

General Certificate of Education  
January 2007  
Advanced Subsidiary Examination



**SPORT AND PHYSICAL EDUCATION**  
**Unit 1**

**PED1**

Monday 22 January 2007 1.30 pm to 3.00 pm

**For this paper you must have:**

- a 12-page answer book.

Time allowed: 1 hour 30 minutes

**Instructions**

- Use blue or black ink or ball-point pen. Pencil should only be used for drawing.
- Write the information required on the front of your answer book. The *Examining Body* for this paper is AQA. The *Paper Reference* is PED1.
- Answer **four** from **five** questions.
- Do all rough work in the answer book. Cross through any work you do not want to be marked.

**Information**

- The maximum mark for this paper is 75.
- The marks for questions are shown in brackets.
- Three of these marks will be awarded for using good English, organising information clearly and using specialist vocabulary where appropriate.

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**Physiological and Psychological Factors which Improve Performance**

Answer **four** from **five** questions.

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1

Total for this question: 18 marks

- (a) Effective demonstrations together with an analysis of movement can lead to an improvement in performance.

A coach may use Bandura's model of observational learning to help teach the correct technique for goal kicking. Name **and** explain the **four** stages of *observational learning*. (4 marks)

- (b) What **other** factors should a coach consider for demonstrations to be effective? (4 marks)

- (c) **Figure 1** shows a football player kicking a ball.

**Figure 1**



**Position A**



**Position B**

- (i) With reference to the movement of the kicking leg from position **A** to position **B**, copy and complete **Table 1** in your answer book. (6 marks)

**Table 1**

	Kicking action	
	Main agonist	Joint action
<b>Hip</b>		
<b>Knee</b>		
<b>Ankle</b>		

- 
- (ii) In which *plane* **and** about what *axis* does the kicking action take place?  
(2 marks)
- (d) Shooting in football is a skill where performance can be easily measured. When testing skill performance, explain the difference between *subjectivity* and *objectivity*.  
(2 marks)

2

**Total for this question: 18 marks**

Games players require a good level of cardio-respiratory endurance (stamina) and effective feedback if they are to be successful.

- (a) (i) What do you understand by the term *cardio-respiratory endurance* **and** why is it an important component of fitness for games players?  
(2 marks)
- (ii) Name **and** describe a suitable test for measuring cardio-respiratory endurance.  
(3 marks)
- (b) Cardio-respiratory endurance training can cause adaptations to the heart.  
  
Describe the changes that occur to the heart as a result of *cardio-respiratory endurance* training.  
(3 marks)
- (c) Games players will experience different types of feedback during and after a performance.  
  
Explain the different types of feedback that a performer may experience.  
(4 marks)
- (d) What are the characteristics of effective feedback for a **novice** games player?  
(3 marks)
- (e) Explain how feedback changes as the games player moves from the *associative* stage of learning to the *autonomous* stage of learning.  
(3 marks)

3

Total for this question: 18 marks

Performance can be improved by the effective use of levers and reinforcement.

**Figure 2** shows a high jumper at take off.

**Figure 2**



- (a) (i) Using **Figure 2**, name, sketch **and** label the lever system operating at the ball of the take-off foot. (3 marks)
- (ii) On your diagram, draw and label the *effort arm* and the *resistance arm*. (2 marks)
- (b) Name **two** key components of fitness required by a high jumper **and** explain how these components are used in this event. (4 marks)

Operant conditioning theories help to explain how a performer develops a link between a stimulus and a response in order to learn effectively.

- (c) Explain how a coach could use operant conditioning to strengthen the stimulus–response bond. (5 marks)
- (d) The high jumper reaches a plateau in their performance. Explain what factors may cause this plateau to occur. (4 marks)

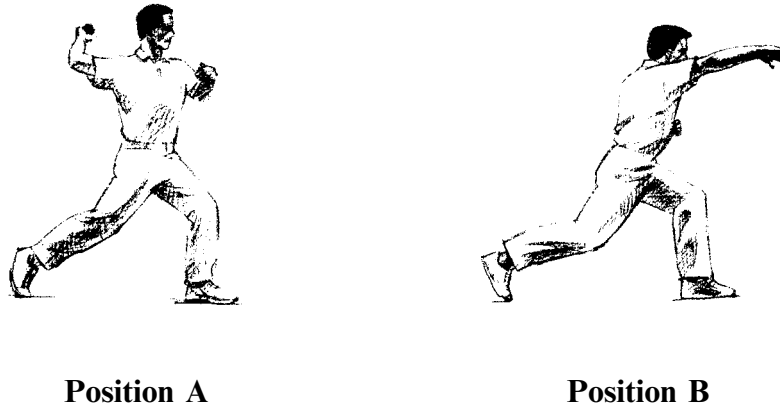
4

Total for this question: 18 marks

Performance can be developed from an analysis of movement and a transfer of skills. This performance can be measured by the use of tests.

Figure 3 shows a performer throwing a ball.

Figure 3



- (a) With reference to the movement of the throwing arm from position A to position B, copy and complete **Table 2** in your answer book. (5 marks)

Table 2

	Type of joint	Joint action	Main agonist
Elbow			
Shoulder			

- (b) In practice, a performer has to throw a ball at a target from different set distances.

Discuss whether this would be a *valid and reliable* measure of this person's ability to play a game of cricket. (4 marks)

The action of throwing can be transferred from one sport to another.

- (c) Describe what is meant by the term *transfer of learning* and explain the other forms that transfer can take. (5 marks)
- (d) What factors can lead to successful transfer of learning taking place? (4 marks)

Turn over for the next question

5

Total for this question: 18 marks

In games, performers will use information processing to make decisions.

- (a) Describe the *information processing* involved by a performer who is about to pass a ball to a team mate. (4 marks)

In games, performers will try to create a 2 versus 1 situation, where there are two attackers against one defender.

- (b) Explain, in terms of *information processing*, why a 2 versus 1 situation should cause a defender's response time to be slower. (3 marks)
- (c) In a 2 versus 1 situation, if the players involved are **beginners**, the attack may keep breaking down. Explain in terms of *information processing* why this occurs. (3 marks)

During a game, a defender will work at various intensities.

- (d) (i) Describe how cardiac output increases when a defender is working at a higher intensity. (3 marks)
- (ii) Describe how the *parasympathetic* **and** the *sympathetic* pathways control heart rate during the game. (5 marks)

**END OF QUESTIONS**

**There are no questions printed on this page**

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