

PHYSICAL EDUCATION

Paper 0413/11 Theory

Key messages

Candidates should note the number of marks awarded in questions to ensure they answer the question in appropriate depth.

Candidates should consider how to compare or identify differences.

Candidates should be aware of questions that require their understanding to be linked to a particular physical activity and that in such cases generic responses will not meet the demand of the question.

Candidates should ensure that they use examples of physical activities from the list of physical activities identified in the syllabus.

General comments

The majority of candidates answered 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 correctly identified two classifications of bones.

Question 2

- (a) Most candidates demonstrated a good understanding of the requirements of both mental health and well-being as well as social health and well-being with many fully correct answers.
- (b)(i) Most candidates were able to identify two appropriate nutrients and described different functions.
- (ii) Most candidates demonstrated an understanding of the concept of different energy requirements. The question required an explanation of why there was a difference in energy requirements. A typical answer correctly identified that males generally have a greater energy requirement than females but did not then explain a cause for this.

Question 3

- (a) Most candidates using the knowledge and cues from the photograph were able to identify appropriate components of fitness. A very small number used the components of fitness given in the question which could not be awarded credit. The question required the examples to be linked to volleyball but a small number of candidates either described the component of fitness or linked them to a different activity.
- (b)(i) Most candidates correctly identified an appropriate PED, the most typical being anabolic steroids. A number did not apply their understanding to the game of volleyball and gave generic descriptions of the effect of such a PED.

- (ii) This was answered well, and most candidates gained credit with answers related to performers being banned, fined and losing sponsors.

Question 4

- (a) (i) Most candidates gained partial credit for naming the open/closed continua, but few gave a second continua.
- (ii) A number of candidates gave the correct order of the activities on the continua to gain full credit.
- (b) Answers showed a good understanding of this subject from most candidates. Answers generally included the high level of accuracy, coordination and concentration and the use of small muscle movements.

Question 5

- (a) Many candidates were able to identify some of the components of a synovial joint.
- (b) Most candidates were able to identify and correctly describe a movement at the shoulder.

Question 6

- (a) Many candidates were able to show an understanding of the wall thickness and lumen size of the blood vessels but found it difficult to draw comparisons between the two.
- (b) This question was answered well and most candidates were able to give a good description of the function of valves in the heart.

Question 7

- (a) (i) Candidates needed to define power as a combination of strength and speed. Some candidates gave one of the components but found the second more difficult.
- (ii) Many candidates answered this question well and described the exercise in detail. Some named an exercise without a description and in such cases unless the naming gave a clear indication of its plyometric nature it did not meet the demands of the question.
- (iii) Most candidates were able to identify an appropriate test. The descriptions given varied in quality. Stronger candidates gave answers that contained great detail of all aspects of the test. Weaker responses often talked about measuring the jump but did not describe the process of measuring the distance between the stretch and jump height.
- (b) (i) Most candidates gained partial credit for naming the movement plantar flexion. However, other candidates confused the movement with dorsi flexion.
- (ii) A number of candidates were able to identify the agonist muscle correctly but found naming the antagonist more difficult.
- (iii) Those candidates who gained credit for this question used dorsi flexion as the movement with the most common example being the position of a sprinter's foot in the starting block when in the set position.
- (iv) Most candidates gained partial credit with many achieving full credit for this question. The most common response for the cause of the injury was a twisting movement. Those candidates who gained credit for an appropriate treatment usually used a component of the RICE method and went on to explain the reason for using this type of treatment.

Question 8

Most candidates gained at least partial credit with many achieving full credit. A number of responses included the benefits of media to audience/spectators.

Question 9

- (a) Most candidates were able to give benefits of knowledge of performance, and some responses demonstrated a very good understanding of this topic.
- (b) A high level of understanding of this topic was also seen in this part of the question. Most candidates were able to demonstrate differences between intrinsic and extrinsic feedback and linked their understanding to a cognitive performer.

Question 10

It was important that candidates described the advantages and disadvantages that the income from the media can make. Some candidates linked their answers to the effect of media coverage which did not always answer the question fully.

Question 11

There was a very mixed range of responses. Some candidates found it difficult to correctly identify the components of the lever, and other candidates correctly identified the three components but did not place effort in the middle of the lever. Stronger candidates correctly named and positioned the three components of the lever.

