teaching was understood by the vast majority of the students. It was not necessary for students to suggest that command style was not the best style to use for a particular group and discuss, in considerable detail, other teaching styles. When stated, the reasons for adopting command style often lacked depth and only referred to the idea of using command style with large groups, in dangerous situations. When the ability of the group was referenced, credit was only given to students who stated that cognitive learners were linked to command style as other descriptions, such as beginners, novices, young, or inexperienced, were considered too vague. Consideration of the use of command style for complex skills, when the teacher lacks experience or confidence, for when the learner lacks

fitness or motivation, for when the situation involves a misbehaving class or little time and/or equipment were rarely contemplated by students.

As demonstrated by this question, the topic areas that are available for examination in question 7 are often too broad to contain the whole topic. This is why FITT and specificity (rather than training principles in general) and command style (rather than all teaching styles) were specifically used in the question.

## Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the Results statistics page of the AQA Website.