

Physical Education

Advanced GCE A2 H554

Advanced Subsidiary GCE AS H154

Report on the Units

January 2009

H154/H554/MS/R/09J

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This report on the Examination provides information on the performance of candidates which it is hoped will be useful to teachers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding of the syllabus content, of the operation of the scheme of assessment and of the application of assessment criteria.

Reports should be read in conjunction with the published question papers and mark schemes for the Examination.

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Chief Examiner's Report

There were just over 300 candidates entered for the new specification AS theory paper (G451). The paper was marked online.

The advice given to centres at Inset was that to cover the whole of the Physiological, Psychological and Socio-cultural theoretical areas in one term was unrealistic. This, therefore, meant that entry for the January examination would be very daunting for candidates. Several centres apparently entered single candidates simply to access the paper, again unnecessary as the question paper and mark scheme will be available through OCR Interchange.

It was pleasing to note that this small cohort did not seem to have difficulty in managing their time in attempting all sections of the paper. This may have been contributed to, however, by many candidates lacking in both depth and breadth of knowledge. Additionally it was also pleasing for examiners that the extended answer questions (question e) worth 10 marks appeared to allow most candidates to access the knowledge and understanding marks of Level 1 if not the more analytical marks of Levels 2 & 3.

Generally candidate performances were weak with responses patchy and lacking depth of knowledge. In a considerable number of cases, candidates had clearly been taught one of the three topics in sufficient depth, allowing them to score well in this section, but then achieved only a few marks on the two remaining topic areas, presumably where teaching time had been limited. No candidate achieved 80% of the marks available and the majority achieved below 50%. Whilst accepting that this is a new specification these performances appear to give credence to the advice given to centres at Inset. This advice is that it is unrealistic to consider entering candidates for the January series after only one term of teaching. This advice applies to both AS and A2 units. There may of course be exceptions to this but for the vast majority of candidates this advice will apply. The results from this first sitting of G451 indicate that it has been a potentially negative experience for many candidates given the insufficient preparation time available to them.

G451: An introduction to Physical Education (Written Examination)

General Comments

This was the first G451 paper for the new specification and the number of entries was understandably small. It is expected that in future the January paper will predominantly be sat by A2 candidates who are re-sitting rather than by AS candidates being examined on their entire AS theory work just four months into the course. While a very small minority of scripts were of exceptional quality, the vast majority reflected the relatively small amount of time available for preparation, and the level of maturity that candidates had developed. The specification is driven by the new subject aims (delivered by QCA) which focus on balanced, active and healthy lifestyles and lifelong involvement in physical activity.

The structure of the paper is as follows: Each of the three theory sections has five parts a-e. The first four parts (a-d) totals 20 marks with the final part (e) being a 10-mark question marked with a levels of response mark scheme. The levels descriptors used to mark the 10-mark questions are based on the following skills:

Knowledge and understanding;
Analysis/critical evaluation/discussion/explanation/development;
Practical application of knowledge;
Technical and specialist vocabulary;
Written communication;

The levels are as follows:

Level 3: 8-10 marks for a **comprehensive** answer (based on the descriptors above).

Level 2: 5-7 marks for a **competent** answer (based on the descriptors above).

Level 1: 0-4 marks for a **limited** answer (based on the descriptors above).

Candidates write their responses into the exam booklet. It is essential that they obey instructions such as: **do not write in the bar codes**. Staff might also encourage learners to leave blank the top line of the second sheet of each 10-mark question. The scripts will be marked on-line by the examining team and each script is scanned before being assigned to an examiner's work list. Candidates should request extra paper rather than write outside of scanning lines as such work will not be visible.

Section A: Anatomy & Physiology

1 (a) Use your anatomical and physiological knowledge to complete the table below for the athlete's spine.

Give two ways in which a warm up would affect the strength of contraction of the muscles during the sit up. (5)

- A minority of candidates achieved 3/3 for the first part of this question and/or 2/2 for the second part.
- The agonist and antagonist often the wrong way round.
- Some vague answers that did not gain credit e.g. **abdominals** instead of **rectus abdominus**
- In the second part of the question it was essential examination technique that candidates noticed that they were specifically asked for **two ways** – so just their first two responses were marked which caught some out.
- Pts 1, 2, 5 were the most frequently awarded in the second part of this opening question.
- A significant number of candidates jumped into the effect of exercise/warm up on the cardiovascular system and therefore did not answer the question nor gain marks.