Question 12

- (a) Most candidates were able to name two different types of guidance. The benefits proved slightly more difficult and there was some confusion over the benefit of mechanical and manual guidance.
- (b) A considerable number of candidates found this question difficult, and some candidates did not attempt to answer the question. Other candidates confused the SMARTER principles with a range of other principles used in physical education. A few candidates were able to identify some of the principles that were not applied to the target, mainly without an appropriate justification.

Question 13

- (a) Candidates needed to demonstrate that the risk manifests itself through a performer's fear, thoughts or worries when swimming. Most answers given were examples of a real risk but did not answer the question.
- (b) Candidates demonstrated a greater understanding of real risks than perceived risks. The most common risk identified was drowning with strategies such as ensuring qualified supervisors are present and that there are the correct number of qualified supervisors.

Question 14

- (a) The majority of the candidates were able to gain credit for identifying elite as level **A**. Stronger candidates gained full credit, but some found the performance level the most difficult to recall.
- (b) A number of candidates gained credit and demonstrated an appropriate difference between performance level and the foundation level, mainly connected with opportunities to start playing in small sides or structured teams. Also, the level of commitment to play was generally low compared to the performance level.

Question 15

- (a) Most candidates gained partial credit with many achieving full credit. The most common responses were the increase in heart rate, the increase in breathing rate, that sweating occurs and a feeling of nausea.
- (b)(i) To gain credit, candidates needed to apply their understating to a game's activity. Some candidates used activities such as swimming and athletics which were inappropriate. The example needed to demonstrate explosive elements during the named games activity. For example, dunking the ball and running down the court as part of a fast break in basketball.

- (ii) A number of candidates gave characteristics of anaerobic activities which did not answer the question. Stronger candidates gave the equation that outlines the release of energy and gained full credit.
- (c) Candidates needed to describe how named factors affect a performer's ability to recover. There were some excellent answers which gave a very good level of detail. Some candidates gave appropriate factors that affect recovery after exercise but did not provide the detail required to describe how these factors affect recovery.

PHYSICAL EDUCATION

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.

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Candidates should be aware of questions that requires their understanding to be linked to a particular physical activity and that in such cases generic responses will not meet the demand of the question.

Candidates should ensure that they use examples of physical activities from the list of physical activities identified in the syllabus.

General comments

The majority of candidates answered 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 correctly identified two blood vessels, but some candidates identified components of blood.

Question 2

- (a) (i) To gain credit, candidates needed to define speed by including time and distance in their definition.
- (ii) If candidates did not name an appropriate test by describing a test of speed they could still gain partial credit. Many candidates gained full credit, but some candidates confused the test with other running tests which are regarded as testing cardiovascular fitness or stamina.
- (b) Many candidates gave two good descriptions of the reasons for testing a performer. Some candidates confused the reason for testing as helping to improve performance. For this to be given credit, it needed to be linked to testing acting as a motivational factor to improve performance.

Question 3

- (a) Those candidates who named a skill rather than an activity were often able to focus their answer better than those who named an activity. The most common correct response was answering the output part of the model. A common error was to give generic responses to the model rather than linking it to the skill named.
- (b) Candidates needed to apply their description to a skill to gain full credit. Some candidates were able to describe an aspect of the concept but if a skill was not named the question was not fully addressed.

Question 4

- (a) Some candidates described the antagonistic muscle action shown in the picture and named the muscles used in the bicep curl. Those who recognised that the question required different types of isotonic contractions sometimes named the muscles in the wrong position.
- (b)(i) The majority of candidates were able to name and give a good description of the contraction.
- (ii) Identifying examples of isometric contractions proved difficult for many candidates who were able to describe the contraction. Some candidates chose activities that are not on the syllabus list, and others chose activities where there is little movement, for example a rower or cyclist who perform mainly in a sitting position.

Question 5

This was answered well, and many candidates gained full credit. Candidates provided a good understanding of the topic.

Question 6

- (a) Many candidates were unable to give a complete definition of VO_2 max. Few were able to include in their definition that it is the measure of oxygen that can be used rather than the amount of oxygen breathed in.
- (b) Most candidates were able to identify some of the factors that can affect a person's VO_2 max with the most common response being age and gender. The explanations were often less clear with candidates needing to describe the factor and how it affects VO_2 max.

