OCR
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Cambridge **TECHNICALS LEVEL 2**

SPORT AND PHYSICAL ACTIVITY

Cambridge TECHNICALS

Feedback on the January 2018 on-screen test (including selected exemplar candidate answers)

Unit 2 – Physical preparation and readiness for sport and physical activity

Version 1

CONTENTS

INTRODUCTION

This resource brings together the questions from the January 2018 examined unit (Unit 2), the marking guidance, the examiners comments and the exemplar answers into one place for easy reference.

The examiner's comments are taken from the Report to Centre for this question paper, which can be found on the qualification web page:

http://www.ocr.org.uk/qualifications/vocational-education-and-skills/cambridge-technicals-sport-and-physical-activity-level-2-2016-suite/

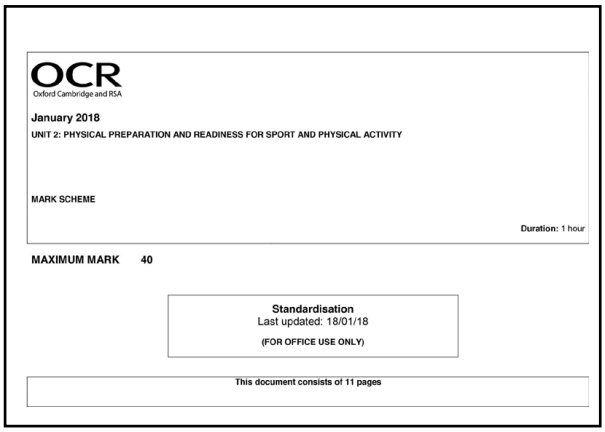
The Mark Scheme is available from Interchange:

https://interchange.ocr.org.uk/Modules/PastPapers/Pages/PastPapers.aspx?menuindex=97&menuid=250

This on-screen test is delivered through our Surpass testing service.

Link to further information about Surpass:

http://www.ocr.org.uk/administration/stage-3-assessment/vocational-qualifications/on-screen-tests/



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January 2018
UNIT 2: PHYSICAL PREPARATION AND READINESS FOR SPORT AND PHYSICAL ACTIVITY

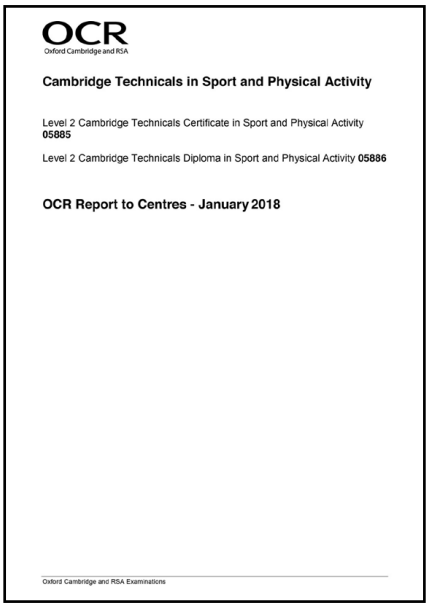
MARK SCHEME

Duration: 1 hour

MAXIMUM MARK 40

Standardisation
Last updated: 18/01/18
(FOR OFFICE USE ONLY)

This document consists of 11 pages



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Cambridge Technicals in Sport and Physical Activity

Level 2 Cambridge Technicals Certificate in Sport and Physical Activity **05885**

Level 2 Cambridge Technicals Diploma in Sport and Physical Activity **05886**

OCR Report to Centres - January 2018

Oxford Cambridge and RSA Examinations

GENERAL EXAMINER COMMENTS ON THE PAPER

The overall quality of responses to this paper was disappointing. There was a widespread failure to recognise the significance of the command word at the heart of each question. As a result, candidates struggled with the 'describe; and 'explain' questions and did not do enough to demonstrate their understanding. 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. Most candidates were much more successful with questions that offered just 2 marks, by asking them to state or identify.

The more successful candidates were clearly well-prepared by their centres who have been following the contents of the Unit 2 specification closely.

The quality of written communication overall was poor. Few candidates scored well for this in question 4.

Resources which might help address the examiner comments:

From the link below, you'll find 'The OCR guide to examinations' (along with many other skills guides)
http://www.ocr.org.uk/i-want-to/skills-guides/

Command verbs definitions
http://www.ocr.org.uk/Images/273311-command-verbs-definitions.pdf

Questions 1, 2 and 3

Section: Section | Question: 1(not attempted) | Next to mark

View Mark Scheme | View Marking History | Add Comment | Replay | Item ID: 7003P7026 - Version: 25 | Mark: 0 / 4

Describe **four** short-term health benefits gained from regular participation in sport and physical activity.

1
2
3
4

Four marks for four from:
1. (Improved mood/happiness/well-being) through releasing muscular and mental tension
2. (Skin looks healthier) due to increased blood flow to the surface
3. (Blood pressure lowers) due to improved function of the cardiovascular system
4. (Sleep) is improved to allow muscles time to repair
5. (Metabolism is boosted) to convert calories into energy

[4]

Section: Section | Question: 2(not attempted) | Next to mark

View Mark Scheme | View Marking History | Add Comment | Replay | Item ID: 7003P7027 - Version: 18 | Mark: 0 / 2

Describe the vascular shunt mechanism that occurs once physical activity has started.

Two marks for two from:
1. Blood flow is directed away from the inactive organs (e.g. gut) or inactive muscles or vasoconstriction (of blood vessels) restricts blood flow to (inactive) organs
2. Blood flow is redirected to the (working) muscles or vasodilation (of blood vessels) increases blood flow to (working) muscles
3. Blood flow to the brain remains constant

[2]

Section: Section | Question: 3(not attempted) | Next to mark

View Mark Scheme | View Marking History | Add Comment | Replay | Item ID: 7003P7028 - Version: 22 | Mark: 0 / 4

Explain how the short-term effects of the respiratory system enable a 1500 m runner to complete a race.

Four marks for four from:
1. Breathing (rate) increases, which increases the uptake of oxygen
2. Respiratory muscles work harder
3. Depth of breathing increases
4. Increases the (volume of) oxygen/air into the lungs
5. Enabling more oxygen to be supplied to the (working) muscles
6. So the runner can keep going/running or can run at a faster pace whilst withstanding fatigue

[4]

Mark Scheme Guidance

Question 1:

Sub-max 1 if learner identifies 4 appropriate benefits but does not describe.

Question 3:

Award benefit of doubt for points on effects (e.g. pts 5 & 6) even if earlier response not focussed on respiratory system.

Examiner comments

Question 1 – This question was generally poorly answered. Most candidates made 1 of 2 mistakes.

