

# PHYSICAL EDUCATION

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Paper 9396/11

Written Paper

## General Comments

The standard of responses varied considerably. Although many good responses were witnessed, often candidates did not clearly demonstrate the detailed knowledge required to produce extensive and comprehensive answers. It is important that candidates respond in a suitable way to the question being asked. Command words are used to indicate the detail of the response required and mark allocations to help candidates decide the length and depth of their answer; so when the command word is “explain” a reason or a response of some detail is required.

## **Section A – Applied Anatomy**

### **Question 1**

- (a) Candidates had to identify the type of movement at the hip and knee, naming the main agonists responsible. Many managed to ascertain the concept of flexion and/or extension but less managed to name the main agonists. When the movement was incorrect, the main agonists also tended to be incorrect. Some students used the names of a group, e.g. quadriceps rather than the individual muscle names.
- (b) Candidates were required to describe the functions of antagonists and synergists. The role of antagonists was better known with only a minority correctly identifying the function of synergists.
- (c) The commands and detail within the question challenged candidates. As candidates had to describe how the Sino-atrial (SAN) node controls heart rate, many gave a generic answer, which did not focus on the role of the SAN. Some answers concentrated on the role of carbon dioxide within the blood; which was irrelevant.
- (d) Many candidates understood the main mechanisms that assist with venous return, with valves preventing backflow a common answer. This was one of the better answered applied anatomy and physiology questions.
- (e)(i) Most candidates correctly identified the need to transport oxygen to the working muscles to create energy.
- (ii) The descriptive element required was often incomplete, with candidates failing to describe the role of chemoreceptors and the vascular shunt mechanism. However, many candidates did correctly identify the role of vasoconstriction and vasodilation.
- (f) Candidates’ answers were mixed, but largely positive. Many candidates scored almost full or full credit for demonstrating a detailed knowledge of the features that assist the diffusion of respiratory gases. The large surface area of the alveoli and the thin walls were common answers.

## **Section B – Acquiring, developing and performing movement Skills**

### **Question 2**

- (a) Candidate’s responses to were mixed although many candidates did show a good level of understanding. Most knew the difference between the open to closed continuum but few knew how to identify that triple jump is a serial skill.
- (b)(i) Candidates were asked to distinguish between positive and negative reinforcement. Most knew what positive is but could not explain negative reinforcement.

- (ii) The use of operant conditioning was not well known. The concepts of “shaping” and “trial and error” were seldom given as answers although the use of praise or reward was commonly credited.
- (c)(i) Candidates were asked to describe closed loop control. This tended not to be well answered with many candidates describing closed skills. A minority of candidates correctly described the importance of feedback and its availability.
  - (ii) As (i) was linked to this part most candidates did not identify why closed loop control is not applicable to all skills.
- (d)(i) Most candidates were able to explain the term selective attention although many suggested that it was a negative concept as opposed to being able to focus on relevant information / cues.
  - (ii) The improvement of selective attention was relatively well answered with many candidates correctly suggesting about increasing the intensity of the stimulus, direction attention to a cue and/or lots of relevant practice.
- (e) This was concerned with motivation. Many candidates suggested positive and negative motivation, lacking the depth of response to explain intrinsic and extrinsic. Extrinsic was generally more common than intrinsic in candidate’s answers. The second part to the question required candidates to identify strategies to motivate a group of performers. Many good answers were seen with points correctly identified like: use of rewards, positive feedback and variation in training.

### **Section C – Contemporary Studies**

#### **Question 3**

- (a) Candidates were asked to compare the differences between physical recreation and education. Answers were mixed with many identifying the importance of compulsory education compared to voluntary recreation. However, many answers did not compare the two terms and suggested that both were similar. It was also common to see physical recreation linked to non-sporting activities.
- (b) The benefits of play were often described instead of the characteristics of play. Many gave answers to this that were better suited to **Question 3 (d)**. The most common answers were credited for benefits to health/fitness and for fun.
- (c)(i) The majority of candidates were able to identify that excellence was the best/international performers. However, some answers were too simplistic, simply saying it is a performer “who is good”.
  - (ii) This part allowed candidates choice as to which country they referred to. Many did outline policy, administration and provision that promoted excellence, however, a number gave a vague overview of un-named initiatives that take place.
- (d) This part was concerned with identifying the benefits of increased participation to the individual and society. Most candidates gained credit on this question with answers often focusing on health and fitness benefits. Some candidates were challenged by relating the benefits to society but the stronger candidates made some reasoned conclusions relating to social control, less strain on health services and/or increased chances of producing elite athletes.
- (e)(i) The term “commercialised sports” challenged many students. However, many did gain credit for referring to large audiences and player contracts.
  - (ii) This was answered better with most students gaining credit for balanced answers comparing the advantages and disadvantages of sponsorship to the performer. However, some candidates focused on the advantages to the sport rather than the performer.

# PHYSICAL EDUCATION

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Paper 9396/12

Written Paper

## General Comments

Candidates must read questions carefully and ensure that they give the type of response required by the “command” word in the question.