(b) Complete the table below identifying the name and blood pressure value for an adult at rest in both phases of the cardiac cycle.

What changes would you expect to occur to blood pressure during exercise? (5)

- The first part of this question (4mks) was very poorly answered with a large number of **Nil Responses**
- Systolic and diastolic were often round wrong way
- In the second part of the question the majority of candidates omitted values (**mmHg**) and so did not gain credit even if they knew 120 / 80 (or the equivalent acceptable range)
- The vast majority of candidates knew that BP rises during exercise and so gained one mark for the last part of this question. The mark scheme this time did not require candidates to explain that Systolic values of BP increase & Diastolic values of BP stay the same during exercise. It is strongly recommended that in future candidates are prepared with this additional knowledge.

(c) How do neural factors regulate heart rate during physical activity and during a period of gradual recovery? (5)

- There were some impressive answers in this two part question.
- Those who did less well knew some of the key terminology (eg proprioceptors, baroreceptors, chemoreceptors) but did not know the detail/specifics of the changes – ie whether they detected increases or decreases during activity and/or recovery - and so could not gain marks. As always specific rather than vague answers are required.

(d) Describe the processes of internal respiration which allow more oxygen to be diffused into the muscle cell during exercise. (5)

- Internal respiration is a part of the specification that many candidates find difficult.
- Here many failed to know and understand the theory and muddled internal respiration (at muscles) with external respiration (at lungs)
- Very few mentioned the Bohr shift for Pt 7
- Some who were on the right track failed to note that the question required their knowledge of internal respiration to be applied to **during exercise**. So, even though these candidates gave an accurate explanation of internal respiration, they did not score.

- A large number of candidates got 0 marks here.

(e) Evaluate critically the impact of long term aerobic training and lifestyle choices on the efficiency of the respiratory system. (10)

- This question was similar in style to the specimen assessment material (SAMs) 10-mark Anatomy & Physiology question.
- It was a demanding and open question that proved to be a discriminator and which had an extensive mark scheme.
- Encouragingly even the weaker candidates were frequently able to apply lifestyle choices (particularly smoking) to the efficiency of the respiratory system.
- Overall, a majority of candidates were judged to be in level 1, gaining 4 or fewer marks out of 10. Often this was because they wrote about the cardio-vascular system rather than the respiratory system.
- Candidates should be encouraged to make their theoretical point and then try to expand on it with a little more specialist detail if they are able.
- They should also ensure that they learn and use correct technical and specialist vocabulary especially in this A&P 10-mark question.

Section B: Acquiring movement skills

2(a) The classification of motor skills in sport is often used in determining the most effective practice methods. Using a motor skill of your choice, mark its position on each of the following continua and write a justification for each placement. (6)

- This is a popular area of the specification and some candidates performed well here noting that having **identified a motor skill** of their choice they needed to **mark its position** on each of the continua and **justify its placement** to gain each of the six marks.
- Many candidates were vague in their identification of a motor skill selecting, for example *rugby* rather than say a *place kick* or *tackle* in rugby or *netball* rather than *passing in open play* or *taking a penalty shot*. While most knew and understood the gross/ fine and open/closed continua – most did not know or understand the simple/complex or low/high organisation continua.
- Some placed their chosen activity correctly but their justification was inaccurate or vice versa.
- Candidates had clearly been taught that motor skills can be positioned at any point on continua, but many inaccurately made placements at one extreme end or the other.

(b) The motivation to lead an active healthy lifestyle has an impact on participation in physical activity.

Briefly explain what is meant by drive reduction theory.

Describe how drive reduction can affect the motivation for an active, healthy lifestyle. (4)

- Many did not know or understand about drive reduction theory
- And very few were able to apply drive reduction theory to an active healthy lifestyle
- There were several Nil Responses here.
- A significant number of candidates saw the word **drive** and wrote about Hull's Drive Theory, thereby missing the focus of the question.