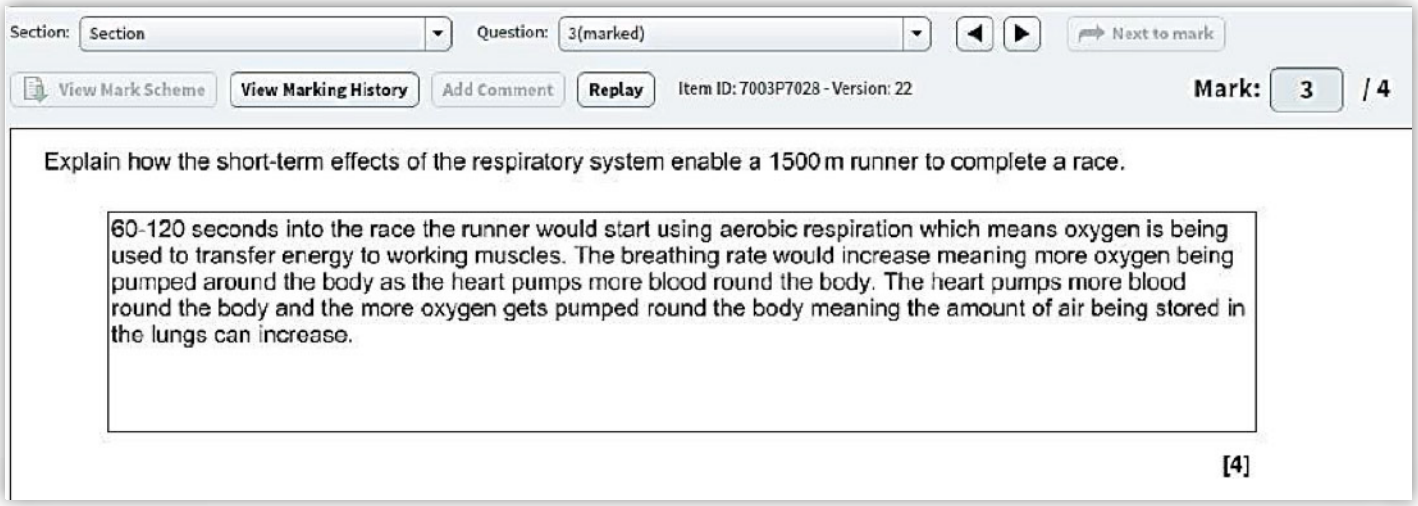
i) They merely identified the short-term health benefits rather than describing them, as required. For example, they might have stated 'Skin looks healthier' rather than demonstrating their full understanding with; 'Skin looks healthier due to increased blood flow to the surface'. Where candidates identified 4 benefits in such a way, they were awarded a sub-max of 1 out of 4 marks. Any less than 4 and they were awarded 0 marks.

ii) They answered with regards to the short term (or even long-term) physiological effects of sport and physical activity and not the short-term health benefits. For example, many stated 'increase of synovial fluid', 'Lower resting heart rate' or similar.

Question 2 – Most candidates were awarded at least 1 out of the 2 available marks by describing how blood is redirected to the working muscles. A few candidates scored a second mark by adding that blood flow is redirected away from inactive organs or muscles. Vasodilation or vasoconstriction was referred to only very rarely.

Question 3 – Many candidates failed to recognise that the question demanded only reference to the short-term effects of the respiratory system, by including unnecessary information on cardio-vascular effects. Others included long term effects. Nevertheless, most candidates managed to score at least 1 or 2 marks in this question.

Exemplar candidate work
Question 3 – High level answer



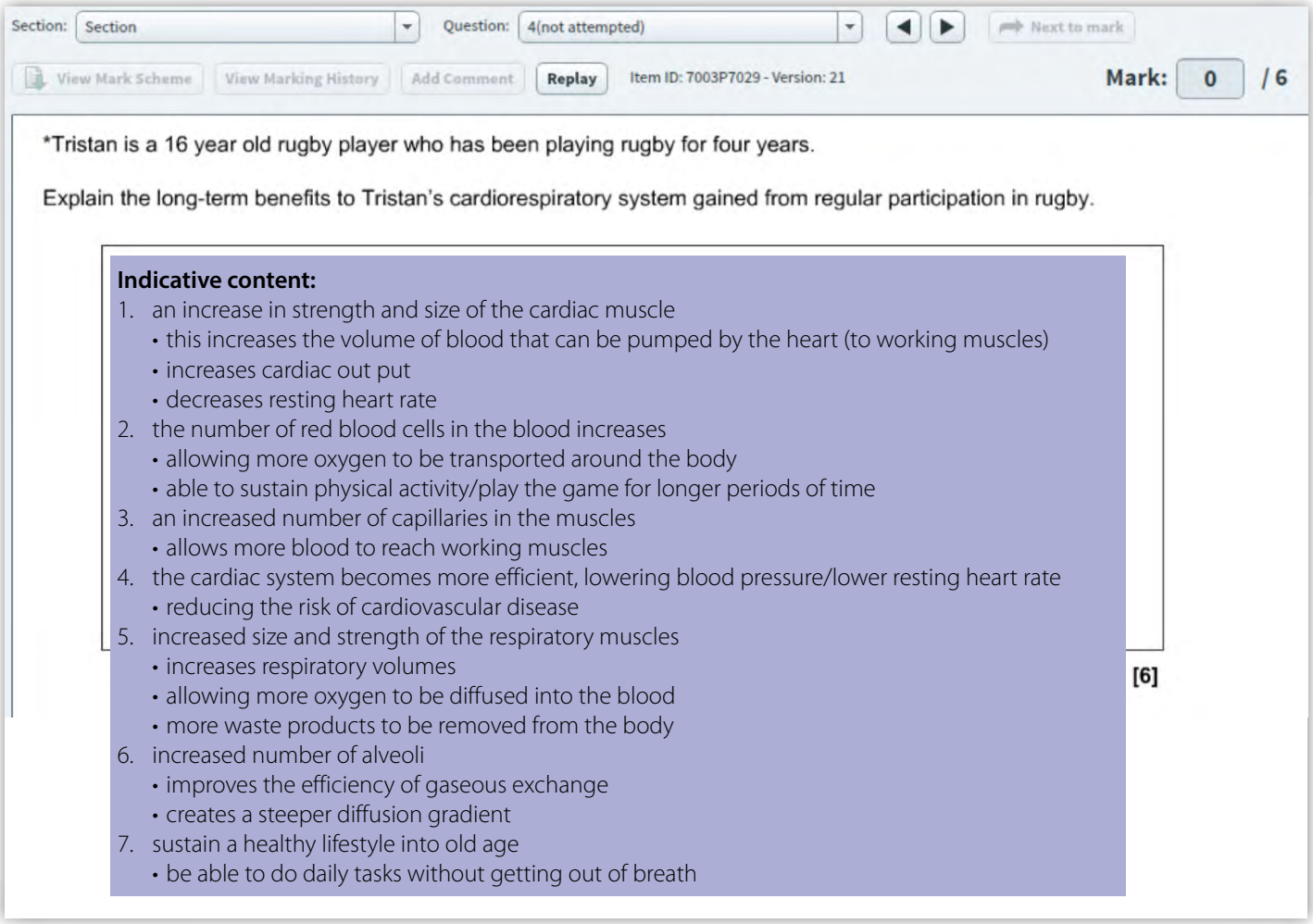
Commentary

This is a high level answer. Four marks are available for explaining 4 short-term effects from a list of 6 possible short-term effects in the mark scheme. The candidate offers a number of short-term effects, but does not fully explain 4, therefore, maximum marks are not achieved.