## **Section A – Applied Anatomy**

### **Question 1**

- (a) Descriptions of the type of movement occurring at the shoulder and elbow were generally correct. The question required the names of the appropriate terms for the movements from A to C; not ‘at A’, ‘at B’ or ‘at C’. Where candidates did respond in such a fashion, the terms used for the ‘at C’ situation were the ones marked. Identification of the agonist was usually good, with ‘deltoids’, ‘pectoralis major’ and ‘biceps brachii’ commonly identified. Whereas ‘anterior deltoid’ was an acceptable (actually more accurate) alternative for the shoulder action; use of the term ‘posterior deltoid’ was not credited. Similarly ‘biceps’ or ‘pectorals’ were not credited.
- (b)(i) Many candidates suggested that this movement from A to B involved a concentric, rather than an eccentric contraction. Many candidates also provided the names of the agonist. Use of the command word “describe” meant that a depiction of the action was required for further credit.
- (ii) Many candidates correctly identified the isometric contraction occurring.
- (c)(i) The majority of candidates gained credit by defining cardiac output and stroke volume, although a considerable proportion of candidates did not gain full credit.
- (ii) The majority of candidates were able to suggest the relationship between cardiac output, stroke volume and heart rate either through using the correct terms or through abbreviations.
- (d) The identification and explanation of the mechanics of breathing produced some clear and detailed responses intermingled with some limited responses. Names of the appropriate breathing muscles were commonly stated, there is an expectation that candidates should be able to distinguish between the roles of the external and internal intercostal muscles. The mechanism of the effect of the breathing movements on thoracic volumes and pressure were less commonly stated, and few candidates identified the role of the pleural membranes.
- (e) Candidates’ knowledge of the transport of carbon dioxide was generally good, with many candidates gaining maximum credit. The combination of carbon dioxide with haemoglobin was credited, but suggesting a link with red blood cells was not. Similarly stating the name of the chemical formed as “carbaminohaemoglobin” was also credited, whereas suggesting it was named “carboxyhaemoglobin” was not.
- (f) The majority of candidates discussed the combination of oxygen and haemoglobin at a simplistic level rather than the detail of the two different gas exchange systems. In this question there was an expectation of the use of the correct technical terms; hence the need for the use of “down a diffusion gradient”, “saturation of haemoglobin” and “dissociation from haemoglobin”, rather than the more general “oxygen moves”, “haemoglobin picks up oxygen” and the “oxygen goes to the muscles”.
- (g)(i) The majority of candidates were able to identify the two types of blood vessels.
- (ii) The question asked for explanations of the variations in blood pressure and velocity as shown in the diagram. Few candidates showed that velocity of blood is dependant of the total cross-sectional area

and that pressure is restricted by the resistance between the blood vessel walls and the blood flow. The majority of candidates simply described what could be seen from the diagram in terms of changing velocities and pressures.

### **Section B – Acquiring Movement Skills**

#### **Question 2**

- (a) Candidates' responses to the differences between skill and ability in (i) and the characteristics of skill in (ii) were generally good. The majority of candidates correctly identified that skills are "learned" whereas abilities are "innate". Similarly the idea that skills are "fluent", "efficient", "aesthetically pleasing" and "goal orientated" were all regularly stated.
- (b) Candidates were asked to explain insight learning and its potential benefits as a learning method. The majority of candidates found this challenging.
- (c) The majority of candidates were able to suggest that open loop control "does not involve feedback". A few candidates identified the idea of control being "too fast" and/or there being "no time for adjustments". The most common correct example suggested for open loop control was a golf swing.
- (d) Many candidates correctly identified intrinsic and extrinsic feedback and gave suitable descriptions. The terms "internal" and "external" as forms of feedback are not in the specification and therefore were not credited. "Concurrent" (not continuous) and "terminal" forms of feedback were also often correctly described. Many candidates described the terms "positive feedback" and "negative feedback". These were incorrectly described as being concerned with "prizes/rewards" and "criticism". The majority of candidates were actually describing positive reinforcement and punishment rather than positive and negative feedback.
- (e)(i) Many candidates gained partial credit by suggesting the "limited duration and capacity" of the short-term memory, but fewer gained further credit by mentioning the flow of "information from STSS" and "to LTM" and "from LTM" and the idea of the STM running "motor programmes".
- (ii) This question required candidates to comment on methods that might be used to store information in long-term memory. Here candidates suggested that "practice" might help. They tended to focus their responses on what could be done to the learner rather than what the coach could/should do.
- (f) Credit was given for suggesting that "as arousal increases so does performance". Additional credit was available for suggesting that this relationship was linear, and this was often shown as a diagram. The majority of candidates described the inverted U hypothesis rather than drive theory, and hence able to gain only partial credit.

### **Section C – Contemporary Studies**

#### **Question 3**

- (a) The majority of candidates found this question challenging, with few gaining full credit. Candidates needed to make a comparison of the differences rather than describing play and then describing sport. Such methods were credited as appropriate but it often led to candidates omitting the comparator, for example the suggestion that play has "few, changeable rules" was not compared to sport as having "fixed rules". Candidates might find these comparison questions lend themselves to answers that are written in a tabular form in order to make direct comparisons.
- (b) Most candidates were able to suggest several benefits including "health" and/or "fitness benefits" and possibly "reduce crime". Other common correct responses in this question where many gained credit included "generating revenue", "creating employment opportunities" and "increasing numbers potential elite performers".
- (c) Few candidates clearly described how elite performers are identified and developed. Candidates were expected have some detailed knowledge of this area. Suggestions that "scouts will watch", "training groups will be developed", or "they would attend academies" were too general to be credited. Detailed knowledge would identify the organisations involved and their funding mechanisms, and these would be specific to the country of choice.

