

# PHYSICAL EDUCATION

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Paper 0413/11  
Theory

## **Key messages**

- Candidates should note the number of marks available for each question to ensure they answer the questions in appropriate depth.
- Where questions require the use of a physical activity in an answer, candidates should carefully consider their choice before beginning to answer.

## **General comments**

The majority of candidates responded to all questions and there was no evidence to suggest that there was insufficient time to complete the paper. The standard of responses was generally good with answers clearly constructed in many cases.

## **Comments on specific questions**

### **Question 1**

Most candidates gained credit with many achieving full credit. The only common error occurred when weaker candidates included protection in their answer as this function appeared in the question.

### **Question 2**

- (a) (i) Most candidates gained at least partial credit with the most common answer relating to power. The most common error was to give a generic definition of the fitness component rather than justifying its benefit to a 100-metre sprinter.
- (ii) Most candidates answered the question well with a number achieving full credit. However, some candidates named or described an inappropriate test.
- (iii) This question was answered well by most of the candidates.
- (b) Stronger candidates showed good understanding of this method of training, particularly when describing the advantages of using HIIT. Some weaker responses were a general description of the training method instead.

### **Question 3**

- (a) Most candidates gained credit for this question, with many achieving full credit. An issue for some weaker candidates was to include inaccurate or vague descriptions of the function.
- (b) Most candidates answered this correctly.

### **Question 4**

- (a) Most candidates could recall a definition of fitness well.
- (b) This question was answered well and most candidates included a response relating to diet.

- (c) Weaker candidates sometimes struggled to distinguish physical health and well-being from mental health and well-being. Clear explanation typified stronger candidate responses.

**Question 5**

- (a) A small number of candidates were unable to name a continuum. However, most were able to identify at least two correct continua. The justification for the position of the swimmer's skills on the continua was sometimes not included.
- (b) Most candidates gave good descriptions of coordinated and aesthetically pleasing as characteristics of a skilled performance. Goal directed was sometimes less well addressed but generally this question was answered well.

**Question 6**

- (a) A small number of candidates did not give an example of a games activity. A few candidates confused a ligament with other body parts.
- (b) The vast majority of candidates gained at least partial credit for the components of RICE with many giving appropriate benefits to achieve full credit.

**Question 7**

Generally, this was a well answered question with many candidates achieving full credit. A common issue for weaker candidates was the confusion of carpal with other bones.

**Question 8**

- (a) Most candidates were able to identify the main type of respiration. The equation was not always accurate or complete for weaker candidates.
- (b) Only the stronger candidates tended to give a full response to this question.
- (c) Most candidates were able to identify factors. However weaker candidates did not go further to include the effect of these on recovery.

**Question 9**

Most candidates identified gravity and air resistance as appropriate forces acting on the ball. Many also gave reasonable descriptions of how the force acts on the ball.

**Question 10**

Most candidates gave good descriptions of an exercise that could be used during the familiarisation phase of the warm up. The pulse raiser response tended not to be applied in responses of the weaker candidates. Good description of suitable stretches was typically included by only strong candidates.

**Question 11**

- (a) Most candidates gained at least partial credit here. The majority were able to name the type of joint and the type of movement at the knee. Most candidates could name at least one of the bones that form the knee joint.
- (b) Most candidates gave succinct and precise responses to this question.
- (c) Most candidates gained credit for identifying fats as either an energy source or a factor in maintaining body temperature.

**Question 12**

- (a) Most candidates seemed to know of some strategies that would benefit a climber but some did not include how the real risk could be reduced.

- (b) Only the stronger candidates could provide an accurate description.
- (c) Stronger candidates focused their answers on terms such as a fear of something, or being concerned by or worried about something to good effect when describing suitably applied examples.