The candidate recognises the need to explain how the short-term effect enables the runner to complete the race. For example, they state 'breathing rate would increase' then follow up with 'meaning more oxygen being pumped around the body (point 1 on mark scheme). They do not do this consistently, however.

The candidate also recognises the need to confine his answers to the short-term effects rather than the longer term adaptations to the respiratory system. However, they did waste time and marks by including unnecessary information on cardio-vascular effects.

Questions 4 and 5



Indicative content:

1. an increase in strength and size of the cardiac muscle
   - this increases the volume of blood that can be pumped by the heart (to working muscles)
   - increases cardiac out put
   - decreases resting heart rate
2. the number of red blood cells in the blood increases
   - allowing more oxygen to be transported around the body
   - able to sustain physical activity/play the game for longer periods of time
3. an increased number of capillaries in the muscles
   - allows more blood to reach working muscles
4. the cardiac system becomes more efficient, lowering blood pressure/lower resting heart rate
   - reducing the risk of cardiovascular disease
5. increased size and strength of the respiratory muscles
   - increases respiratory volumes
   - allowing more oxygen to be diffused into the blood
   - more waste products to be removed from the body
6. increased number of alveoli
   - improves the efficiency of gaseous exchange
   - creates a steeper diffusion gradient
7. sustain a healthy lifestyle into old age
   - be able to do daily tasks without getting out of breath

Two marks for two from:

1. Bones become stronger
2. Bones **increase** in size and density
3. Reduces the risk of osteoporosis/disease

Mark Scheme Guidance

Question 4:

MB3 – 5–6 marks

- Answer considers all/most of the benefits with clear understanding of the link to regular participation.
- Quality of written communication show few errors in grammar, punctuation and spelling.

MB2 – 3–4 marks

- Answer makes link between regular participation and some benefits
- Quality of written communication show occasional errors in grammar, punctuation and spelling.

MB1 – 1–2 marks

- Answer may show some knowledge of benefits without linking to regular participation
- Quality of written communication show errors in grammar, punctuation and spelling may be noticeable and intrusive.

Best-fit approach is used when judging quality of written communication, i.e. an MB3 answer but with several noticeable and intrusive writing errors is limited to MB2 overall.

It is acknowledged that some errors will have been typographical give the computer based testing format, rather than learners not knowing correct terminology and spelling, hence some benefit of doubt allowed in the best-fit.

Question 5:

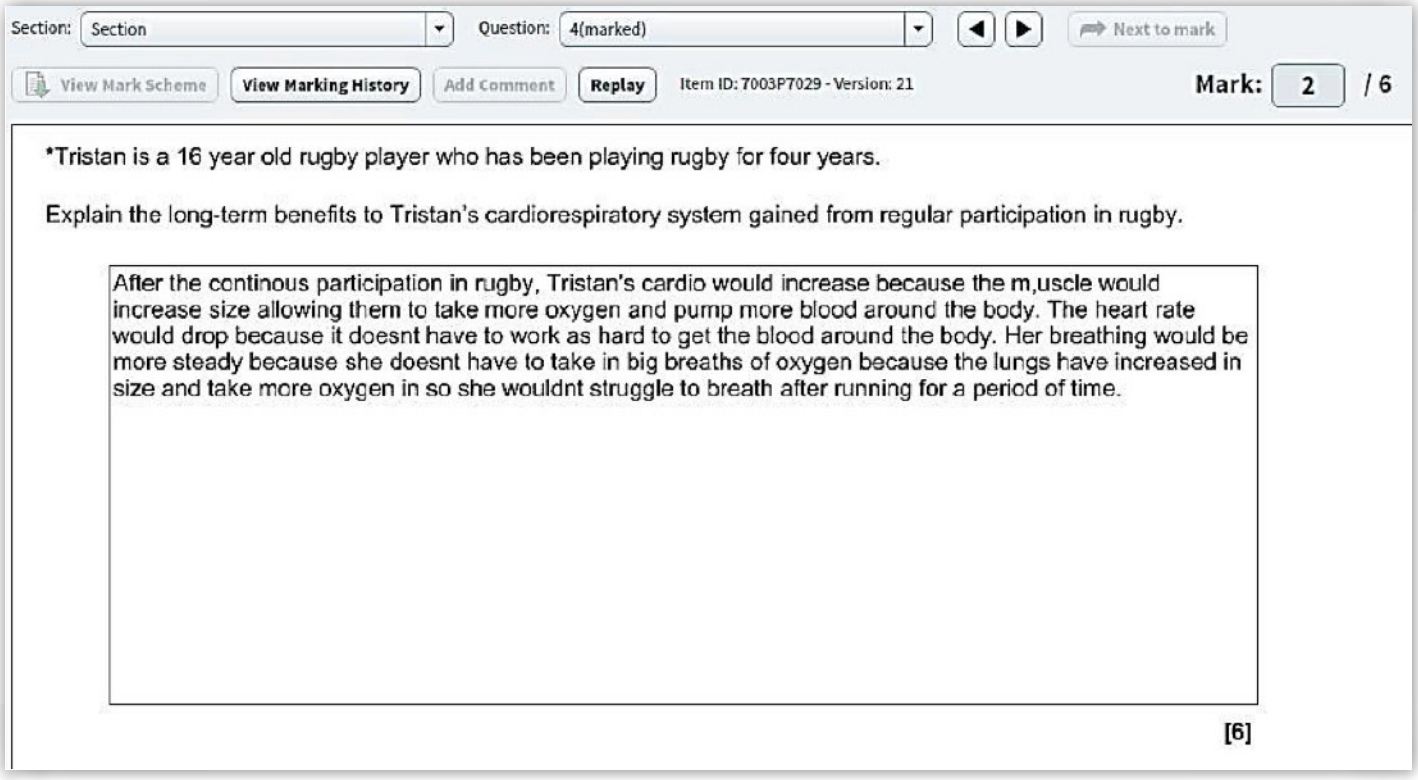
Must say **increased** bone size/density for point 2.