- (d) There were some regularly repeated answers involving the ideas of “more clubs / facilities”, “greater prize-money” and “increased media coverage / role models”. Few candidates gained more than partial credit.
- (e)(i) Many candidates were able to gain credit by suggesting that sporting events were dependent on commercialisation in order to have sufficient funds for the event to proceed. The majority of candidates concerned themselves with sponsorship and the role of the media in general, rather than talking about why these sporting events need the additional funding. The idea of “insufficient income from ticket sales”, the “cost of security”, “prize monies” and “facility hire / upkeep” would have gained credit.
- (ii) Candidates were asked to discuss the impact of the media and commercialisation on spectators. However, many talked about the impact on the sport rather than the spectators. Sports have changed to fit in with the media, and sport often dominates the media; few candidates entered into this area of discussion.

# PHYSICAL EDUCATION

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Paper 9396/13

Written Paper

## General Comments

The standard of responses was generally quite good, with many candidates demonstrating clear, detailed knowledge of the specification and producing comprehensive answers. There were, however, occasions where candidates needed to ensure that their responses were appropriate to the “command” words used in the questions.

## **Section A – Applied Anatomy**

### **Question 1**

- (a) Descriptions of the type of muscle contraction involved at the shoulder, elbow and wrist were generally good, with many candidates correctly identifying shoulder “flexion” (or adduction) elbow “flexion” and wrist “flexion” as the movements occurring. “Pronation” was also accepted as the wrist action. Identification of the agonists was less reliable. Both “pectoralis major” and “deltoid” were credited for the shoulder action. Responses which suggested “posterior deltoid” rather than “anterior deltoid” were not credited. Many candidates correctly identified the “biceps brachii” as the main agonist at the elbow, however, a large proportion mistakenly identified it as the “triceps brachii”. In terms of the wrist both ‘wrist flexors and “pronator teres” were credited.
- (b) The majority of candidates gained credit by identifying some of the characteristics of fast glycolytic muscle fibres. The most popular correct responses were “fast speed of contraction”, “few mitochondria”, “low resistance to fatigue” and “white”. Candidates could have responded to this type of question by giving responses as a numbered list to make sure that they offered a number of responses that matched the mark allocation.
- (c) The majority of candidates were able to explain some aspects of the regulation of heart rate. “Adrenaline” as the cause of the anticipatory rise was a common response, but detailed explanations of the causes of the increase in heart rate were limited. Several candidates identified receptors but not their role and this was needed to gain credit. Responses concerning post-exercise regulation often lacked detail, statements such as “heart rate returns to resting levels” were only credited if there was some explanation as to how this is achieved; through “reduced blood pressure” and “baroreceptors” or reduced “sympathetic impulses”/“increased parasympathetic impulses”.
- (d) Candidate’s need to improve their knowledge of the causes of the increase in blood pressure during exercise. Many candidates gained some credit through the mention of heart rate increasing.
- (e)(i) Many candidates were able to clearly identify the three lung volumes that form the vital capacity. However, the use of abbreviations was not credited and other than the required terms, only “expiratory reserve” and “inspiratory reserve” were credited.
- (e)(ii) Identification of the effects of exercise on these three lung volumes usually followed knowledge of those volumes. So those candidates who correctly identified the volumes in (e)(i), invariably knew the changes to those volumes that occurred during exercise.
- (f) The majority of candidates were able to identify that “oxygen tension is lower at altitude. Many candidates discussed the long-term effects of altitude training, rather than the short-term effects of exercise.

**Section B – Acquiring Movement Skills**

**Question 2**

- (a) Candidates needed to clearly identify the concepts of abilities and the role of fundamental motor skills developing from motor abilities and under-pinning skill learning.
- (b) Candidates found it challenging to explain how the stages in Bandura's theory of observational learning could help a demonstration. The majority of candidates simply identified the four stages of the theory. They were required to suggest ways of making the demonstration useful and ways of using the theory to assist learning. Making the demonstration "attractive", "meaningful", using a "role model" and allowing "time to practice" were creditable responses.
- (c)(i) Candidates were asked to state the four sources of information used to modify motor programmes in Schmidt's schema theory. The mark scheme credited only those terms from the specification. The majority of candidates named just one or two of these sources of information.
- (ii) This question was concerned with the development of schema through practice. Many candidates identified the idea of "varied practice" as being important. The use of "frequent feedback" was another suitable comment, others such as "video analysis", or "conditioned games" would have gained credit.
- (d)(i) Responses to the definitions of movement time, response time and reaction time were generally good. Credit was not gained by repeating the question.
- (ii) Many candidates stated that the performer should practice; this is too simplistic a response. There needs to be some idea of what sort of practice; "realistic practice" or "practice the skill" were creditable responses. In addition, some candidates did advocate the use of "mental rehearsal", "improved fitness", "increased motivation" and "improved selective attention".
- (e)(i) Candidates were asked to name and describe two stages of learning. The majority of candidates were able to name the two stages, descriptions needed to be more specific and detailed, especially where the associative stage was concerned.
- (ii) Candidates were required to suggest strategies for helping a performer progress between these two stages. This produced a range of suitable responses, where "repetition", "feedback", "encouragement" and "imagery" were the most popular.

