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A-level  
**PHYSICAL EDUCATION**  
**7582/1**

Paper 1 Factors affecting participation in physical activity and sport

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**Mark scheme**

June 2022

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Version: 1.0 Final Mark Scheme



Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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## Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the average performance for the level. There are marks in each level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

### Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student's answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity, you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level, you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly level 3 with a small amount of level 4 material it would be placed in level 3 but be awarded a mark near the top of the level because of the level 4 content.

### Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. There will be an answer in the standardising materials which will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the example to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the Indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.

**Section A**

**Applied anatomy and physiology**

0 1

Which **one** of the following describes spatial summation?

[1 mark]

**Marks for this question: AO1 = 1**

D – The addition of impulses received at different places on the neuron

0 2

Measuring energy expenditure can be useful during training.

Which **one** of the following would be most practical to use with a swimmer during a training session in the pool?

[1 mark]

**Marks for this question: AO2 = 1**

C – Lactate sampling

0 3

Describe how an increase in carbon dioxide in the blood during exercise would lead to an increased breathing rate.

[3 marks]

**Marks for this question: AO1 = 3**

- Increased blood acidity/decreased blood pH. (1)
- Detected by chemoreceptors. (1)
- Impulse sent to the respiratory centre/medulla. (1)
- Increased impulses to respiratory muscles to contract faster. (1)  
*Accept named respiratory muscles including diaphragm/intercostal muscles/scalene/sternocleidomastoid/pectorals/abdominals.*

Accept any other appropriate description of how an increase in carbon dioxide in the blood during exercise would lead to an increased breathing rate.

**Maximum 3 marks**

<b>0</b>	<b>4</b>	<p><b>Figure 1</b> shows an athlete performing the downward phase of a press-up.</p> <p>Complete the table for the movement occurring at the <b>elbow</b> as the athlete moves from position <b>A</b> to position <b>B</b>.</p> <p style="text-align: right;"><b>[4 marks]</b></p>
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**Marks for this question: AO1 = 1, AO2 = 3**

<b>Articulating bones at the elbow</b>	Humerus, radius, ulna (1) <i>All three bones required for one mark</i>
<b>Main agonist</b>	Triceps (1)
<b>Plane</b>	Sagittal (1)
<b>Axis</b>	Transverse (1)

**Maximum 4 marks**

<b>0</b>	<b>5</b>	<p>If endurance events take place in warm conditions, cardiovascular drift can occur.</p> <p>Analyse how cardiovascular drift may result in lower levels of performance.</p> <p style="text-align: right;"><b>[3 marks]</b></p>
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**Marks for this question: AO3 = 3**

- Athletes will sweat reducing the plasma volume of blood. (1)
- Blood becomes more viscous/thicker which reduces venous return. (1)
- Due to Starling's law stroke volume/ejection fraction will decrease. (1)
- As stroke volume/ejection fraction decreases heart rate increases to maintain/increase cardiac output. (1)
- Having a higher heart rate at a lower than normal intensity increases the athlete's rate of perceived effort/the performer mentally thinks they are working harder than they are. (1)

Accept any other appropriate analysis of how cardiovascular drift may result in lower levels of performance.

**Maximum 3 marks**

<b>0</b>	<b>6</b>	<p>Evaluate the effectiveness of altitude training for an endurance athlete preparing for a one-off event like the London Marathon.</p> <p style="text-align: right;"><b>[8 marks]</b></p>
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**Marks for this question: AO1 = 2, AO2 = 3, AO3 = 3**

Students are expected to answer in continuous prose, use good English, organise information clearly and use specialist vocabulary where appropriate.

Level	Marks	Description
4	7–8	Knowledge is consistently accurate and well detailed. Application of breadth or depth of knowledge is clearly evident. Analysis and/or evaluation is coherently and consistently made between different relevant factors and their impact. Relevant terminology is consistently used. The answer almost always demonstrates substantiated reasoning, clarity, structure and focus.
3	5–6	Knowledge is usually accurate and detailed. Application of breadth or depth of knowledge is often evident. Analysis and/or evaluation is often made between different relevant factors and their impact, and is usually coherent. Relevant terminology is often used. The answer usually demonstrates substantiated reasoning, clarity, structure and focus.
2	3–4	Knowledge is sometimes accurate with some detail. Application of breadth or depth of knowledge is sometimes evident. Analysis and/or evaluation is sometimes made between different relevant factors and their impact, but may lack coherence. Relevant terminology is sometimes used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, structure and focus.
1	1–2	Knowledge may be limited. Application of breadth or depth of knowledge may be limited or not evident. There may be little or no analysis and/or evaluation between different relevant factors and their impact. Relevant terminology is occasionally used. The answer may lack substantiated reasoning, clarity, structure and focus.
	0	No relevant content.