Examiner comments

Question 4 – This question required extended writing with a maximum of 6 marks available. No candidate achieved maximum marks, with most achieving 2 or 3 marks. Very rarely did an answer meet the criteria for MB3. Some candidates did not confine themselves to referring to cardio respiratory benefits, making unnecessary reference to long term benefits of the muscular system by stating, for example, that muscles become stronger or more flexible. Others, did not recognise the need to 'explain'. For example, they might have simply identified 'Increased number of capillaries' without adding 'allowing more blood/oxygen to reach the working muscles', in order to demonstrate their understanding. This question also included a judgement on the quality of written communication. Overall, the quality was poor; perhaps indicating that many candidates were not aware that this was being judged.

Question 5 – This question was generally answered well, with many candidates scoring maximum 2 marks. Usually for indicating that bones became stronger/bigger/denser. References to the reduction in risk of osteoporosis/disease were rarer.

Exemplar candidate work
Question 4 – Low level answer


Section: Section
Question: 4(marked)
Next to mark
View Mark Scheme
View Marking History
Add Comment
Replay
Item ID: 7003P7029 - Version: 21
Mark: 2 / 6

*Tristan is a 16 year old rugby player who has been playing rugby for four years.

Explain the long-term benefits to Tristan's cardiorespiratory system gained from regular participation in rugby.

After the continous participation in rugby, Tristan's cardio would increase because the m,uscle would increase size allowing them to take more oxygen and pump more blood around the body. The heart rate would drop because it doesnt have to work as hard to get the blood around the body. Her breathing would be more steady because she doesnt have to take in big breaths of oxygen because the lungs have increased in size and take more oxygen in so she wouldnt struggle to breath after running for a period of time.

[6]

Commentary

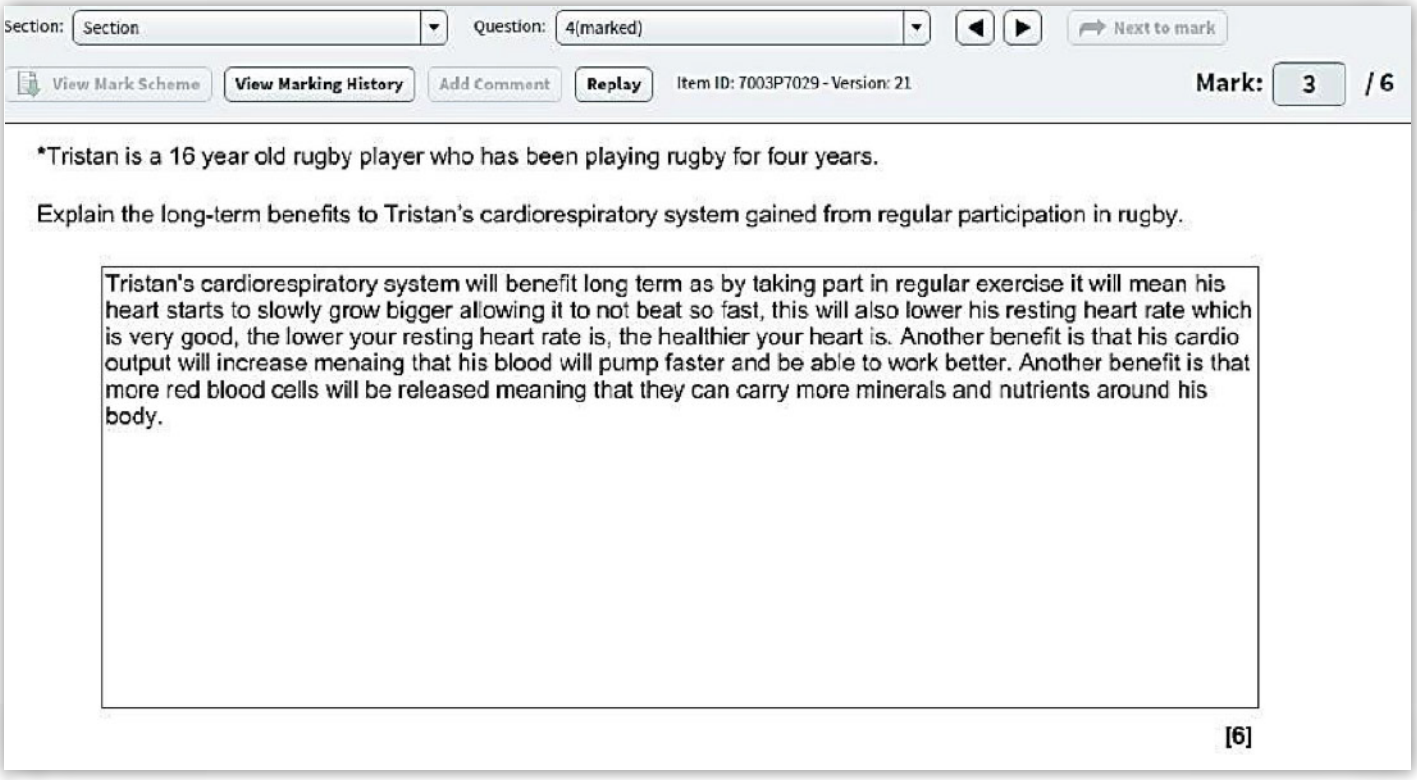
This is a low-level answer, in mark band 1. This question required extended writing with a maximum of 6 marks available. This candidate did not recognise the full implication of the command verb in the question and the need to 'explain' i.e. 'to give account of the purposes or reasons' (http://www.ocr.org.uk/Images/273311-command-verbs-definitions.pdf).

They showed some knowledge by identifying some long-term adaptations without always fully or accurately explaining the benefits of that change in order to demonstrate their understanding. Furthermore, elements of their answer were not precise enough to be given the benefit of the doubt. For example, is the reference to muscle in the first sentence referring to cardiac muscle or skeletal muscle?

This question (indicated by *) also included a judgement on the quality of written communication. Although there are some errors, the quality was not so poor as to be 'noticeable and intrusive'. However, a best fit approach is used when matching answers to the mark bands and the quality of the content of this answer restricted it to mark band 1.

In order to move into a higher mark band, this answer needed to have more long-term benefits explained (the mark-scheme lists 7 possible adaptations, each with a number of associated benefits.

Exemplar candidate work
Question 4 – Medium level answer


Section: Section Question: 4(marked) Next to mark
View Mark Scheme | View Marking History | Add Comment | Replay | Item ID: 7003P7029 - Version: 21 | Mark: 3 / 6

*Tristan is a 16 year old rugby player who has been playing rugby for four years.