Question 7

- (a) Most candidates recognised that fast twitch muscle fibres would be used when taking a jump shot in basketball and were also able to give the characteristics of this type of muscle fibre.
- (b)(i) Candidates found identifying the movement at the shoulder more challenging. However, those who could not identify the muscle, were able to correctly name the main agonist muscle.
- (ii) The majority of candidates were able to identify the movement as extension.
- (iii) Some candidates confused the role of the bicep and triceps during the movement. Most candidates correctly identified the role of the muscles and provided a description of the movement.

Question 8

- (a) Many candidates were unable to name a theory that links arousal and performance. Some candidates were able to gain partial credit for their explanation where appropriate. There were examples of activities used to answer the question that are not on the syllabus list of activities.
- (b) Many candidates gained full credit and showed their understanding with the example of a sprinter at the start of an Olympic Final.

Question 9

- (a)(i) The majority of candidates gained credit with many identifying all three structures.
- (ii) Candidates generally showed a good understanding of the function and characteristic of the structure shown in the diagram. Typical responses were the creation of a large surface area and that they are one cell thick.
- (b) The question asked candidates to describe the mechanics rather than describing the pathway of air into and out of the lungs. Those candidates who interpreted the question correctly usually provided a good range of responses and many gained full credit.

Question 10

- (a) This was generally answered well. The most common responses included the lack of motivation that can result from limited extrinsic feedback and the inability to correct or recognise errors in performance.
- (b) Candidates gave a range of appropriate responses such as the lack of need for a coach, that the performer will be able to feel if errors are being made and make adjustments and that they will become more confident as they are in control of the situation.
- (c) Most candidates gained partial credit with many achieving full credit. There was some confusion between feedback and guidance.

Question 11

- (a) This was usually answered well. Most candidates gave stretches as one phase, usually with the benefit of reducing the possibility of injury. Many also gave pulse raiser, but the benefit sometimes did not fully answer the demands of the question as the benefit to the performer was to increase blood flow or oxygen to muscles rather than increasing heart rate.
- (b) Candidates offered a range of appropriate responses such as mental rehearsal, visualisation and meditation. There were also responses relating to breathing, but to gain credit the answer needed to indicate this was controlled.
- (c) Most candidates gained credit for describing that the EPOC process enables the removal of lactic acid. Few candidates gained further credit as there was little reference to the gradual reduction in heart rate, breathing rate etc.

Question 12

Many candidates demonstrated an understanding of the effect of PEDs. The most common errors were to either apply their understanding to activities that are not on the list of activities on the syllabus or to describe the effect of the PED without explaining the possible improvement on the performance in that particular activity.

Question 13

This was well answered, and most candidates gained partial credit, with many others achieving full credit.

Question 14

- (a) Candidates generally answered this question well. The majority were able to name the three stages of learning, and many applied their understanding to the named activity. The most common error was to give a generic description of a characteristic which did not fully answer the question.
- (b) The question required candidates to describe an example of how the named methods of guidance could be used in a named physical activity. A number of candidates either gave a benefit of the method of guidance rather than an example or did not give an example appropriate to the named physical activity. Some candidates also confused manual and mechanical guidance.

Question 15

Candidates who answered the question well generally chose games activities as their named activity as it provided a greater variety of skills to choose from. Candidates who chose activities such as swimming and long-distance running found it very difficult to identify an open skill. Those who used games activities usually gave detailed description of both open and closed skills.

Question 16

- (a) The majority of candidates gained credit here. Most found the advantages of weight training easier to describe than the disadvantages. Answers needed to be specific to weight training rather than generally applied to all forms of training. A typical example of this occurred when candidates identified an injury as a disadvantage which could be applied to any aspect of training and required

additional information such as using poor technique when lifting weights or lifting weights that are too heavy.

- (b)** Most candidates were able to identify two principles of overload. Some candidates confused these principles with principles of training. Those who provided the correct principles were generally able to correctly describe how these principles could be applied.

PHYSICAL EDUCATION

Paper 0413/13 Theory

Key messages

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Candidates should consider how to compare or identify differences.