**Possible content may include:**

**AO1 Knowledge of altitude training**

- Training at more than 2000m/8000 feet above sea level.
- Usually for at least 30 days/month.
- Three phases – acclimatisation, primary training, recovery.
- Partial pressure of oxygen is lower/less oxygen available.
- Body produces erythropoietin/EPO.
- Higher EPO levels increase red blood cell count.

**AO2 Application of altitude training to endurance sports**

- Marathon is a long duration, low intensity/aerobic event and altitude training will specifically boost aerobic power/ $VO_2$  max.
- Increased concentration of haemoglobin provides endurance athlete with increased capacity to carry oxygen.
- Increased myoglobin in muscle cells allows more oxygen to be stored and transported to mitochondria.
- Altitude sickness which may prevent the athlete from training.
- Training at same intensity as at sea level is very difficult so detraining/loss of fitness may occur.
- Benefits can be lost within few days back at sea level/up to few days so may have no impact on competition.
- Psychological problems linked to travel/time away from home may have detrimental effect on athlete's health and well-being.
- Altitude training is very expensive/time consuming so not available to most athletes preparing for endurance events such as the London Marathon.

**AO3 Evaluation of the effectiveness of altitude training to improve the performance of endurance athletes preparing for a one-off event such as the London Marathon**

- Increase in  $VO_2$  max will allow the endurance athlete to perform at high intensities for longer periods of time whilst still working aerobically.
- This will result in a higher average speed over the duration of the event which is a key factor in determining the outcome.
- As benefits only last for up to 14 days training must be performed close to the event to be effective, however travelling close to a race may also have a negative impact on performance in the race.
- If it is correctly timed the gains in aerobic power could be the difference between winning and losing the event.
- Loss of fitness/detraining/negative impact on mental health close to event may result in worse performance in the marathon if training is not properly managed.
- Some of these issues can be overcome with new methodologies such as live high train low or new technology such as hypoxic tents to sleep in.

Accept any other appropriate evaluation of the effectiveness of altitude training to improve the performance of endurance athletes preparing for a one-off event such as the London Marathon.

**Maximum 8 marks**

<b>0</b>	<b>7</b>	<p>Each of the following athletes uses a different main energy system to resynthesise ATP during a race:</p> <ul style="list-style-type: none"> <li>• Athlete A is a 100 m runner</li> <li>• Athlete B is a 400 m runner</li> <li>• Athlete C is a marathon runner.</li> </ul> <p>Analyse how <b>each</b> of these athletes could use different dietary supplements or manipulation to optimise their performance in a race.</p> <p>Refer to the relevant energy systems throughout your answer.</p> <p style="text-align: right;"><b>[15 marks]</b></p>
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**Marks for this question: AO1 = 4, AO2 = 5, AO3 = 6**

Students are expected to answer in continuous prose, use good English, organise information clearly and use specialist vocabulary where appropriate.

Level	Marks	Description
5	13–15	<p>Knowledge is consistently comprehensive, accurate and well detailed. Application of breadth or depth of knowledge is clearly evident. Analysis and/or evaluation is coherently and consistently made between different relevant factors and their impact. Relevant terminology is almost always used. The answer demonstrates a high level of substantiated reasoning, clarity, structure and focus.</p>
4	10–12	<p>Knowledge is usually comprehensive, accurate and detailed. Application of breadth or depth of knowledge is often evident. Analysis and/or evaluation is often made between different relevant factors and their impact, and is usually coherent. Relevant terminology is usually used. The answer usually demonstrates substantiated reasoning, clarity, structure and focus.</p>
3	7–9	<p>Knowledge is generally accurate and sometimes detailed. Application of breadth or depth of knowledge is sometimes evident. Some analysis and/or evaluation is made between different relevant factors and their impact but may sometimes lack coherence. Relevant terminology is used but may sometimes be missing. The answer sometimes demonstrates substantiated reasoning, clarity, structure and focus.</p>
2	4–6	<p>Knowledge is sometimes accurate but may lack detail. Application of breadth or depth of knowledge is occasionally evident. Some analysis and/or evaluation is attempted between different relevant factors and their impact, but is likely to lack coherence. Relevant terminology is occasionally used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, structure and/or focus at times.</p>
1	1–3	<p>Knowledge is limited and may lack accuracy and detail. Application of breadth or depth of knowledge is likely to be limited or not evident. There may be very little or no analysis and/or evaluation made between different relevant factors and their impact.</p>



		Relevant terminology used only very occasionally. The answer often lacks substantiated reasoning, clarity, structure and/or focus.
	0	No relevant content.