### **Section C – Contemporary Studies**

#### **Question 3**

- (a)(i) Candidates were asked to use examples to explain the terms outdoor education and outdoor recreation. The majority of candidates found this question challenging. The idea that outdoor education involved schools organising outdoor and adventurous activities was not often clearly described, but knowledge about outdoor recreation was better. Many candidates still think outdoors means literally that. Outdoor recreation is concerned with activities that are not available within the confines of the school grounds.
- (ii) Candidates were asked to state the values available when participating in outdoor and adventurous activities. This question was generally well-answered with the ideas of “improved health/ fitness”, “social skills”, “appreciation of the environment”, and “fun” being common responses.
- (b)(i) The majority of candidates were able to identify some of the reasons why Governments are keen to increase participation. Most candidates readily identified the “improved fitness”, “social benefits” and “social control” that occurs.
- (ii) There were a wide range of potential answers as any initiative from any ‘organisation’ was credited so that the majority of candidates gained credit on this question.
- (c) Candidates were asked to suggest possible causes of violence during a sporting event. The vast majority of candidates were able to suggest potential causes. If the suggestion was then repeated in a different context it gained no additional credit. Candidates made little mention about the type of sporting activity involved.
- (d) Candidates were required to explain the effects the media have on sporting events. Candidates needed to appreciate the context of the question. Most candidates were concerned about the commercial aspects of the question and talked about sponsorship and advertising rather than the control of the media on the sporting events. The media (essentially TV) have had a dramatic influence on sporting events, changing their format, affecting the playing seasons and kick-off times. TV has also brought sport into the homes of many people, allowing them to be better informed and educated about the sport/event.



# PHYSICAL EDUCATION

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Paper 9396/02  
AS Coursework

## Key Messages

- 1 Nearly all centres used the new forms.
- 2 Almost all centres adhered to the new rubric that weight training can now not be used for Action Plans. They are also advised that nor is hill walking appropriate.
- 3 Some centres produced Action Plans that were entirely fitness based. Centres must look at a whole performance and comment on all aspects. The balance of action plans between skill and fitness and background information and improvement plans and the interpretation of the task continued to be a problem.
- 4 Centres are asked to complete a dispatch form included in the back of the Guidance Booklet to aid checking and use of coursework by Cambridge.
- 5 The standard of assessment has been more accurate again this year. Consequently the amount of mark adjustment has been reduced. Centres' positive responses are recognised and they are thanked for them. The number of centres that were scaled significantly was also reduced.
- 6 Candidates must be identified by clear numbers (or letters) on the front and back of shirts.
- 7 Hill walking evidence has improved; centres need to submit filmed evidence.
- 8 Candidates should be placed in an environment that applies sufficient demand to allow assessment at AS. If candidates are asked to complete tasks in a situation of low demand then they cannot access higher marks

## General Comments

What is clear is the enthusiasm and effort that so many centres and candidates demonstrate. Many centres do a very good job of filming evidence. The overall quality of teaching and candidate performance should be applauded. Some performances are clearly exceptional. Some other candidates have worked very hard (sometimes over many years) to achieve a high standard in their activity. Teachers are obviously committed to maximising the ability of candidates. There are still some candidates who are beginners in an activity and do not reach AS standard.

## **Filmed Evidence**

The quality, quantity and type of evidence varied considerably. The majority of centres produced good quality filmed evidence. In some cases this was excellent. The best centres clearly review, select, edit and then most importantly check the DVD before dispatch. For some centres the film was blurred, pointed skywards or focused on the wrong candidate. The film should show the skill technique and the outcome (e.g. a shot in Basketball or a Tennis serve). The use of a tripod can improve film quality. There is still filmed evidence with very large black backgrounds and only a small picture; this is a format issue and centres asked to check for this error.

A few centres submitted too many DVDs; one DVD should suffice. Separate DVDs for candidates or activities should not be submitted. Filming should be by activity and not presented by individual candidate except when there is only one person for the activity. Centres are asked to consider the following issues before the DVD is dispatched. The candidates should be clearly identified and the identifiers should have been written onto the assessment sheets (please remember that the moderator will be totally unfamiliar with your candidates); if unsure ask someone who does not know the candidates to view the DVD. Is candidate participation very frequent (or is there a lot of time when they do not have contact with the ball)? Does the film show the best ability of the candidate(s)? Film of candidates in rugby where there is little or no contact makes moderation very difficult. Both candidate identification and participation time are an issue for some centres.

## **Selected Activities**

Invasion games (mainly hockey, football, netball, basketball and rugby), badminton swimming and track and field are the activities that are submitted most frequently. Volleyball, water polo and weight training are also popular. The other activities that are available are used to a much lesser extent but it is pleasing to see that nearly all the activities that are in the Guidance Booklet are selected by some candidates.

## **Action Plans**

Action Plans vary considerably. More adjustment to credit occurs in the written work compared with the practical. They range from high quality, superbly presented, well considered work to one side of basic work. The syllabus and guidance notes must be consulted before teaching and assessing this work. The work should be activity specific and address all factors of the performance not just fitness. The work should include all of; identification of strengths and weaknesses and the rationale for the judgement, which leads to; clear realistic (SMART) goals which lead to: analysis of technique and fitness elements. Detailed plans to bring about improvement must be included which includes detailed practices, the principles of training (particularly SPORT and FITT) and a week by week program. Finally the plan should be evaluated, this will include some quantitative results. The task instructions on page 8 provide a good outline of what is expected. The Action Plan must be one of the candidates own practical activity and must aim to improve the candidate. Action plans should have a front cover which gives the mark, candidate name, candidate number and the activity which is being improved.