Candidates should be aware of questions that require their understanding to be linked to a particular physical activity and that in such cases generic responses will not meet the demand of the question.

Candidates should ensure that they use examples of physical activities from the list of physical activities identified in the syllabus.

General comments

The majority of candidates answered 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

- (a) Most candidates were able to identify both bones from the diagram.
- (b) The majority of candidates correctly identified a different bone classification.
- (c) Most candidates were able to identify two functions of the skeleton.

Question 2

- (a) This was answered well and most candidates were able to correctly name the Illinois Agility Run. The test required a great deal of detail to gain credit.
- (b) Most candidates gained credit by identifying components of fitness with appropriate explanations linked to badminton. The only common error made was not to apply their understanding to badminton.
- (c) Many candidates answered this well and gave a range of appropriate reasons why a coach would test a performer. The most common responses related to identifying strengths and weaknesses, planning for future training and that testing can act as a source of motivation.

Question 3

Most candidates were able to identify the three stages of learning and in most cases were able to give different characteristics. The most common error that occurred were candidates repeating a characteristic for different stages.

Question 4

- (a) (i) Most candidates gained at least partial credit here. The most common response was the hockey player being hit by the ball or a stick. Candidates often did not provide the same level of detail for the gymnast or the rock climber.
- (ii) Candidates needed to name types of injury. Some of the examples were too vague, such as “ankle injury” and “black eye”. The treatment needed to be appropriate to the injury. When the RICE treatment was used it was considered too vague on its own and needed to be broken down into individual components to gain credit.
- (b) Most candidates were able to give an appropriate explanation of real risk. The response for perceived risk was less accurate and often did not indicate that the risk was due to an individual's fear or worry.
- (c) Most candidates gained credit with appropriate strategies such as wearing safety equipment, following the rules and warming up. The main error was to repeat the strategy.

Question 5

- (a) The question required a good breadth of knowledge which many candidates demonstrated enabling most to gain credit, with many achieving full credit.
- (b) Most candidates were able to identify fast twitch muscle fibres. The justification needed to link to the benefit for a sprinter rather than describing the features of this muscle fibre type.

Question 6

- (a) Many candidates gained full credit for this question.
- (b) Candidates answered the question well. Most candidates identified the function of structure **B** correctly but a small number confused the position of the atrium and ventricle.
- (c) Candidates gave some good responses when describing veins. The only common error was to compare veins with arteries or capillaries, which did not answer the question.

Question 7

- (a) The vast majority of candidates achieved full credit demonstrating good understanding of the topic.
- (b) Most candidates were able to identify two characteristics of a skilled performance but some confused these with characteristics of other aspects of participating in physical activities. The examples were generally well described by those candidates who identified the characteristics.

Question 8

- (a) Many candidates were able to complete or partly complete the performance triangle. The vast majority correctly named **A** as elite and **D** as foundation but found correctly placing performance and participation levels more difficult.
- (b) Many candidates confused the characteristics of levels of the performance pyramid with the characteristic of a performer at different stages of learning.

Question 9

- (a) Candidates answered the question well, but they sometimes gave too much information as the question only required them to state factors.
- (b) Many candidates repeated the answer given in (a).

Question 10

- (a) Most candidates were able to gain credit for describing sportsmanship and most included respect for opponents in their answer. Fewer candidates gained further credit with many including either a performer cheating or breaking the rules in their answers. It was important that answers indicated that actions to gain an advantage remained within the rules.
- (b) Again, most candidates gained credit for sportsmanship and the most frequent responses were shaking hands with opponents and helping an opponent up from the ground. The most frequent answer for gamesmanship was timewasting late in a game to protect a narrow lead in a game. There were few alternative responses.
- (c) Most candidates demonstrated a general understanding of PEDs which resulted in describing the effects of taking PEDs rather than the reason for taking them.

Question 11

- (a) This was answered well and most candidates gave correct responses such as receiving clothing, equipment, or an income from sponsors.
- (b) To gain credit candidates needed to suggest the disadvantage to the sport or performer. A typical response that did not provide sufficient information was that people could watch matches from home. To gain credit this response needed to include the disadvantage of people watching a game from home such as a loss of income at the ground or reducing the atmosphere at the ground.