**Question 13**

- (a) Most candidates gave a good description of a difference between skill and ability.
- (b) Some weaker candidates confused variation in skills level with characteristics of a skilled performance. Stronger candidates knew suitable factors and typically explained well how these factors can affect skill levels.
- (c) Most candidates were able to correctly name two stages of a basic information processing model. The descriptions of use were sometimes weaker. Some very weak candidates did not apply their answers to their named physical activity at all.
- (d) Most candidates gained full credit for this question.

**Question 14**

- (a) Many weaker candidates gave partial descriptions of the breathing volumes named in the question, which lacked enough detail to gain credit.
- (b) Many candidates demonstrated a good understanding of the topic and gained at least partial credit. Some weaker candidates focused only on the pathway of air into the body.

**Question 15**

Most candidates applied their knowledge well and gained credit for this question.

# PHYSICAL EDUCATION

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Paper 0413/12  
Theory

## **Key messages**

- Candidates should note the number of marks awarded in questions to ensure they answer the question in appropriate depth.
- Where questions require the use of a physical activity throughout a response, candidates should carefully consider their choice before beginning to answer.

## **General comments**

The majority of candidates responded to all questions and there was no evidence to suggest that there was insufficient time to complete the paper. The standard of responses was generally good with answers clearly constructed in most cases.

## **Comments on specific questions**

### **Question 1**

Most candidates were able to correctly identify two components of a lever.

### **Question 2**

- (a) Most candidates were able to identify components of fitness. Weaker candidates found it difficult to apply the named component of fitness to justify their choice.
- (b) The majority of candidates gained at least partial credit with many achieving full credit by describing the Illinois Agility Test.
- (c) (i) Stronger candidates included description of the exercises in their answers to achieve credit.  
(ii) Many candidates gained at least partial credit with most including the training method is associated with a high risk of injuries.
- (d) There was some confusion by candidates between the principles of training and SMARTER principles. Those who answered the question using the principles of training usually applied their answer correctly to a training programme.

### **Question 3**

Many candidates showed a good understanding of risk and strategies when applied to using an artificial ski slope. Some strategies suggested were not appropriate given the context of the question.

### **Question 4**

- (a) Most candidates gained at least partial credit with a number achieving full credit.
- (b) (i) Most candidates gained full credit by correctly recognising the different effects of exercise on resting pulse rate and stroke volume.

- (ii) Whilst most candidates correctly manipulated the numbers, some found including an appropriate unit more difficult.
- (c) (i) The majority of candidates were able identify differences between arteries and veins. Typical responses compared the lumen and wall size.
- (ii) Most candidates were able to describe the structure of capillaries but found describing the function more difficult.

#### Question 5

- (a) Most candidates answered this question well with a suitable selection of physical activity included.
- (b) Most candidates gave red blood cells as a component of blood and the majority gave the change as an increase in the number of cells.

#### Question 6

- (a) Candidates generally showed a good understanding of this topic and most placed the names of the levels in the correct position. The descriptions were slightly less well completed.
- (b) This was a well-answered question and most candidates were able to give a range of responses to describe the elite level of the pyramid. Weaker candidates sometimes resorted to repetition.

#### Question 7

- (a) (i) Most candidates gained credit for drawing an appropriate inverted-U shape on the graph. There was some confusion over the labelling of the axes by weaker candidates.
- (ii) Most candidates were able to place the letters relating to levels of arousal in an appropriate position.
- (iii) Most candidates were able to demonstrate some understanding of overarousal and underarousal. Some candidates did not apply this understanding to their named activity and instead gave a generic description of each level of arousal. Some candidates chose an activity that proved difficult to write a description for.
- (b) This was a well-answered question and candidates showed a good understanding of causes of anxiety.

#### Question 8

- (a) Most candidates gained partial credit for naming breathing volumes. A few candidates confused stroke volume and cardiac output with breathing volumes. The description of the named breathing volumes by weaker candidates often lacked the level of detail needed for credit to be awarded.
- (b) Candidates generally displayed a good understanding of the topic. Most candidates gained credit for naming at least one characteristic of the alveoli. The explanations of the characteristics were answered less well but stronger candidates still tended to achieve full credit for the question.