**Possible content may include:**

### **AO1 Knowledge of energy systems and dietary supplements/manipulation**

#### **Energy systems:**

- Aerobic system: main energy system during long duration/low intensity/3 minutes plus.
- Anaerobic glycolytic system: main energy during high intensity/short duration/approximately 10 seconds–3 minutes.
- ATP-PC system: main energy during high or maximal intensity/short duration/approximately 5–10 seconds.

#### **Dietary supplements/manipulation:**

- Creatine.
- Sodium bicarbonate.
- Caffeine.
- Glycogen loading.

### **AO2 Application of energy systems and dietary supplements/manipulation to each event**

#### **Athlete A – 100 m**

- ATP-PC system as 100 m is high or maximal intensity/short duration/majority of the race completed in under 10 seconds.
- Creatine.

#### **Athlete B – 400 m**

- Anaerobic glycolytic system as 400 m is high intensity/short duration/lasts more than 10 seconds but less than 3 minutes.
- Sodium bicarbonate.

#### **Athlete C – Marathon**

- Aerobic system as marathon is long duration/low intensity/lasts more than 3 minutes.
- Glycogen loading.
- Caffeine.

### **AO3 Analysis of the impact of the dietary supplements/manipulation on the energy systems**

#### **Athlete A – 100 m**

- Taking creatine may increase the 100m runner's phosphocreatine stores.
- This will allow the sprinter to use this system for a longer period of time.
- Preventing the slow down that occurs when switching to the anaerobic glycolytic system due to the increased number of chemical reactions it involves.

**Athlete B – 400 m**

- Taking sodium bicarbonate will buffer lactic acid produced by the anaerobic glycolytic system.
- This will delay the negative effects of lactate on performance allowing the athlete to run at faster speeds for a longer period of time.

**Athlete C – Marathon**

- Glycogen loading will increase the athlete's stores of muscle/liver glycogen which is the fastest energy source to produce energy using the aerobic system via glycolysis.
- Having more stored glycogen will allow the marathon runner to run faster for longer before their glycogen stores become depleted/they 'hit the wall'.
- Delays the need to use fats via beta oxidation as the main energy source for aerobic respiration which takes more oxygen/time to breakdown resulting in the athlete having to run slower.
- Alternatively, caffeine can increase the oxidation of fats allowing them to be used as a fuel source and sparing muscle glycogen stores until later in the race.

Accept any other appropriate analysis of how these athletes would use different dietary supplements or manipulation to optimise their performance in the race.

**Maximum 15 marks**

**Section B**

**Skill acquisition**

<b>0 8</b>	<p>Baddeley and Hitch devised a model of the working memory.</p> <p>Which component of this model coordinates sight, hearing, and movement information into sequences to be sent to the long-term memory?</p> <p style="text-align: right;"><b>[1 mark]</b></p>
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**Marks for this question: AO1 = 1**

**B** – Episodic buffer

<b>0 9</b>	<p>Which <b>one</b> of the following is an example of temporal anticipation in hockey?</p> <p style="text-align: right;"><b>[1 mark]</b></p>
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**Marks for this question: AO2 = 1**

**B** – Predicting when a player will shoot

<b>1 0</b>	<p>Bandura’s observational learning model describes how we learn from watching others. In sport this can take the form of a demonstration.</p> <p>Outline <b>three</b> factors that make a demonstration effective.</p> <p style="text-align: right;"><b>[3 marks]</b></p>
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**Marks for this question: AO1 = 3**

Accept the first three answers only.

- The demonstration is accurate. (1)
- Everyone can see/the demonstration is clear. (1)
- Everyone is paying attention/motivated. (1)
- Verbal guidance is included/specific cues are highlighted. (1)
- The demonstration is performed by role model/significant other/peer group. (1)
- The demonstration is within observer’s physical capability/stage of learning/relevant. (1)
- The demonstration is broken down into sub-routines. (1)
- There is limited time between the demonstration and practice. (1)
- Repeated. (1)

Accept any other appropriate outline of **three** factors that make a demonstration effective.

**Maximum 3 marks**

1 1 . 1

Skills in sport can be classified in different ways.

Define the term 'continuous skill'. Give a sporting example.

[2 marks]

**Marks for this question: AO1 = 1, AO2 = 1**

**AO1**

- **Definition:** A skill with no clear beginning or end. (1)

**AO2**

- **Sporting example:** Running/swimming/cycling. (1)

Accept any other appropriate definition and sporting example of the term continuous skill.