Explain the long-term benefits to Tristan's cardiorespiratory system gained from regular participation in rugby.

Tristan's cardiorespiratory system will benefit long term as by taking part in regular exercise it will mean his heart starts to slowly grow bigger allowing it to not beat so fast, this will also lower his resting heart rate which is very good, the lower your resting heart rate is, the healthier your heart is. Another benefit is that his cardio output will increase menaing that his blood will pump faster and be able to work better. Another benefit is that more red blood cells will be released meaning that they can carry more minerals and nutrients around his body.

[6]

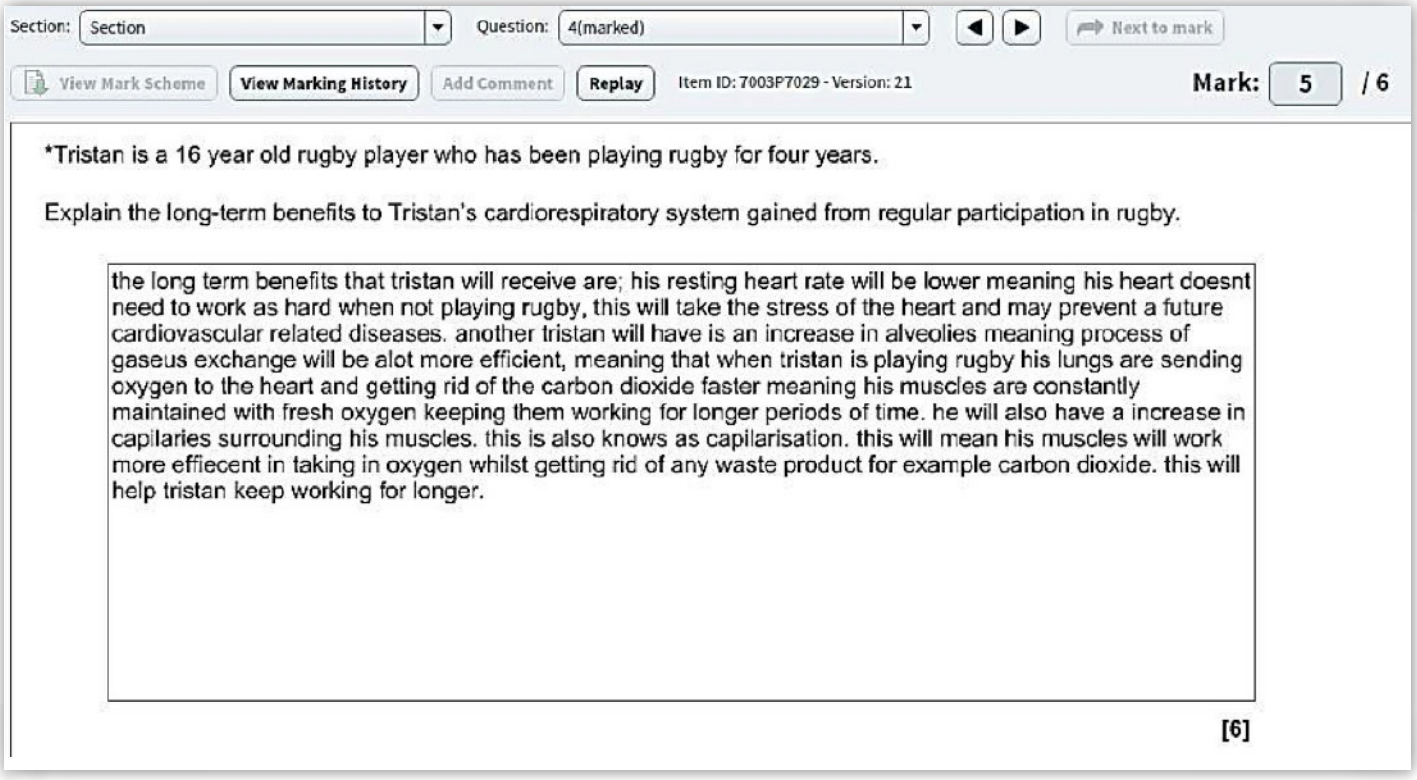
Commentary

This is a medium-level answer, in mark band 2. Again, this response does not fully meet the expectation for an extended answer. This candidate did, at times, 'explain'. For example, they showed some knowledge by identifying that the heart would 'grow bigger' and also showed understanding of the benefit of this by explaining that this would result in a lower resting heart rate (point 1 on the mark scheme). Elements of their answer lacked some precision; in some cases, this was considered accurate enough to receive the benefit of the doubt, on other occasions not. For example, they refer to an increase in red blood cells (some credit for point 2 on the mark scheme), but then explained that this would increase the transport of 'minerals and nutrients' not oxygen.

With regard to the quality of written communication. Again, there are some errors in grammar, punctuation and spelling. The best fit approach resulted in this answer being placed in mark band 2.

In order to move into a higher mark band, this answer needed to have more long-term benefits explained (the mark-scheme lists 7 possible adaptations, each with a number of associated benefits). This response offers two adequately explained and a further one inaccurately explained.

Exemplar candidate work
Question 4 – High level answer



Commentary

This is a high-level answer, in mark band 3. This response is closer to meeting the expectations for an extended written answer. This candidate is more successful at identifying the adaptations and then explaining the benefit. For example, making the connection between lower resting heart rate and reducing the risk of cardio-vascular disease (point 4 on the mark scheme).

In order to achieve a full mark of 6/6, this answer needed to have more of the long-term benefits explained. This response offers a number of fully explained points. However, the mark scheme requires all/most of the possible adaptations listed, each with associated benefits, to be considered in order to get full marks.

With regard to the quality of written communication. Again, there are some errors in grammar, punctuation and spelling (lack of capital letters, for example) which prevented full marks being given. The best fit approach resulted in this answer being placed in the lower range of mark band 3.

Questions 6 and 7

Section: Section | Question: 6(not attempted) | Next to mark

View Mark Scheme | View Marking History | Add Comment | Replay | Item ID: 7003P7031 - Version: 16 | Mark: 0 / 2

State **two** ways in which an increase in synovial fluid is beneficial to a sports performer.

Two marks for two from:
1. Increases the range of movement (at a joint)
2. Ensures lubrication (in joints)
3. Increases flow of nutrients (to bones)
4. Reduces the risk of osteoarthritis/disease/bone damage

[2]

Section: Section | Question: 7.1(not attempted) | Next to mark

View Mark Scheme | View Marking History | Add Comment | Replay | Item ID: 7003P7032 - Version: 17 | Mark: 0 / 4

(a) Explain the purpose of a warm up before participation in sport and physical activity.