#### Question 9

- (a) Most candidates answered the question well, recognising that an amateur might have a lack of time for training, that lack of financial support reduced training opportunities and that they might not have the level of sports science support that a professional performer might have.
- (b) Stronger candidates showed some understanding of the concept of blurring and could suggest some suitable reasons for this occurring. Weaker responses sometimes just gave reasons why there was a difference between professional and amateur performers.

**Question 10**

- (a) (i) The majority of candidates correctly identified the type of movement.
- (ii) Most candidates identified the type of movement correctly and many were also able to explain how the movement occurs. A small number of answers confused the role of each muscle in the movement.
- (b) (i) Most candidates gained full credit for identifying the type of synovial joints.
- (ii) Most candidates were able to identify the shoulder as providing a greater range of movement and less stability than the elbow. Stronger candidates often used precise language well in their responses.
- (c) There was some confusion for weaker candidates over reasonable causes of a graze. Some seemed to confuse a graze with a muscle strain. The treatment was generally well answered when a graze was understood.

**Question 11**

- (a) Most candidates were able to define fitness precisely.
- (b) A well-answered question where many candidates were able achieve at least partial credit. Weaker candidates confused this with other types of health on occasion.

**Question 12**

- (a) Stronger candidates were able to name the muscle contractions and gave a description of the relevant isotonic muscle contraction. Only the strongest candidates were able to include a suitable example.
- (b) Stronger candidates were able to identify the type of muscle contraction taking place and many also provided a sufficiently precise description of the contraction.

**Question 13**

- (a) Most candidates gave a reasonable description of the importance of extrinsic feedback. Descriptions of the importance of knowledge of results were often less strong.
- (b) Most candidates were able to identify two types of guidance. A careful choice of activity often seemed to help with the ease with which candidates were able to provide examples when applying the types of guidance to their named physical activity.

**Question 14**

A generally very well answered question, many candidates offered a wide range of strategies to encourage female participation in physical activities, which resulted in many achieving full credit.

# PHYSICAL EDUCATION

Paper 0413/13  
Theory

## **Key messages**

- Candidates should apply answers to a particular physical activity when asked to and not make generic, unapplied responses.
- Candidates should note the mark allocation and try to divide their time accordingly.

## **General comments**

The majority of candidates responded to all questions. There was no evidence to suggest that there was insufficient time to complete the paper. The standard of responses was generally good.

## **Comments on specific questions**

### **Question 1**

- (a) A large number of candidates were able to identify the three muscles.
- (b) Many candidates correctly identified the two types of movement.
- (c) Stronger candidates were able to identify the key terms and describe them clearly. The descriptions of each type of contraction contained misconceptions about 'relaxations' for some weaker candidates.

### **Question 2**

- (a) Many candidates were able to correctly name an appropriate component of fitness and often stronger candidates described a suitable example.
- (b) Most candidates were able to identify a fitness test that could be used to measure flexibility. The descriptions of how the test was carried out were generally well written and clear.
- (c) (i) Most candidates were able to identify at least one other principle of training.  
(ii) Explanations from stronger candidates were usually applied well to a training programme for the named physical activity. Weaker candidates often did not apply their understanding and some gave a generic description of the principles instead.

### **Question 3**

- (a) (i) The majority of candidates were able to correctly define heart rate. The definition of stroke volume often lacked the required detail for weaker candidates.  
(ii) Most candidates gave a correct description or described an equation.
- (b) Generally, only the stronger candidates could offer two suitable suggestions.

- (c) Most candidates demonstrated a good understanding of the short-term effects of exercise on the circulatory system. Some weaker candidates included the effects of exercise on other body systems.

**Question 4**

- (a) The majority of candidates were able to give a reasonable definition.  
(b) For stronger candidates each explanation was linked to an example from a named physical activity. Weaker responses were often left too vague.