Some work has not been very activity specific. Other work has identified strengths and weaknesses and then the improvement plan has not referred back to the identified issues. Not all aspects need to be included in the plan especially if some are focused on in depth. Some training sessions are excellent whereas others have only been repeated twice a week and contain content that will last a maximum of ten minutes. Candidates need to be taught how to construct a training session and a ten week plan. Action plans must not be just a record of participation in an activity, either in a club training session or lessons. Action Plans cannot be undertaken in Weight Training and it is also advised that Hill Walking is not appropriate. Activities must allow candidates to improve aspects of skill

## **Assessment**

Overall this has improved resulting in less centres being scaled and scaling being less severe. There are still a few centres that marked significantly differently. Some centres marked to within a few marks of the criteria and some were very accurate. The moderation process examined the evidence, it aimed to give as much credit to the candidate as possible and then arrive at a precise mark for the activity. If the centre has internally standardised effectively then any difference between centre marking and the moderation outcome should be consistent across all activities.

Some centres have assessed activities where the candidates are complete beginners, or at an early stage of developing their ability. Therefore candidates could not achieve a performance that is at A Level standard. Candidates sometimes do not demonstrate their ability in sufficiently demanding conditions, for example a skier on an elementary run cannot be marked at a high level. Centres are asked to ensure that in their initial planning of an activity that opportunities to film candidates in conditions in which they can demonstrate their ability are available and are planned and used.

In weight training the evidence has improved. Most centres submitted logs. However, some of the logs did not follow a logical pattern with quite puzzling use of IRM and percentages of it to create programs. Centres must present evidence that the candidate has followed a program of weight training that has a specific purpose and includes a wide range of weight training stations. The new form should record a candidates' participation which should then be used as the basis of assessment. This is available in the current coursework guidelines. The Weight Training log must be submitted with coursework.

## **Double Evidence**

There have been a few cases where this has occurred. AS and A2 evidence must be separate.

## **Comments on Specific Activities**

The following activities have raised issues that centres are asked to note.

**Athletics**

Several examples/attempts (particularly in field events) should be filmed.

**Cross Country**

Candidates must run the specified distance; this is to ensure that comparability between centres can be maintained (4 km female, 5 km male).

**Weight Training**

Training logs must be used and then marks submitted on a centre rank order sheet.

**Combat Activities**

Only Judo and Karate are permitted.

**Dance**

Three solo dances are required; the candidate must choreograph the dances. Group dances or dances taken from a school production are not permitted.

**Games Activities**

These must include conditioned competitive practices (not simple drills) at a standard that places demand on the candidate.

**Cricket**

Assessment should be carried out on two out of three skill areas.

**Outdoor and Adventurous Activities**

Prescribed minimum conditions apply; the conditions are to be entered onto assessment sheets.

**Hill Walking** Navigational skills must be filmed for each individual candidate.

**Rowing** Candidates should be assessed and filmed in sculls or pairs.

**Orienteering** Navigational skills must be filmed; assessment must be on a graded course.

**Swimming** Swimming strokes must be filmed.

# PHYSICAL EDUCATION

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Paper 9396/31

Written Paper

## Key Messages

The majority of candidates were well prepared for the examination by their Centres, having been taught all areas to the syllabus to the correct level of detail. Many candidates used correct technical language to answer their questions and most candidates wrote with a good standard of spelling, grammar and punctuation. However, as in previous years, a number of candidates did not use a practical sporting example when asked to do so and failed to gain credit as a result. This is an important message that must be emphasised to candidates as they prepare to sit the examination. The vast majority of candidates appeared to manage their time effectively with very few unanswered questions.

## General Comments

Many candidates were able to demonstrate a good understanding of the theoretical principles underpinning Physical Education and could apply their knowledge to the specific questions set. Section A was answered well and was often the highest scoring section of the three. Many candidates scored higher for section C than section B, and this may be because candidates were often asked to use practical examples to support their answers. When examples are asked for, candidates must understand that this is a necessary requirement of a fully successful answer.

## Comments on Specific Questions

### *Section A: Exercise and Sport Physiology*

#### Question 1

- (a) (i) Candidates were generally able to give definitions and units for energy, work and power.
- (ii) Many candidates showed an understanding of the principles of a coupled reaction. The best answers explained how the product of the first reaction is used in the second, gave suitable equations for the ATP-PC system and linked these to exothermic or endothermic reactions.
- (b) This question was generally well answered. Most candidates were able to identify tests to measure their two chosen components of fitness, and it was clear that candidates had been taught this area in a practical manner. Definitions given were clear.
- (c) (i) Candidates performed more strongly on this question than any of question in **Section A**. Candidates had generally learned a suitable acronym for the principles of training and applied the principles well to an elite marathon runner. Candidates are reminded to read the question carefully and focus on the specific performer. In this case it was an elite marathon runner using continuous training. Weaker candidates did not always have the specified focus.
- (ii) A significant number of candidates knew about periodisation and identified the macrocycle, mesocycle and microcycle, giving a description of each. The best answers also gave a specific objective for each block, and explained that small training blocks allow for rest and recovery and could help to maintain motivation.
- (iii) Most candidates were aware of the importance of eating plenty of carbohydrates prior to a marathon race and understood that this should be around two hours or the night before the event.

Some candidates suggested that a post-competition meal should have proteins as well as carbohydrates, and this was acceptable. A small number of candidates did not complete this question.