1 1 . 2

Explain why bowling in cricket might **not** be placed exactly at either end of the Gross – Fine continuum.

[2 marks]

**Marks for this question: AO2 = 2**

- Bowling can be placed towards gross/away from fine as it requires large muscle groups to generate speed. (1)
- Bowling can be placed towards fine/away from gross as it requires smaller muscle groups for accuracy/produce spin. (1)

Accept any other appropriate explanation of why bowling in cricket might **not** be placed exactly at either end of the Gross – Fine continuum.

**Maximum 2 marks**

1	2
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**Figure 2** shows the impact of the number of possible responses on response time.

Analyse **Figure 2** to suggest why response times may be longer when passing in football than at the start of a 100 m race. Support your answer with data from

**Figure 2.**

**[3 marks]**

**Marks for this question: AO3 = 3**

- Start of 100m has one possible response to stimuli which the graph suggests would result in a response time of 180 ms. (1)
- Passing in football has many possible responses so response time longer (must include relevant data from graph). (1)
- Passing in football represents choice reaction time which takes longer / this increase can be explained by Hicks Law. (1)

Accept any other appropriate analysis to suggest why response times may be longer when passing in football than at the start of a 100m race.

**Maximum 3 marks**

<b>1</b>	<b>3</b>	<p>A high jumper is experiencing a learning plateau.</p> <p>Evaluate the effectiveness of setting a SMARTER process goal to overcome this learning plateau. Refer to an appropriate goal in your answer.</p> <p style="text-align: right;"><b>[8 marks]</b></p>
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**Marks for this question: AO1 = 2, AO2 = 3, AO3 = 3**

Students are expected to answer in continuous prose, use good English, organise information clearly and use specialist vocabulary where appropriate.

Level	Marks	Description
4	7–8	Knowledge is consistently accurate and well detailed. Application of breadth or depth of knowledge is clearly evident. Analysis and/or evaluation is coherently and consistently made between different relevant factors and their impact. Relevant terminology is consistently used. The answer almost always demonstrates substantiated reasoning, clarity, structure and focus.
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2	3–4	Knowledge is sometimes accurate with some detail. Application of breadth or depth of knowledge is sometimes evident. Analysis and/or evaluation is sometimes made between different relevant factors and their impact but may lack coherence. Relevant terminology is sometimes used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, structure and focus.
1	1–2	Knowledge may be limited. Application of breadth or depth of knowledge may be limited or not evident. There may be little or no analysis and/or evaluation between different relevant factors and their impact. Relevant terminology is occasionally used. The answer may lack substantiated reasoning, clarity, structure and focus.
	0	No relevant content.

**Possible content may include:**

**AO1 Knowledge of learning plateau and goal setting**

**Learning plateau**

- A period of no improvement in performance/performance levels off.
- Causes: lack of motivation/boredom/poor coaching/achieved potential set by ability/low targets/fatigue/insufficient fitness.

**Goal setting**

- A process goal is one which focuses on improving technique.
- Goals should be specific; measurable; achievable; realistic; time bound; evaluated; re-done.

**AO2 Application of goal setting to the cause of a learning plateau and high jump**

- Setting effective goals would be beneficial if the cause of the plateau were motivational/technical.
- Setting goals correctly would increase motivation/force the performer to focus on specific weaknesses.
- An example of an effective process goal in this situation would be to push the hips up to arch the back on at least 9/10 attempts in the next session.

*Accept any appropriate **process** goal.*

*Justification of why this is effective is AO3.*

**AO3 Evaluation of goal setting to overcome this learning plateau**

- Setting goals would not be an effective strategy for overcoming a learning plateau if the cause were fatigue/poor coaching/lack of ability.
- In these situations, alternative strategies such as rest/a new coach would be more effective.
- A process goal would be most effective as they focus on the technique/avoid comparison with others.
- The performer can experience success without setting a new PB, which increases motivation.
- The example goal is specific as it focuses on a key technical element of high jump.
- It can be measured in terms of the number of times the high jumper performs the skill correctly.
- It is achievable and realistic as it is focused on a small technical improvement and not a new height or competition position.
- It is time bound as it is to be completed in the next session.

Accept any other appropriate evaluation of the effectiveness of setting a SMARTER process goal to overcome this learning plateau with reference to an appropriate goal.