**Question 5**

- (a) The majority of candidates were able to identify one other part of the definition.  
(b) Most candidates gained credit for this question, with many achieving full credit.

**Question 6**

- (a) Most candidates were able to identify three appropriate forces.  
(b) Stronger candidates were able to identify and draw the class of lever.

**Question 7**

- (a) Most candidates included increasing red blood cells in their response. Additional suggestions were typically reserved for the stronger candidates.  
(b) The majority of candidates were able to suggest at least some disadvantages. Stronger candidates could list three without repetition.

**Question 8**

Many candidates were able to name three of the principles of goal setting. Each example needed to be linked to the named physical activity. Weaker candidates often did not apply their understanding and resorted to a generic description instead.

**Question 9**

- (a) The majority of candidates gained full credit for this question.  
(b) Most candidates were able to name two types of motivation. The example for intrinsic motivation was generally less well answered than the example for extrinsic motivation.

**Question 10**

- (a) Most candidates were able to identify at least one appropriate response to overarousal. Some weaker candidates tended to include psychological responses instead.  
(b) Stronger candidates were able to recognise the need to explain the effects on performance and gave various appropriately applied responses that gained credit. Some candidates did not use examples from a games activity and so needed to read the question with more care.  
(c) Many candidates correctly identified two types of anxiety.

**Question 11**

Most candidates demonstrated at least some understanding of the topic. However, a small number of candidates focused on effects on performers.

**Question 12**

- (a) The majority of candidates were able to identify some factors. However, the explanations of why these factors affected the choice of physical activity were often missing from weaker candidates.
- (b) Most candidates gained credit for this question.
- (c) The majority of candidates suggested some ways that education in schools may prepare children to participate in physical activity. Stronger candidates showed a greater depth of application to this context and so typically supplied a wider breadth of answer.

**Question 13**

- (a) Most candidates correctly identified the types of prohibited PED. The benefit for performance was less well answered, with some candidates using inappropriate physical activities.
- (b) Many candidates gained full credit for this question.
- (c) Many candidates were able to suggest at least one way organising bodies prevent and reduce the use of PEDs.

**Question 14**

The majority of candidates applied their knowledge well to this question and gave precise, well-worded answers.

**Question 15**

- (a) Most candidates were able to describe differences between aerobic and anaerobic respiration. Weaker candidates sometimes gave responses relating to either aerobic or anaerobic respiration only.
- (b) Most candidates gained at least partial credit. The choice of physical activity seemed to make it difficult for some candidates to describe an appropriate situation. Candidates should take time to consider their choices.

# PHYSICAL EDUCATION

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Paper 0413/02  
Coursework

## **Key messages**

- Games activities require appropriate match play to support the marks awarded, particularly for stronger candidates.
- Filmed evidence for each activity is better as a continuous video and not as a series of very short clips.
- Separate DVDs/memory sticks should not be used for individual candidates. Please compile the evidence on as few DVDs/memory sticks as possible.
- Assessment information, when relevant or appropriate, should be written onto the Order of Merit sheets. For example, the course difficulty in orienteering or national performance achievements.
- Some centres inserted additional music and introductions to the activities which produced elaborate DVDs. This did not always aid the moderation process.

## **General comments**

Many centres had prepared well using the Coursework Guidelines Booklet. The overall standard of the coursework paperwork was good and there were few arithmetical mistakes from most centres. Most centres used the sample database effectively.

The filmed evidence was usually clear and in activities such as tennis, the action of the performer and the outcome of the skill could often be seen well.

When planning the evidence to be presented for moderation, it is important that centres read the assessment conditions in the Coursework Guidelines Booklet. The conditions indicate how the practices set up will influence the level of mark awarded. For example, skills demonstrated in isolation will be assessed as being in the lower levels of attainment. Demonstrating skills which are combined in a practice against opposition will allow candidates to potentially be assessed at a higher level.