### **Section B: Psychology of Sports Performance**

#### **Question 2**

- (a) (i) This question was well answered. Most candidates recognised that a characteristic of each word was required.
- (ii) This question was also well answered and many candidates produced more than the two limitations of personality profiling that were required.
- (b) Stronger candidates could explain the difference between a prescribed leader and an emergent leader and gave a practical example of each. A significant number of candidates did not give a sporting example however.
- (c) The best answers used sporting examples to identify each of the antecedents, and then outlined the leader behaviours. Some answers addressed the antecedents but not the leader behaviours. A few candidates did not apply the model to leadership which was an integral part of the question.
- (d) (i) There were some excellent responses to this question with candidates explaining that simple tasks need high arousal and complex tasks need low arousal, and that autonomous performers work better at high arousal whereas novices need low arousal to perform well. Some candidates talked about drive reduction theory which was not relevant to this question.
- (ii) This was generally well answered with many candidates gaining full credit for the question.
- (iii) The best answers identified the importance of the event, playing at an unfamiliar venue against strong opposition, fear of failure, getting injured, and being judged by the audience as factors affecting sports competition anxiety. Many candidates only identified one factor, and a significant number discussed ways to reduce anxiety which was not the focus of the question.
- (e) (ii) Many candidates recognised the need to address both positive and negative effects of this question and produced strong, balanced answers.

### **Section C: Olympic Games – A Global Perspective**

#### **Question 3**

- (a) Many candidates identified this concept as competing against the very best athletes in the world and striving to be the best. The best answers also talked about showing good sportsmanship and reaching one's personal goals.
- (b) (i) This question was very well answered with most candidates identifying at least three sources of funding available to the host nation.
- (ii) This question was also very well answered. Almost all candidates gave three financial costs that affect an athlete who is competing in the Olympic Games.
- (iii) This question asked candidates to consider the potential costs to the people living in a city which is awarded the Olympic Games. Many answers were excellent and addressed negative impacts such as increased taxes and traffic congestion, and the relocation of people to other areas, as well as positive impacts such as improved infrastructure, use of the Olympic village for affordable housing and use of world class facilities.
- (c) This question proved challenging for many candidates. The best candidates understood that the USA had a decentralised system with limited Government funding whereas the People's Republic of China is a centralised system with heavy Government funding. Many candidates talked about China selecting children at a very young age, sending them to specialist schools and the lack of

personal choice. The USA pathway of High School and scholarships to College was often mentioned.

- (d) There were some very good answers to this question. Many candidates were able to explain this important concept. However, some candidates expressed the mistaken belief that amateurism is linked to a low standard of performance and gained no credit for this.
- (e) Candidates were expected to consider the future of the Olympic Games and this was generally well answered. The best responses identified what 'wealth sports' are, and gave arguments for and against their removal from the Games. Common arguments mentioned the Olympic ideal of sport for all and this was used for both sides of the discussion, that these sports are not fair on those who cannot afford to compete, and how to deny those who have trained for years to be the best in an Olympic sport is also inherently unfair. Other less common arguments included dropping these sports to make room for others, and how dropping them might lose revenue from broadcasters and sponsors as many are very popular. There were some very thorough answers to this question.

# PHYSICAL EDUCATION

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Paper 9396/32

Written Paper

## Key Messages

The majority of candidates were well prepared for the examination by their Centres, having been taught all areas to the syllabus to the correct level of detail. Many candidates used correct technical language to answer their questions and most candidates wrote with a good standard of spelling, grammar and punctuation. However, as in previous years, a number of candidates did not use a practical sporting example when asked to do so and failed to gain credit as a result. This is an important message that must be emphasised to candidates as they prepare to sit the examination. The vast majority of candidates appeared to manage their time effectively with very few unanswered questions.

## General Comments

Many candidates were able to demonstrate a good understanding of the theoretical principles underpinning Physical Education and could apply their knowledge to the specific questions set. Section A was answered well and was often the highest scoring section of the three. Many candidates scored higher for section C than section B, and this may be because candidates were often asked to use practical examples to support their answers. When examples are asked for, candidates must understand that this is a necessary requirement of a fully successful answer.

## Comments on Specific Questions

### *Section A: Exercise and Sport Physiology*

#### Question 1

- (a) (i) Candidates were generally able to give definitions and units for energy, work and power.
- (ii) Many candidates showed an understanding of the principles of a coupled reaction. The best answers explained how the product of the first reaction is used in the second, gave suitable equations for the ATP-PC system and linked these to exothermic or endothermic reactions.
- (b) This question was generally well answered. Most candidates were able to identify tests to measure their two chosen components of fitness, and it was clear that candidates had been taught this area in a practical manner. Definitions given were clear.
- (c) (i) Candidates performed more strongly on this question than any of question in **Section A**. Candidates had generally learned a suitable acronym for the principles of training and applied the principles well to an elite marathon runner. Candidates are reminded to read the question carefully and focus on the specific performer. In this case it was an elite marathon runner using continuous training. Weaker candidates did not always have the specified focus.
- (ii) A significant number of candidates knew about periodisation and identified the macrocycle, mesocycle and microcycle, giving a description of each. The best answers also gave a specific objective for each block, and explained that small training blocks allow for rest and recovery and could help to maintain motivation.
- (iii) Most candidates were aware of the importance of eating plenty of carbohydrates prior to a marathon race and understood that this should be around two hours or the night before the event.

Some candidates suggested that a post-competition meal should have proteins as well as carbohydrates, and this was acceptable. A small number of candidates did not complete this question.