**Maximum 8 marks**

<b>1</b>	<b>4</b>	<p>Trampolinists <b>A</b> and <b>B</b> have both performed the same set routine on a number of occasions in training. For each attempt they have been awarded an execution score out of 10 by their coach, with 10 being the best possible score.</p> <p><b>Table 1</b> shows the execution scores the trampolinists were awarded for each attempt.</p> <p>Evaluate whether massed practice or distributed practice would be most effective for their coach to use with:</p> <ul style="list-style-type: none"> <li>• Trampolinist <b>A</b></li> <li>• Trampolinist <b>B</b>.</li> </ul> <p>Refer to each trampolinist's stage of learning in your answer.</p> <p style="text-align: right;"><b>[15 marks]</b></p>
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**Marks for this question: AO1 = 4, AO2 = 5, AO3 = 6**

Students are expected to answer in continuous prose, use good English, organise information clearly and use specialist vocabulary where appropriate.

Level	Marks	Description
5	13–15	Knowledge is consistently comprehensive, accurate and well detailed. Application of breadth or depth of knowledge is clearly evident. Analysis and/or evaluation is coherently and consistently made between different relevant factors and their impact. Relevant terminology is almost always used. The answer demonstrates a high level of substantiated reasoning, clarity, structure and focus.
4	10–12	Knowledge is usually comprehensive, accurate and detailed. Application of breadth or depth of knowledge is often evident. Analysis and/or evaluation is often made between different relevant factors and their impact, and is usually coherent. Relevant terminology is usually used. The answer usually demonstrates substantiated reasoning, clarity, structure and focus.
3	7–9	Knowledge is generally accurate and sometimes detailed. Application of breadth or depth of knowledge is sometimes evident. Some analysis and/or evaluation is made between different relevant factors and their impact but may sometimes lack coherence. Relevant terminology is used but may sometimes be missing. The answer sometimes demonstrates substantiated reasoning, clarity, structure and focus.
2	4–6	Knowledge is sometimes accurate but may lack detail. Application of breadth or depth of knowledge is occasionally evident. Some analysis and/or evaluation is attempted between different relevant factors and their impact, but is likely to lack coherence. Relevant terminology is occasionally used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, structure and/or focus at times.
1	1–3	Knowledge is limited and may lack accuracy and detail. Application of breadth or depth of knowledge is likely to be limited or not evident. There may be very little or no analysis and/or evaluation made between different relevant factors and their impact. Relevant terminology used only very occasionally. The answer often lacks substantiated reasoning, clarity, structure and/or focus.
	0	No relevant content.



**Possible content may include:**

**AO1 Knowledge of massed and distributed practice**

**Massed practice**

- No rest.

Advantages and disadvantages of massed practice stated in isolation. For example:

- Good to use with closed skills where repetition is possible.
- It promotes fitness/makes skills automatic/it is time efficient.
- It can be tiring/result in negative transfer/performers need to be highly motivated.

**Distributed practice**

- Includes rest intervals.

Advantages and disadvantages of distributed practice stated in isolation. For example:

- Good to use with open skills where the break can be used to explain changes.
- Good to use with complex/externally paced skills to decrease the pressure on the performer.
- Provides time for feedback/mental practice.
- It is time consuming and may limit the speed of progress.

**AO2 Application of massed and distributed practice to trampolining**

**Massed practice**

- The trampolinist would simply perform their routine/skills from their routine repeatedly for a period of time.

Advantages and disadvantages of massed practice linked to trampolining. For example:

- As trampolining is a closed skill, massed practice could be used.
- The high fitness demands of trampolining may cause the performer to fatigue very quickly, increasing the risk of injury.

**Distributed practice**

- The routine/skills from the routine would be performed with breaks in between for recovery.

Advantages and disadvantages of distributed practice linked to trampolining. For example:

- As trampolining could be considered complex due to the high number of sub routines, distributed practice could also be used.
- The trampolinist could use this time to get extrinsic feedback from their coach or mentally practice the routine/somersault.

**AO3 Evaluation of whether massed or distributed practice would be most effective for a coach to use with:**

**Trampolinist A**

- Looking at the scores in **Table 1** it would appear that Trampolinist A is an autonomous performer.
- This is due to the consistently high standard of their performance.
- As they are an autonomous performer they may benefit more from massed practice.

Advantages and disadvantages of massed practice used in evaluative points relevant to the autonomous stage of learning. For example:

- They can already trampoline to a high standard so massed practice will help them to overlearn the routine in preparation to repeat it in competition.
- Massed practice will also help to further improve the trampolinist's fitness with increases in strength and power helping them get more height to perform complex moves/increases in cardiovascular power allowing them to train harder for longer.
- If, however, the trampolinist was learning a new routine/skill or trying to correct a specific weakness, distributed practice may be more effective as it will allow them to receive feedback from their coach.
- As trampolining is a complex and demanding skill, even an autonomous performer would struggle to use massed practice for long periods/often and would benefit from break periods to allow their body and mind to recover.

