

CAMBRIDGE TECHNICALS LEVEL 2 (2016)

Examiners' report

SPORT AND PHYSICAL ACTIVITY

05889, 05885, 05886

Unit 2 January 2022 series

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Introduction

Our examiners' reports are produced to offer constructive feedback on candidates' performance in the examinations. They provide useful guidance for future candidates.

The reports will include a general commentary on candidates' performance, identify technical aspects examined in the questions and highlight good performance and where performance could be improved. The reports will also explain aspects which caused difficulty and why the difficulties arose, whether through a lack of knowledge, poor examination technique, or any other identifiable and explainable reason.

Where overall performance on a question/question part was considered good, with no particular areas to highlight, these questions have not been included in the report.

A full copy of the question paper and the mark scheme can be downloaded from OCR.

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Unit 2 series overview

The quality of responses to this Unit 2 paper was generally disappointing. There was widespread difficulty with recognising the intent or purpose of a question, leading to misunderstandings regarding the response needed.

The more successful candidates were well-prepared by their centres, who have clearly been following the contents of the Unit 2 specification closely. Most candidates were much more successful with questions that required shorter responses. Where questions carried higher maximum marks such as 4 or 6 marks, candidates often struggled to score more than half marks because they did not appreciate the extra depth of understanding they were expected to demonstrate to achieve the higher marks.

The quality of written communication could be improved. Few candidates scored well for this in Question 1 (c) and spelling of key terminology was inconsistent throughout.

<i>Candidates who did well on this paper generally did the following:</i>	<i>Candidates who did less well on this paper generally did the following:</i>
<ul style="list-style-type: none"> • maximised the contribution of the multi-choice, true/false and shorter response questions to their overall score • understood the intention or purpose of the questions by identifying key words in the question. 	<ul style="list-style-type: none"> • misinterpreted the intention or purpose of the questions • did not recognise the points value of a question and make sufficient valid responses • did not recognise that the Levelled Question, Question 1 (c), required an extended answer.

Question 1.1


Ben is a 100m sprinter.

(a) Which type of exercise is the 100 m sprint (select the correct type of exercise)?

- Aerobic
- Anaerobic

[1]

This question offered candidates a good opportunity to start the paper positively. However, there was more confusion than one might expect as to the distinction between aerobic and anaerobic activity.

	Misconception	There appears to be confusion around the nature of aerobic and anaerobic exercise. Aerobic exercise is of low intensity over a long duration (such as a 5000m run), whereas anaerobic exercise is of high intensity over short duration (e.g. 100m sprint).
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Question 1.2

(b) Justify your answer to 1(a).

[2]

Candidates who answered correctly for question 1(a) were generally correct in 1(b) also. Many justified their choice of anaerobic in 1(a) by stating that a 100m sprint is generally run at high intensity and over a short duration. Only a few explained that anaerobic activity would not use oxygen for energy production. Surprisingly, a number of candidates mistakenly stated that a 100m sprint was run at low intensity and over longer duration.

Question 1.3


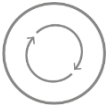
(c)* Explain how the short-term effects of physical activity on the musculoskeletal system will improve Ben's performance in a 100m race.

[6]

This question (denoted by an *) required extended writing with a maximum of 6 marks available. Most candidates achieved only 1, 2, or 3 marks. To meet the MB3 criteria and score highly, candidates were expected to explain, with good knowledge of physiological responses, what happens to Ben's musculoskeletal system during a 100m race. Most candidates offered a response in the MB1 level for this question. They would identify one short-term response, typically an increase in muscle temperature, but with only superficial attempts to develop their answers to demonstrate further understanding such as 'so improving flexibility'.

Despite there being a wide range of acceptable answers, few candidates were able to demonstrate more than a limited understanding. Furthermore, many were unable to recognise the purpose of the question, offering long-term effects such as 'increasing strength', not immediate short-term effects. Others incorrectly offered physiological responses by one of the other body systems, such as 'increased heart rate'. The majority did not identify the second part of the question which asked them to explain how the short-term effects of physical activity on the musculoskeletal system actually improve Ben's performance in the race, i.e. enabling him to run faster.

This question also included a judgement on the quality of written communication. Overall, the quality of written communication could be improved, it appeared that many candidates were not aware that this was being judged. It was also difficult to assess as responses were often short and undeveloped. This recognition and identification of the Levelled Response (*) question in future papers is something that centres can improve on, as well as emphasising the need to write an extended, structured response.

	<p>AfL</p>	<p>Candidates should be taught to identify the phrase 'short-term' in the question and know that this refers to what happens to your body systems during exercise or shortly after. They should be taught that 'long-term' refers to the changes or adaptations that result in your body systems due to exercising repeatedly over a prolonged period of days, weeks or months (as in Questions 2 (c), 3 and 4).</p>
	<p>AfL</p>	<p>Candidates should be taught to identify the keyword in the question that signposts which of the body systems is being examined. In this case it was the musculoskeletal system and candidates should be advised to restrict their responses to that system. There is no credit given for giving responses related to other systems, even if they are accurate.</p>

Question 2.1

(a) Select whether the following statement is True or False.

Participation in sport is **not** advised for someone who has mental health issues.

True

False

[1]

Most candidates answered this question correctly.

Question 2.2

(b) Identify a stretch for the legs that is suitable for a cool down.

[1]


Most candidates collected the mark on offer here by giving an example of a suitable stretching exercise, with lunges being the most common response.

Question 2.3

(c) Identify the long-term effect that physical activity has on an individual's blood pressure.