Question 12

- (a) Some candidates found the word “inspiration” confusing and gave responses relating to people being inspired to perform. Many candidates who correctly understood the term gave good description of the process with many achieving full credit.
- (b) Most candidates who gained credit were able to give an accurate description of residual volume. The responses for vital capacity were less strong as they often did not include that the volume of air exhaled must be maximum.
- (c) Most candidates were able to read the graph correctly.
- (d) Many candidates gained full credit. Common errors including dividing the breathing rate and tidal volume rather than multiplying the two components. There were also errors in the calculations.

PHYSICAL EDUCATION

Paper 0413/02 Coursework

Key messages

- It is important to read the assessment conditions for each sport prior to filming as the activities you choose to video will determine the marks the candidates can be awarded.
- Games activities require appropriate match play to support the marks awarded.
- Assessment information, when relevant or appropriate, should be written onto the Order of Merit sheets. For example, the course difficulty in Orienteering and the length of the course used.
- Filmed evidence for each activity needs to be continuous and not a series of short clips.
- A commentary is no longer needed on the video evidence.
- Warm ups should not be included in the filmed evidence.

General comments

The overall standard of the coursework paperwork was good and there were few arithmetical mistakes. Most centres used the sample database effectively.

The filmed DVD evidence was usually clear and in activities such as Tennis the action of the performer and the outcome of the skill could be seen. However, some centres sent in several small clips for each activity instead of linking the clips together in a continuous film. Also separate DVDs or files should not be used for each candidate as evidence is better by ordered activity.

Candidate identification was a problem for some centres. Certain combination of colours are difficult to see, e.g. yellow on white. Identifiers should be on the front and back of the shirts. Giving a candidate a different coloured bib is acceptable and it makes it easy to identify them.

Comments on specific activities

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 the higher-ability candidates was 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 compass and the features around them.

Hill Walking

Hill Walking evidence must support navigational skills. Candidates must be assessed as individuals even though 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. Some centres did not include the evidence needed to support detailed navigational skills and included just a view of candidates walking. The best evidence of higher-ability candidates was seen when they 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. Also, 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.

Cross-country running

Official maps must be used as evidence of the Cross-country 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 or annotated maps do not support this. The course must be on open terrain and should not include artificial surfaces, roads or footpaths (unless they are being crossed.) Some centres provided less than 6 minutes of evidence for this activity. Centres that provided the best evidence of the higher-ability candidates included 15 minutes of video evidence and showed the stopwatch at the start and the end of the course.

Life saving

In some centres, for some candidates this activity was too generously assessed. Weaker candidates tended to give insufficient care to the casualty when landing them from the water. Others needed to keep the casualty tighter to their body. Some executed the tows from poor positions or did not use their body to support the casualty. A poor arm position and hand/fingers on the throat were sometimes observed.

Personal Survival

This activity should be completed and assessed as a continuous task without breaks/rest between tasks and with the tasks completed in the order stated. Evidence must include the filming of a stop-watch to confirm times. The surface dives must be completed during the distance swim and included in the evidence. Please note the clothing required by the different levels in the initial timed swim.

Games

The level of demand must be appropriate for the ability of the candidate and must match the mark awarded. An issue for some evidence was that candidates were only filmed in very small-sided games or games where the opposition (and team mates) did not provide sufficient level of demand to enable skills to be performed at a level that supported the awarded marks. It is vital that the assessment conditions for each activity are referred to in the Coursework Guidelines booklet. This will help to determine the best activities that will support the marks awarded. For higher-marked candidates, a school/club level game or game of a similar standard is required. Also for these candidates, the balance of the filmed evidence can be strongly in favour of applied situations with isolated/basic skills allocated only a short time.

Rounders

The filmed evidence sent by centres generally focused on the ability of candidates to strike and field the ball. In some situations, the pitches used by centres did not allow the candidates to demonstrate the distance they could hit the ball before its first bounce and the pitches were within an enclosed court. The best evidence of higher-ability candidates included tactical play within the recordings and advanced field placings.

Weight Training

Many centres submitted logs and filmed evidence. Good evidence clearly showed technique and included a summary of the exercise where candidates 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. Good filmed evidence included the optimum performances and candidates able to demonstrate the effect the exercise would have on their performance.