### Trampolinist B

- Looking at the scores in **Table 1** it would appear that Trampolinist B is a cognitive/associative performer.
- This is due to the inconsistent/low standard of their performance.
- As they are a cognitive/associative performer distributed practice may be more beneficial.

Advantages and disadvantages of distributed practice used in evaluative points relevant to the cognitive/associative stage of learning. For example:

- This will allow the trampolinist to focus on the routine/skills within the routine without worrying about fatigue.
- In the gaps between routines they could receive extrinsic feedback from their coach to target key weaknesses in their performance.
- This would help prevent the negative transfer which may arise from massed practice if they have fundamental errors in their trampolining technique.
- However, if the training focused on a key simple aspect of the routine such as a named skill in isolation eg tuck jump, massed practice may be applicable to help the trampolinist overlearn this part of the routine.
- Massed practice may also be beneficial if the trampolinist is failing to perform to their true ability in competitive environments as overlearning the skill will limit the impact of over arousal/social inhibition/anxiety.

Accept any other appropriate evaluation of whether massed or distributed practice would be most effective for a coach to use with:

- Trampolinist A
- Trampolinist B.

**Maximum 15 marks**

**Section C**

**Sport and society**

1 5

Which **one** of the following had the most significant impact on the invention of lawn tennis?

[1 mark]

**Marks for this question: AO1 = 1**

**B** – Emergence of the middle class

1 6

Which **one** of the following is defined as ‘an organised group of people associated for some specific purpose or with a shared common interest’?

[1 mark]

**Marks for this question: AO1 = 1**

**D** – Society

1 7

Ex-public-school boys and university old boys helped spread sport throughout the British Empire during the industrial and post-industrial period (1780–1900).

State **three** professions that were also responsible for the spread of sport throughout the British Empire during this period.

[3 marks]

**Marks for this question: AO1 = 3**

- Teachers. (1)
- Clergy/missionaries. (1)
- Military officers/soldiers. (1)
- Diplomats. (1)
- Industrialists/factory owners. (1)

Accept any other appropriate statement of professions that were responsible for the spread of sport throughout the British Empire during the industrial and post-industrial period (1780–1900).

**Maximum 3 marks**

<b>1</b>	<b>8</b>	<p>Explain how mob football reflected the characteristics of pre-industrial British society (pre-1780).</p> <p style="text-align: right;"><b>[3 marks]</b></p>
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**Marks for this question: AO2 = 3**

- Lower class in a two-class system had little money so mob football required little equipment/facilities making it accessible. (1)
- Rural living suited mob football as it was played over large and undefined areas. (1)
- Lack of time/long working hours resulted in mob football only being played occasionally. (1)
- Lack of transport/communication so mob football was played differently in each place. (1)
- Widespread illiteracy made sharing of rules difficult, so mob football was simple. (1)
- Harsh lifestyle meant mob football was physical and at times violent. (1)

No marks for characteristics of mob football/society pre-1780 on their own. Characteristics must be clearly linked to answer the question.

Accept any other appropriate explanations of how mob football reflected the characteristics of pre-industrial British society (pre-1780).

**Maximum 3 marks**

<b>1</b>	<b>9</b>	<b>.</b>	<b>1</b>	<p>A 2019 survey looked at the physical activity of adults. <b>Table 2</b> shows the percentage of men and women who completed a minimum of 150 minutes of physical activity per week.</p> <p>One possible cause of the difference shown is stereotyping.</p> <p>Define the term 'stereotyping'.</p> <p style="text-align: right;"><b>[1 mark]</b></p>
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**Marks for this question: AO1 = 1**

- Making generalisations about all members of a group/an individual due to them belonging to a certain group. (1)

Accept any other appropriate definition of stereotyping.

19.2

Analyse how stereotyping may contribute to the difference shown in **Table 2**.

[3 marks]

**Marks for this question: AO3 = 3**

- Fewer women are active as they are stereotypically viewed as homemakers of the family so may have less free time to take part in physical activity. (1)
- Fewer women are active as they are stereotypically viewed as the weaker sex and may be put off some physical activities due to these views. (1)
- Fewer women are active as they are channelled into a limited number of physical activities based on stereotypical views of which physical activities they should take part in resulting in less choice/less likely to find a physical activity they enjoy. (1)
- Fewer women are active due to stereotypical views that some physical activities are masculine/not feminine which limits their options. (1)

*Acknowledgement that the table shows fewer women are active is only required once for all marks to be awarded.*

*To be credited answers must include an example of a stereotypical view **and** its impact.*

*Accept converse if reference to more men being active.*

Accept any other appropriate analysis of how stereotyping may account for the difference shown in **Table 2**.