(c) Types of motor control affect the acquisition of skill in sport. Explain the role of closed loop control in the performance of movement skills. (4)

- This question was poorly answered on the whole.
- Some candidates muddled their knowledge and wrote about open – closed skills (which had already been examined in question 2a).
- Those who did know about closed loop control tended to be vague rather than specific in their answers and so missed marks for example they did not explain that movements can be adjusted **during** their execution.
- Hardly anyone mentioned perceptual v memory trace or accurately referred to level 2 and 3 motor control.

(d) Identify the three different types of reinforcement used in acquiring movement skills.

Explain how reinforcement can be used to promote a healthy lifestyle. (6)

- The first three recall marks were gained by approx. 60-70% of candidates. The rest were guessing with key words from other areas of the specification such as self paced /externally paced.
- The application/explanation marks proved much more difficult for candidates to gain and in general they failed to apply their knowledge to the promotion of a healthy lifestyle.

(e) Using a motor skill example from sport, explain each element of the model in fig. 2 (10)

- This proved to be the most straightforward 10-mark question on the paper with candidates having been given a model and so clear hooks on which to hang their knowledge and therefore structure their answer. On the downside this often meant that answers were a little disjointed and presented almost as a series of bullet points.
- Some candidates were outstanding in their ability to apply theory to practical examples and so gained good credit under one particular levels descriptor.
- Candidates need to remember to structure their answer so that they score well on written communication, which requires a fluent style.
- On the down side some candidates appeared not to have covered Information processing as a body of knowledge.
- Some failed to identify a motor skill and so the awarding of application marks was difficult.

Section C: Socio-cultural Studies relating to participation in physical activity

3(a) Identify possible benefits to young people of regular participation in school Physical Education. (4)

- This opening question of the socio-cultural section had a straightforward command word and covered a popular area of the specification resulting in many candidates doing very well here and scoring a max of 4 marks.

(b) Describe possible consequences of using drugs in sport and possible solutions to the problem of drugs in sport. (5)

- Some candidates did very well here clearly having good knowledge and understanding of this contemporary sporting issue.
- Most were able to structure their answer well and noted the need to describe rather than simply identify key points/words (which would not have gained marks).
- There was a sub max of four marks from one section here and a pleasing number scored a max.
- Weaker candidates gave detailed descriptions of why some performers are tempted to take performance enhancing drugs which was not required.

(c) Describe the nature of sport in the USA. (5)

- This is a new area to AS socio-cultural work and many candidates were clearly confident and well prepared here with many encouraging responses evident.
- As always they needed to obey the command word in the question and so give a description here. The American Dream (Pt 1) was awarded for reference to sport being a vehicle for achieving 'the dream', rather than simple reference to this notion.
- The most commonly awarded points were 1 - 5.

(d) Compare cycling when performed as a physical recreation with cycling when performed as a sport. (5)

- Here candidates needed to apply their knowledge of physical recreation and sport in order to give a comparison. Direct comparisons or differences were strictly required to gain marks. .
- Candidates could and did score well if they wrote two separate paragraphs (one on cycling as physical recreation and one on cycling as sport) but those who scored more efficiently used links words such as however, but, although and whereas. E.g. ***cycling when done as recreation is not competitive whereas cycling when done as sport is very competitive.*** (one mark).
- Marks could also be gained if candidates clearly said than one was MORE competitive (for example) than the other.

(e) Violence by spectators and players is a contemporary sporting issue. Discuss violence in sport with reference to both causes and solutions. (10)

- This is a popular contemporary sporting issue with many candidates doing well here.
- The candidates' knowledge and understanding was often at least competent with many also able to give sound examples to back up their points (practical application of knowledge). Discussion was also often competent and sometimes comprehensive with quality of written communication varied.
- The descriptor 'technical and specialist vocabulary' was not relevant in this particular socio-cultural question – and is unlikely to be relevant in the future. So candidates can be encouraged to focus on the others (outlined in the introduction to this report).

Grade Thresholds

Advanced GCE Physical Education H154 H554
January 2009 Examination Series

Unit Threshold Marks

Unit		Maximum Mark	A	B	C	D	E	U
G451	Raw	90	66	58	50	43	36	0
	UMS	120	96	84	72	60	48	0

Aggregation was not available in this series

For a description of how UMS marks are calculated see:

http://www.ocr.org.uk/learners/ums_results.html

Statistics are correct at the time of publication.

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