### **Section B: Psychology of Sports Performance**

#### **Question 2**

- (a) (i) This question was well answered. Most candidates recognised that a characteristic of each word was required.
- (ii) This question was also well answered and many candidates produced more than the two limitations of personality profiling that were required.
- (b) Stronger candidates could explain the difference between a prescribed leader and an emergent leader and gave a practical example of each. A significant number of candidates did not give a sporting example however.
- (c) The best answers used sporting examples to identify each of the antecedents, and then outlined the leader behaviours. Some answers addressed the antecedents but not the leader behaviours. A few candidates did not apply the model to leadership which was an integral part of the question.
- (d) (i) There were some excellent responses to this question with candidates explaining that simple tasks need high arousal and complex tasks need low arousal, and that autonomous performers work better at high arousal whereas novices need low arousal to perform well. Some candidates talked about drive reduction theory which was not relevant to this question.
- (ii) This was generally well answered with many candidates gaining full credit for the question.
- (iii) The best answers identified the importance of the event, playing at an unfamiliar venue against strong opposition, fear of failure, getting injured, and being judged by the audience as factors affecting sports competition anxiety. Many candidates only identified one factor, and a significant number discussed ways to reduce anxiety which was not the focus of the question.
- (e) (ii) Many candidates recognised the need to address both positive and negative effects of this question and produced strong, balanced answers.

### **Section C: Olympic Games – A Global Perspective**

#### **Question 3**

- (a) Many candidates identified this concept as competing against the very best athletes in the world and striving to be the best. The best answers also talked about showing good sportsmanship and reaching one's personal goals.
- (b) (i) This question was very well answered with most candidates identifying at least three sources of funding available to the host nation.
- (ii) This question was also very well answered. Almost all candidates gave three financial costs that affect an athlete who is competing in the Olympic Games.
- (iii) This question asked candidates to consider the potential costs to the people living in a city which is awarded the Olympic Games. Many answers were excellent and addressed negative impacts such as increased taxes and traffic congestion, and the relocation of people to other areas, as well as positive impacts such as improved infrastructure, use of the Olympic village for affordable housing and use of world class facilities.
- (c) This question proved challenging for many candidates. The best candidates understood that the USA had a decentralised system with limited Government funding whereas the People's Republic of China is a centralised system with heavy Government funding. Many candidates talked about China selecting children at a very young age, sending them to specialist schools and the lack of



personal choice. The USA pathway of High School and scholarships to College was often mentioned.

- (d) There were some very good answers to this question. Many candidates were able to explain this important concept. However, some candidates expressed the mistaken belief that amateurism is linked to a low standard of performance and gained no credit for this.
- (e) Candidates were expected to consider the future of the Olympic Games and this was generally well answered. The best responses identified what 'wealth sports' are, and gave arguments for and against their removal from the Games. Common arguments mentioned the Olympic ideal of sport for all and this was used for both sides of the discussion, that these sports are not fair on those who cannot afford to compete, and how to deny those who have trained for years to be the best in an Olympic sport is also inherently unfair. Other less common arguments included dropping these sports to make room for others, and how dropping them might lose revenue from broadcasters and sponsors as many are very popular. There were some very thorough answers to this question.

# PHYSICAL EDUCATION

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Paper 9396/33

Written Paper

## Key Messages

The majority of candidates were well prepared for the examination by their Centres, having been taught all areas to the syllabus to the correct level of detail. Many candidates used correct technical language to answer their questions and most candidates wrote with a good standard of spelling, grammar and punctuation. However, as in previous years, a number of candidates did not use a practical sporting example when asked to do so and failed to gain credit as a result. This is an important message that must be emphasised to candidates as they prepare to sit the examination. The vast majority of candidates appeared to manage their time effectively with very few unanswered questions.

## General Comments

Many candidates were able to demonstrate a good understanding of the theoretical principles underpinning Physical Education and could apply their knowledge to the specific questions set. Section A was answered well and was often the highest scoring section of the three. Many candidates scored higher for section C than section B, and this may be because candidates were often asked to use practical examples to support their answers. When examples are asked for, candidates must understand that this is a necessary requirement of a fully successful answer.

## Comments on Specific Questions

### *Section A: Exercise and Sport Physiology*

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personal choice. The USA pathway of High School and scholarships to College was often mentioned.

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# PHYSICAL EDUCATION

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Paper 9396/04  
A2 Coursework

## Key Messages

Use of notes in the oral presentations must be limited to those taken when observing the live performance. The filming should clearly show that candidates are only recording their observations and not listing theoretical knowledge.

Synoptic Talks must include the theoretical disciplines. Candidates need to have experience before they are assessed. Some talks lasted less than 10 minutes. Centres should include the opening statement.

Hill walking evidence still varies in quality. Some Centres have responded with good quality evidence. Hill walking must be filmed and the content clearly show advanced skills.

Candidates must be assessed in a full performance, competitive situation. It is this that distinguishes from AS. The level of demand in games must be at an A2 level. Simple unopposed skills/drills are not suitable for evidence at A2.

## General Comments

What was clear was the enthusiasm and effort that so many Centres and candidates demonstrated. Many Centres did a very good job of filming evidence. The overall quality of teaching and candidate performance should be applauded. Some performances were clearly exceptional. Some other candidates have worked very hard (sometimes over many years) to achieve a high standard in their activity. Teachers are obviously committed to maximising the ability of candidates.

## **Filmed Evidence**

The quality, quantity and type of evidence varied across the whole range of Centres and activities. The majority of Centres produced good quality filmed evidence. In some cases this was excellent. The best Centres clearly reviewed, selected, edited and then most importantly checked the DVD before dispatch. DVD content should be presented by activity rather than by candidate. Similar candidates should be filmed together. Where “chapters” are used the film should be continuous and not sub divided for each candidate. Film angles must enable the skill and the outcome (e.g. where the ball lands) to be seen.