**Maximum 3 marks**

<b>2</b>	<b>0</b>	<p>The number of factories increased in the UK during the industrial and post-industrial period (1780–1900).</p> <p>Evaluate the impact of this development on the physical activity of the working class:</p> <ul style="list-style-type: none"> <li>• at the start of the 19th century</li> <li>• at the end of the 19th century.</li> </ul> <p style="text-align: right;"><b>[8 marks]</b></p>
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**Marks for this question: AO1 = 2, AO2 = 3, AO3 = 3**

Students are expected to answer in continuous prose, use good English, organise information clearly and use specialist vocabulary where appropriate.

Level	Marks	Description
4	7–8	Knowledge is consistently accurate and well detailed. Application of breadth or depth of knowledge is clearly evident. Analysis and/or evaluation is coherently and consistently made between different relevant factors and their impact. Relevant terminology is consistently used. The answer almost always demonstrates substantiated reasoning, clarity, structure and focus.
3	5–6	Knowledge is usually accurate and detailed. Application of breadth or depth of knowledge is often evident. Analysis and/or evaluation is often made between different relevant factors and their impact and is usually coherent. Relevant terminology is often used. The answer usually demonstrates substantiated reasoning, clarity, structure and focus.
2	3–4	Knowledge is sometimes accurate with some detail. Application of breadth or depth of knowledge is sometimes evident. Analysis and/or evaluation is sometimes made between different relevant factors and their impact but may lack coherence. Relevant terminology is sometimes used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, structure and focus.
1	1–2	Knowledge may be limited. Application of breadth or depth of knowledge may be limited or not evident. There may be little or no analysis and/or evaluation between different relevant factors and their impact. Relevant terminology is occasionally used. The answer may lack substantiated reasoning, clarity, structure and focus.
	0	No relevant content.

**Possible content may include:**

**AO1 Knowledge of the development of factories between 1780 and 1900**

- New factories required large number of employees to work in them.
- Working class lowest group in new three tier class system.
- Urbanisation occurred.
- New laws/rules/working patterns required to manage workforce/population.

**AO2 Application to the working class**

- Urbanisation occurred as the lower/peasant class moved from countryside to cities to take up new jobs in factories and became the working class.
- Initially wages were low meaning the working class suffered in poverty/these gradually improved.
- Working hours were long initially/this changed as half days were introduced on Saturdays.
- The working class suffered from poor health due to living and working conditions in newly crowded cities/this improved as factory owners realised it was in their interest to look after their workforce/new laws were introduced.
- The working class also had their rights curtailed with several new laws introduced to manage behaviour in the crowded cities/workers rights were introduced in the late 19<sup>th</sup> century which improved standards for the working class.

**AO3 Evaluation of what impact the developments in factories between 1780–1900 had on the physical activity of the working class at the beginning and end of this period**

At the start of the 19th century the development of factories had a negative impact on the physical activity of the working class because:

- poor health meant that the working class were not well/fit enough to take part in physical activity
- long working hours meant the working class lacked the free time to take part in physical activity
- low wages meant the working class lacked the disposable income to pay to take part/for equipment to take part in physical activity
- lack of public provision of facilities/space in new towns so the working class had nowhere to be physically active.

By the end of the 19th century the development of factories had a positive impact on the physical activity of the working class because:

- factory owners started to take an interest in the health and wellbeing of their workforce which meant they were healthy enough to take part and encouraged to do so
- to improve the health of their workers factory owners created teams/competitions to promote physical activity
- they also gave their workforce time off to be active at weekends with broken time payments available to some
- factory owners became the new middle class and valued athleticism highly, becoming patrons for working class sport
- they provided the facilities for the working class to be physically active.

Accept any other appropriate evaluation of the impact of this development on the physical activity of the working class:

- at the start of the 19th century
- at the end of the 19th century.

**Maximum 8 marks**

<b>2</b>	<b>1</b>	<p>Active Partnerships, formerly County Sports Partnerships, are an example of a local partner of Sport England. Sport England’s local partners work to overcome the barriers to participation that some groups may face.</p> <p>Analyse how the work of Sport England’s local partners can overcome the barriers to participation for those disadvantaged by their socio-economic status.</p> <p style="text-align: right;"><b>[15 marks]</b></p>
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**Marks for this question: AO1 = 4, AO2 = 5, AO3 = 6**

Students are expected to answer in continuous prose, use good English, organise information clearly and use specialist vocabulary where appropriate.