There are performance descriptions for each level of attainment for each activity and they can be found in the Coursework Guidelines Booklet. This information, together with the assessment conditions, will aid centres in planning the evidence that is to be submitted. It is possible that centres will submit different types of evidence for candidates with very different levels of attainment.

If centres wish to place a candidate in the highest levels, often a full competitive game should often be seen where the time and space allowed for the performers is restricted as this will enable them to demonstrate their ability.

The evidence should mostly be presented per activity and not per candidate and each activity should be one continuous piece of evidence where possible. Two or three candidates may be filmed at the same time performing the same skills to reduce filming length if needed and appropriate to their skill level.

Do not speed up the footage as it does not allow the candidates' techniques to be seen.

### **Comments on specific activities**

#### **Swimming**

Filming of candidates in school competitions is encouraged where possible. In this situation, if the camera is a long way from the candidate, additional evidence should be submitted. This will allow candidates' techniques to be seen. To award very high marks for technique candidates' technique should be close to faultless.

#### **Orienteering**

Centres are reminded that they should indicate the standard of the course that the candidates are using and the distance covered on the Order of Merit form. The standard required for different levels is indicated in the Coursework Guidelines Booklet. The best evidence of higher ability candidates was often seen when they discussed in their interviews how to use such skills as pace counts to measure ground distance, running time to measure distance, how to use handrailing, attack points and how to calculate a bearing using both a compass and the features around them.

#### **Hill walking**

Hill Walking evidence must support navigational skills. Candidates must be assessed as individuals despite the fact that they participate in groups. This should be evident from the filmed evidence, candidate interviews during the expedition and the individual logs. A leader role is needed for some levels. Candidate evidence must include an interview with the candidate showing skills in an unforeseen situation where appropriate to the awarded mark. Evidence needs to support detailed navigational skills rather than being just a view of candidates walking. Often the best evidence of higher ability candidates was seen when they clearly wrote their own route cards and led the leg that they had written. They were also able to complete the unforeseen circumstance when intercepted in the middle of their walk rather than at a checkpoint where they knew exactly where they were. Candidates must be self-sufficient for the duration of the activity. They should carry everything they need in terms of food, cooking equipment and tents for two overnight camps. Including footage of the candidates packing their rucksack is useful.

#### **Cross-country running**

Maps must be used as evidence of the course with a scale for the distance and height climbed. The moderator must be able to verify the height climbed and distance covered. Hand-drawn maps are not suitable for this and some annotations are not sufficient evidence. The course must be on open terrain and should not include artificial surfaces, roads or footpaths (unless they are being crossed). Some centres provided very short evidence for this activity. Centres that provided strong evidence of the higher ability candidates generally provided 15 minutes of evidence and many showed the stopwatch at the start and the end of the course to confirm times.

#### **Weight Training for Fitness**

Many centres submitted logs and filmed evidence. Good evidence clearly showed the technique and included a summary of the exercise where the candidate applied theoretical knowledge. Weaker candidates needed a greater understanding of the principles that underpin this activity. All sections of the log should be completed, and more than one sheet is required to provide an effective programme. The Coursework Guidelines Booklet states that candidates should be filmed giving a brief verbal explanation of the exercise. Candidates should not provide a running commentary over the film they have submitted after the event. Good filmed evidence included the optimum performances and the candidate being able to demonstrate the effect the exercise would have on their performance.

#### **Track and Field Athletics**

Track and Field Athletics evidence should include a close-up of the measuring tape and stopwatch. Careful measurements are required. Running event times, once totalled for sprints, must use the mark below (e.g., 55.2 in girl's 200m should have a mark of 21). Roughly approximating a distance using a tape lying alongside the event area is not appropriate. Good filmed evidence showed the tape measure being correctly placed before it was zoomed in on to show the measurement of the distance achieved. Filming of field events should enable the action of the throw or jump to be seen along with the relevant landing points, as well as the correct application of the rules. Foul throws/jumps should not be awarded.