Four marks for four from:
1. (To prevent injury) by preparing for the activity
2. (Increase body temperature) to make muscles more pliable
3. (Increase heart rate) to deliver more oxygen to the muscles.
4. (Increase flexibility) in muscles and joints to increase range of movement
5. (Increase blood flow) to deliver oxygen and nutrients and remove waste products
6. (Increase speed of muscle contraction) to improve power in the game
7. (Mentally prepares the performer) to focus on the game
8. (Improve performance) by maximising physical efficiency

[4]

Section: Section | Question: 7.2(not attempted) | Next to mark

View Mark Scheme | View Marking History | Add Comment | Replay | Item ID: 7003P7033 - Version: 18 | Mark: 0 / 2

(b) Identify **two** suitable elements of a cool down for a netball player.

1

2

Two marks for two from:
1. Pulse lowering (e.g. brisk walk around the court)
2. Stretching the muscles used within the game (e.g. Triceps stretch)

[2]

Mark Scheme Guidance

Question 6:

Accept opposites if clear and relevant e.g. 'lack of synovial fluid affects movement at joint' for point 2.

Question 7(a):

Sub-max 1 if learner identifies 4 appropriate purposes of the warm up (prompts in brackets on 1 – 8) but does not explain.

Question 7(b):

Accept any suitable practical activity for each mark.

Do not accept 'dynamic stretches'.

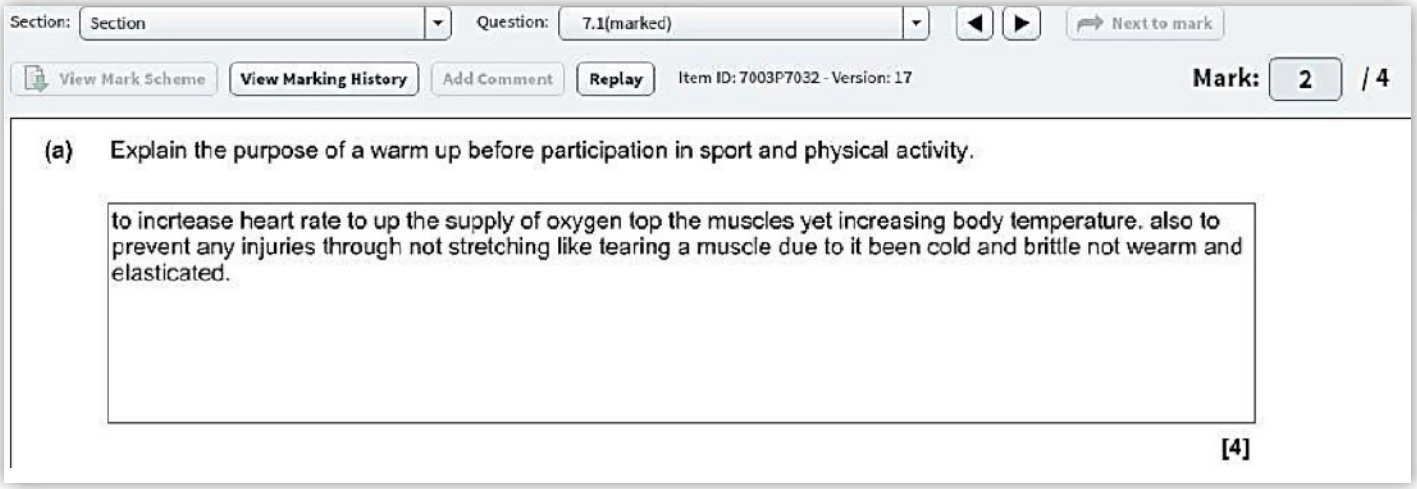
Examiner comments

Question 6 – Most candidates scored at least one mark in this question.

Question 7(a) – Many candidates chose to state what a warm-up involves (e.g. stretching), but did not explain the purpose (beyond 'preventing injury'). For example, many referred to increasing body temperature without explaining that its purpose was to make muscles more pliable. Many candidates referred generically to preparing or getting ready for exercise without explaining how or why.

Question 7(b) – This question was answered well, with most candidates scoring at least 1 mark and often the maximum of two. A minority of candidates incorrectly referred to dynamic stretching in the cool-down.

Exemplar candidate work
Question 7(a) – Medium level answer


Section: Section Question: 7.1(marked) Next to mark

View Mark Scheme | View Marking History | Add Comment | Replay | Item ID: 7003P7032 - Version: 17 | Mark: 2 / 4

(a) Explain the purpose of a warm up before participation in sport and physical activity.

to incrtease heart rate to up the supply of oxygen top the muscles yet increasing body temperature. also to prevent any injuries through not stretching like tearing a muscle due to it been cold and brittle not wearm and elasticated.

[4]

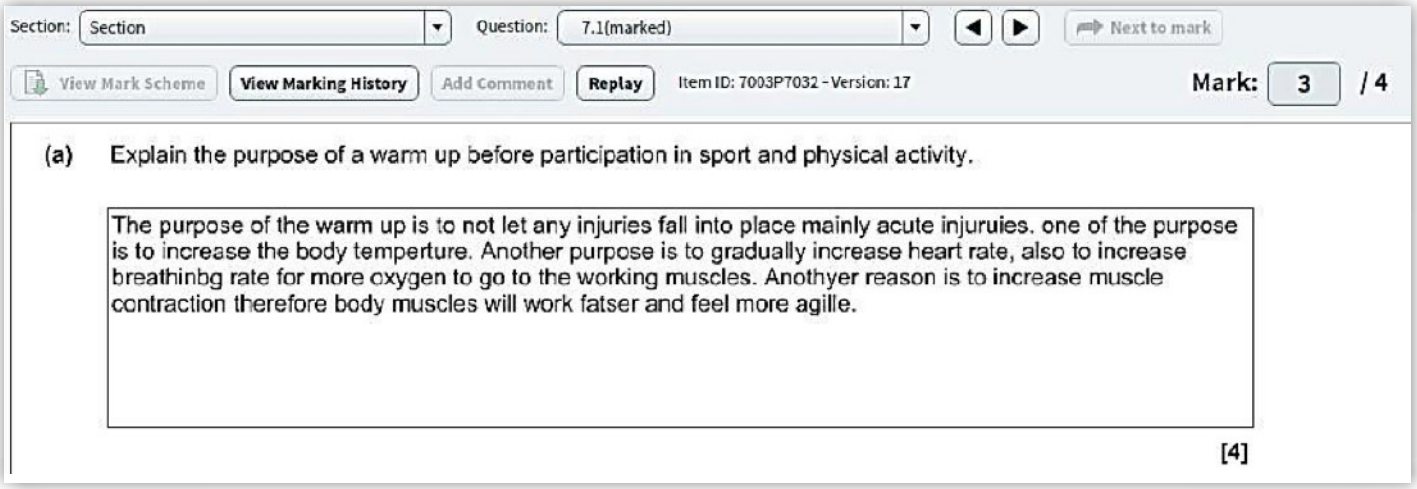
Commentary

This is a medium level answer. Four marks are available for explaining 4 purposes of a warm-up from a list of 8 possible purposes in the mark scheme. This response does not offer 4.