[1]

This question was not answered well by the majority of candidates. Few recognised the role of physical activity in regulating and controlling blood pressure levels over time. Some suggested that it might decrease, but fell short of stating how this might maintain blood pressure inside a healthy range in the long term. A significant number stated that blood pressure would increase, perhaps indicating that candidates did not recognise that the purpose of the question was to identify long-term not short-term effects.

	Misconception	This question flags up a possible misconception around the long-term effects of exercise on blood pressure. Regular exercise can help maintain blood pressure within a healthy range. It is wrong to say that exercise lowers blood pressure, as low blood pressure can also be unhealthy.
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Question 3

After completing a programme of training and exercise, the body undergoes long-term effects and changes.

For each example of a long-term effect, select whether it is a **musculoskeletal effect** or a **cardiorespiratory effect**.

Long-term Effect	Musculoskeletal	Cardiorespiratory
Cartilage grows thicker	<input type="radio"/>	<input type="radio"/>
Muscles produce more energy	<input type="radio"/>	<input type="radio"/>
Increased number of capillaries	<input type="radio"/>	<input type="radio"/>
Increased volume of blood	<input type="radio"/>	<input type="radio"/>
Increased bone density	<input type="radio"/>	<input type="radio"/>

Table 1

[5]

This question was answered very well by the majority of candidates. Many gained the maximum 5 marks available, demonstrating good knowledge of the long-term effects of exercise on the musculoskeletal and cardiorespiratory system, perhaps also demonstrating a greater degree of comfort with this either/or format of question.

Question 4

Complete the statement below about the long-term effects of physical activity on the skeletal system by selecting words from the drop down list.

The increase of in joints means a decrease in its over time, improving the range of movement at the joint and reducing the risk of .

Synovial fluid	Density	Oxygen
Osteoarthritis	Viscosity	Osteoporosis

Table 2

[3]

This question was answered well by some candidates who gained the maximum 3 marks available, demonstrating good knowledge of the long-term effects of exercise on the skeletal system. The majority understood that synovial fluid increased in joints, but were less clear about the resulting impact of that.

Question 5

Beth is a tennis player. Through participation in training and matches, Beth has increased the number of alveoli in her lungs.

Describe why an increased number of alveoli is beneficial for Beth's performance in tennis.

[2]

Some candidates recognised that the increased number of alveoli gained through playing and training for tennis would have a positive impact on Beth's ability to play at a high intensity for longer and resist fatigue. Some also demonstrated an understanding of how a greater number of alveoli might improve the efficiency of gaseous exchange and delivery of oxygen to the working muscles. However, very few scored both marks available.

Question 6

Warm ups and cool downs are performed before and after physical activity. Each of them serves a different purpose.

For each example of a purpose, select whether the purpose applies to a **warm up** or a **cool down**.

Purpose	Warm Up	Cool Down
1. Gradually lower body temperature	<input type="radio"/>	<input type="radio"/>
2. Increase heart rate	<input type="radio"/>	<input type="radio"/>
3. Increase blood flow	<input type="radio"/>	<input type="radio"/>
4. Maintain the rate of blood circulation	<input type="radio"/>	<input type="radio"/>
5. Gradually reduce breathing rate	<input type="radio"/>	<input type="radio"/>

Table 3

[5]

This question was answered very well by the majority of candidates. Many gained the maximum 5 marks available, demonstrating good knowledge of the purpose of warm-ups and cool-downs. Perhaps this also demonstrates a greater degree of comfort with this multi-choice format of question.

Question 7

Kofi is 45 years old and works in an office Monday to Friday, 9:00 am - 5:00 pm. He has recently joined a rock climbing club and participates three times per week.

Explain how rock climbing supports Kofi's sport and physical activity needs.

[6]

Surprisingly, many candidates demonstrated a narrow understanding of how rock climbing can meet the sport and physical activity needs of Kofi, a 45-year-old office worker. There were many possible responses allowed on the mark scheme, but most candidates limited themselves to references to increasing the strength of muscles or other physical benefits. Stronger responses identified social and mental health benefits, leading towards a better work/life balance, and scored well.

Question 8

Name **three** contact sports suitable for adults (25-50 years).

1

2

3

[3]

This question was mostly answered correctly, with candidates listing three suitable contact sports – usually rugby, football and basketball. In some cases, it was clear that candidates had misread the question and gave three non-contact sports such as golf, tennis or swimming.

Question 9.1


(a) Identify **two** intrinsic factors that can cause a sports injury.

1

2

[2]

Many candidates misinterpreted this question and mistakenly listed two examples of sports injuries such as a sprain or strain, rather than the intrinsic factor that caused them. Furthermore, many candidates offered two extrinsic factors, or described examples of when injuries were caused by extrinsic factors. Only a few candidates collected a mark, usually by explaining that the injury was caused by inadequate warm up or cool-down.

	<p>Misconception</p>	<p>This question identified a misconception with regard to the causes of injury. Candidates need to be taught the difference between extrinsic and intrinsic risk factors. This is quite a complex distinction and is often best understood by providing relevant examples of each.</p>
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Question 9.2


(b) Complete the blanks in the table below for this method of on-field assessment of a sports injury.

Look
Touch
Active
Passive
Strength

Table 4

[2]

It was clear that some centres had been taught SALTAPS as a method of on field assessment of injury and, and as a result, both marks were collected easily for 'See' and 'Ask'. Others attempted to insert other possible relevant, but incorrect, alternatives such as 'assess'. Some candidates offered 'Stop' for the first answer, which is often used in some versions of SALTAPS, but as the specification clearly states 'See', this was not accepted.

	<p>Misconception</p>	<p>In regard to the specification for this qualification, the S in SALTAPS refers to SEE and <u>not</u> STOP</p>
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