Level	Marks	Description
5	13–15	<p>Knowledge is consistently comprehensive, accurate and well detailed. Application of breadth or depth of knowledge is clearly evident. Analysis and/or evaluation is coherently and consistently made between different relevant factors and their impact. Relevant terminology is almost always used. The answer demonstrates a high level of substantiated reasoning, clarity, structure and focus.</p>
4	10–12	<p>Knowledge is usually comprehensive, accurate and detailed. Application of breadth or depth of knowledge is often evident. Analysis and/or evaluation is often made between different relevant factors and their impact, and is usually coherent. Relevant terminology is usually used. The answer usually demonstrates substantiated reasoning, clarity, structure and focus.</p>
3	7–9	<p>Knowledge is generally accurate and sometimes detailed. Application of breadth or depth of knowledge is sometimes evident. Some analysis and/or evaluation is made between different relevant factors and their impact but may sometimes lack coherence. Relevant terminology is used but may sometimes be missing. The answer sometimes demonstrates substantiated reasoning, clarity, structure and focus.</p>
2	4–6	<p>Knowledge is sometimes accurate but may lack detail. Application of breadth or depth of knowledge is occasionally evident. Some analysis and/or evaluation is attempted between different relevant factors and their impact, but is likely to lack coherence. Relevant terminology is occasionally used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, structure and/or focus at times.</p>
1	1–3	<p>Knowledge is limited and may lack accuracy and detail. Application of breadth or depth of knowledge is likely to be limited or not evident. There may be very little or no analysis and/or evaluation made between different relevant factors and their impact. Relevant terminology used only very occasionally. The answer often lacks substantiated reasoning, clarity, structure and/or focus.</p>
	0	No relevant content.



**Possible content may include:**

**AO1 Knowledge of the work of Sport England's local partners and the barriers to participation faced by those disadvantaged by their socio-economic status**

**Work of local partners**

- Club development.
- Coaching/workforce/volunteer development.
- Education programmes/raising awareness.
- Equality/targeted campaigns.
- Facility development.
- Funding and support.
- Marketing and communication.
- Safeguarding.
- Strategic networking.

**Barriers to participation faced by those disadvantaged by their socio-economic status**

- Lack of disposable income.
- Limited free time.
- Access to facilities/open spaces/countryside.
- Possible lower focus on the importance of education.
- Lack of role models in some sports/positions of authority.
- Lack of transport.
- Discrimination/stereotyping.

**AO2 Application of the work of Sport England's local partners to overcome the barriers to participation faced by those disadvantaged by their socio-economic status**

- Lack of disposable income can be overcome by funding and support/education programmes/targeted campaigns.
- Limited free time can be overcome by safeguarding/marketing and communication.
- Access to facilities can be overcome by club development/facility development/education programmes/targeted campaigns/funding and support.
- Poor education can be overcome by volunteer development/education programmes/raising awareness/targeted campaigns.
- Lack of role models in some sports/positions of authority can be overcome by coaching/workforce /volunteer development/education programmes/raising awareness/equality/targeted campaigns
- Lack of transport by club development/facility development.
- Discrimination/stereotyping can be overcome by education programmes/targeted campaigns.

**AO3 Analysis of how the work of Sport England's local partners can overcome the barriers to participation for those disadvantaged by their socio-economic status**

- Funding can be provided to local facilities which allows them to reduce the cost of activities for those from lower socio-economic groups/disadvantaged backgrounds.
- Targeted campaigns eg School Games could also be used to highlight low-cost exercise options such as jogging/provide structured competition for all socio-economic groups at no cost.
- Increased education may help people to use time efficient opportunities to be active such as online HIIT workouts, although access to tech/internet may be an issue for this group.
- New facilities can be developed in key areas where lower socio-economic groups/people from disadvantaged backgrounds live. This will give them greater access to a wider range of sports.

- Local clubs/satellite clubs could be set up with local coaches developed so that the existing facilities available in areas where lower socio-economic groups/people from disadvantaged backgrounds live can provide high quality experiences.
- By running targeted campaigns in the local area high impact role models, such as successful athletes from the local area, can be used to highlight the benefits of physical activity and exercise.
- As organisations are local they can focus in on the key issues which exist in their communities and raise participation in sport to address key social issues.

Accept any other appropriate analysis of how the work of Sport England's local partners can overcome the barriers to participation for those disadvantaged by their socio-economic status.

**Maximum 15 marks**