This candidate has made some effort to explain the purpose. For example, they referred to 'increasing body temperature', explaining that this made muscles more pliable (point 2 on the mark scheme).

In order to achieve full marks they simply needed to repeat this process of fully explaining a purpose four times. For example, 'A warm up increases flexibility, this increases the range of movement in joints' (point 4).

Exemplar candidate work
Question 7(a) – High level answer



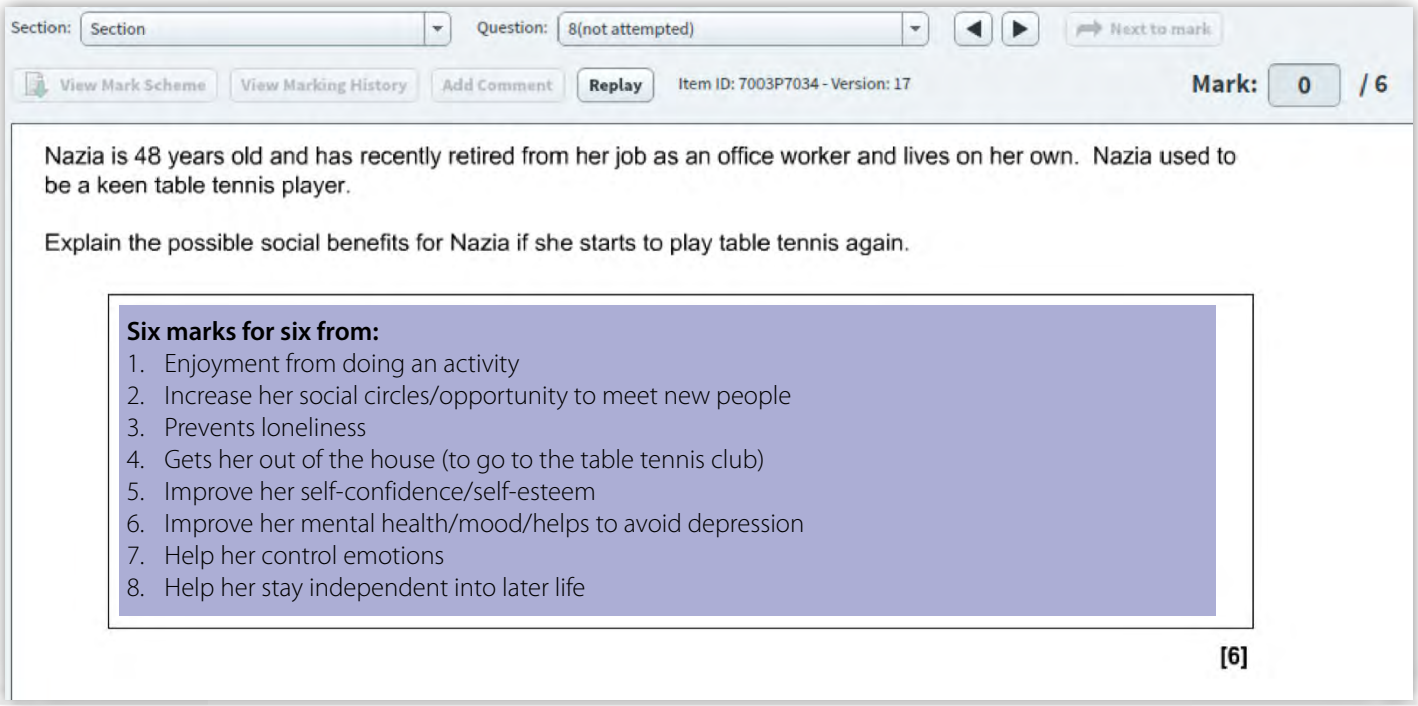
Commentary

This is a high level answer. Four marks are available for explaining 4 purposes of a warm-up from a list of 8 possible purposes in the mark scheme.

This candidate has made some effort to explain the purpose. For example, they referred to increasing the speed of muscle contraction, explaining that this improved power (point 6 on mark scheme – benefit of the doubt for 'muscles will work faster').

In order to achieve full marks they simply needed to repeat this process of fully explaining a purpose four times. This response offers 4 purposes, but they are not all fully or accurately explained. For example, they state 'one of the purposes is to increase body temperature' without explaining why one would need to do this (to make muscles more pliable).

Questions 8 and 9



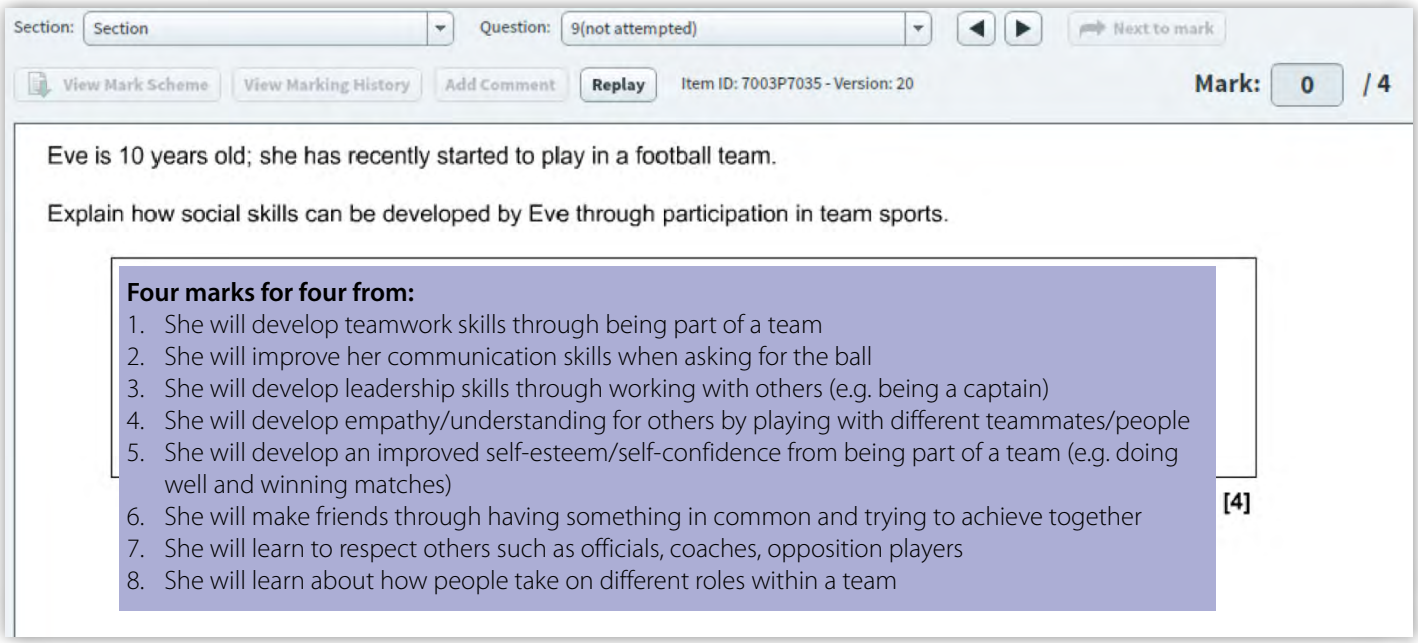
Nazia is 48 years old and has recently retired from her job as an office worker and lives on her own. Nazia used to be a keen table tennis player.