Centres are asked to consider the following issues before the DVD is dispatched. Are the candidates clearly identified and have the identifiers been written onto the assessment sheets (please remember that the moderator will be totally unfamiliar with your candidates)? If unsure ask someone who does not know the candidates to view the DVD. Is candidate participation very frequent (or is there a lot of time when they do not have contact with the ball)? Does the film show the best ability of the candidate(s)? Film of candidates in rugby where there is little or no contact make moderation very difficult.

Filming of representative games is appropriate. Identification of candidates is more difficult in formal game situations and it is essential that Centres are able to give clear indicators.

Common problems associated with filmed evidence are the format of the filming or copying creates a picture with a small picture surrounded by a large black background, a lack of sound, camera shake which could be avoided by use of a tripod, use of a camera angle which does not allow the skill and the outcome to be viewed and camera distance is too far for individual candidates to be identified or too close so that the context of the game cannot be appreciated.

### **Candidate identification**

This again varies considerably between Centres. The importance of clear identification of candidates from all angles is paramount to the moderator. Candidates must be identified by large numbered or lettered bibs that can easily be seen at a distance. These must be on the front and back. Candidates should not be introduced on the film or list by name.

The identifier must be written onto the first column on the Centre Order of Merit sheets; do not write DVD1 or what the candidate is wearing.

### **Selected Activities**

Invasion games (mainly hockey, football, netball, basketball and rugby), badminton, swimming and track and field are the activities that are submitted most frequently. Volleyball, water polo and weight training are also popular. The other activities that are available are used to a much lesser extent but it is pleasing to see that nearly all the activities that are in the Guidance Booklet are selected by some candidates. Outdoor and adventurous activities are mainly limited to hill walking.

### **Evaluating and Appreciating**

In common with other aspects of the Coursework these have varied considerably, from high quality, superbly presented, well considered work to just very short, very basic work.

The filming of the talks in a formal environment has improved this year; more Centres have used the opening statement in the Guidance Booklet. The presentation should follow the format laid out in the Guidance Booklet and must start with the opening statement in the guidance booklet read by the staff. The following points must be observed, the performance must be "live" and not a filmed performance, the talk must take place immediately after the observation and only notes of the observation are permitted.

The observations must be of another person taking part in one of the two activities that the candidate has submitted as a practical activity. It is useful when the observed performance is included. However in team games the performer must be clearly identified. Prompts and questions by staff should be kept to a minimum and where their use is necessary marks adjusted accordingly. Candidates must be aware of all the required elements. The analysis, improvement methods, anatomical/physiological/psychological/learning/skill type knowledge should be applied to the observed performance. Candidates should not only state their observations but say WHY they believe that stated weaknesses and strengths are true and HOW improvement plans will work and HOW/WHY/WHEN they will be progressed. The task instructions on page 8/9/10 provide a good outline of what is expected.

Adjustment to marks continues to be frequent and more extensive for this aspect of the component than the practical activities.

### **Standard of Practical Assessment**

This has varied widely. There have been fewer Centres where significant scaling was applied, however, more Centres have been scaled slightly. Some Centres will have marked to within a few marks of the criteria and some are very accurate. The moderation process will examine the evidence, aim to give as much credit to the candidate as possible and then arrive at a precise mark for the activity. If the Centre has internally standardised effectively then any difference between Centre marking and the moderation outcome should be consistent across all activities.

### **Level of Demand**

This continues to be an issue which applies in all activities. A much weaker opponent in badminton, staged opposition in judo, light winds/calm water in sailing, easy contact situations in rugby are examples of insufficient demand at A2. So for example a skier on an elementary run cannot be marked at a high level. Centres are asked to ensure that in their initial planning of an activity that opportunities to film candidates at a level of demand which demonstrates their ability are available and are planned and used. The level of demand in games this year has not been at an A2 level for some Centres. Simple unopposed skills/drills are not suitable for evidence at A2.

## **Double Evidence**

Centres are not allowed to submit the same evidence to support AS and A2 marks where they have entered candidates for both examinations in the same year. Equally evidence submitted for AS should not be reused at A2.

## **Comments on Specific Activities**

The following activities have raised issues that Centres are asked to note for next year. Objectively marked activities need specific data to be recorded on the Assessment Forms and filmed evidence for the Critical Assessment aspect.

### **Cross Country**

Candidates must run the specified distance. This is to ensure that comparability between Centres can be maintained (8 km female, 10 km male).

### **Track and Field**

Events must be filmed.

### **Triathlon**

Transition phases must be filmed. Times are required for the different disciplines. This activity has shown a further marked improvement in filmed evidence this year.

### **Combat Activities**

Only Judo and Karate are permitted.

### **Dance**

Solo dances are required and the candidate must choreograph the dances. Group dance or dance taken from a school production is not permitted.

### **Outdoor and Adventurous Activities**

Prescribed minimum conditions apply. The conditions should be entered onto assessment sheets.

### **Hill Walking**

Navigational skills must be filmed for each individual candidate. It is not sufficient to just submit a log. Group numbers for the expedition should ideally be four. Logs should give information / evidence that allow Centres and moderators to award credit and differentiate between activities.

### **Rowing**

Candidates should be assessed and filmed in sculls or pairs.

### **Swimming**

Strokes must be filmed.