Explain the possible social benefits for Nazia if she starts to play table tennis again.

Six marks for six from:

1. Enjoyment from doing an activity
2. Increase her social circles/opportunity to meet new people
3. Prevents loneliness
4. Gets her out of the house (to go to the table tennis club)
5. Improve her self-confidence/self-esteem
6. Improve her mental health/mood/helps to avoid depression
7. Help her control emotions
8. Help her stay independent into later life

[6]



Eve is 10 years old; she has recently started to play in a football team.

Explain how social skills can be developed by Eve through participation in team sports.

Four marks for four from:

1. She will develop teamwork skills through being part of a team
2. She will improve her communication skills when asking for the ball
3. She will develop leadership skills through working with others (e.g. being a captain)
4. She will develop empathy/understanding for others by playing with different teammates/people
5. She will develop an improved self-esteem/self-confidence from being part of a team (e.g. doing well and winning matches)
6. She will make friends through having something in common and trying to achieve together
7. She will learn to respect others such as officials, coaches, opposition players
8. She will learn about how people take on different roles within a team

[4]

Mark Scheme Guidance

Question 9:

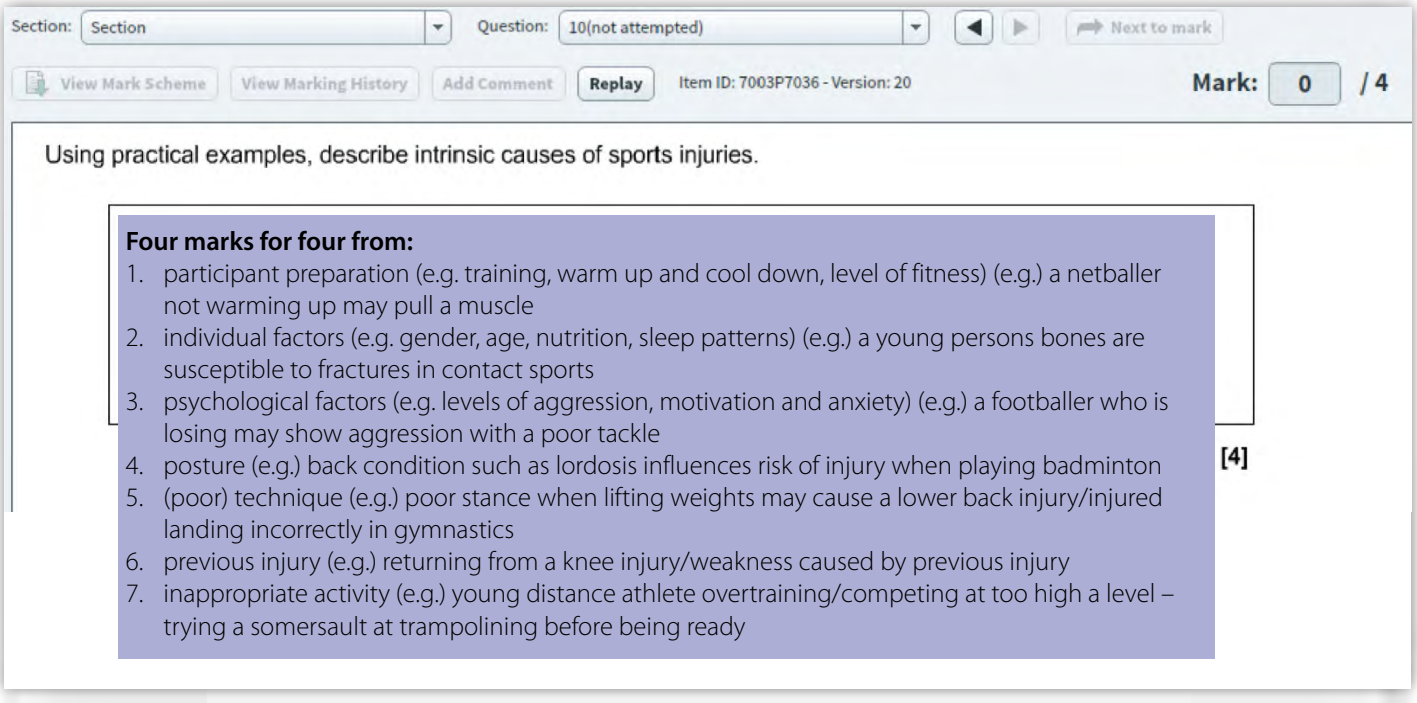
Accept any suitable example of the skill developed.

Examiner comments

Question 8 – This question was answered well by many candidates. Most scored marks for improved confidence or similar, meeting new people/making friends and enjoying the sport. Most scored half marks or more but very few, if any, scored the full six marks simply by not offering six possible social benefits.

Question 9 – Again, this question was answered well by many candidates, although there was some confusion between social benefits (Q8) and social skills. Many scored points for teamwork skills, communication skills and making friends. Most scored half marks or more but very few, if any, scored the full four marks simply by not offering four social skills; for example, there was little reference to leadership skills, empathy/understanding or respecting others.

Question 10



Mark Scheme Guidance

Description can be awarded if embedded within the practical example.

Each point must be supported with an example for a mark to be awarded.

Sub-max 1 mark if 4 valid points made but no examples given to support them.

Examiner comments

This question was poorly answered. There was little understanding of the meaning of intrinsic causes of injuries. Many answers stated various types of injury or gave examples of extrinsic causes of injury. Few could describe what an intrinsic injury was, and even fewer did using practical examples, as required. When this was done successfully, only 1 or 2 causes/examples were given and therefore achieved less than half marks.

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