



# Mark Scheme (Results)

January 2024

Pearson BTEC Tech Award  
In Sport (BSP03)

Component 3: Developing Fitness to Improve  
Other Participants Performance in Sport and  
Physical Activity

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## **Component 3: Developing Fitness to Improve Other Participants' Performance in Sport and Physical Activity**

### **General marking guidance**

- All learners must receive the same treatment. Examiners must mark the first learner in exactly the same way as they mark the last.
- Mark grids should be applied positively. Learners must be rewarded for what they have shown they can do rather than be penalised for omissions.
- Examiners should mark according to the mark grid, not according to their perception of where the grade boundaries may lie.
- All marks on the mark grid should be used appropriately.
- All the marks on the mark grid are designed to be awarded. Examiners should always award full marks if deserved. Examiners should also be prepared to award zero marks if the learner's response is not rewardable according to the mark grid.
- Where judgement is required, a mark grid will provide the principles by which marks will be awarded.
- When examiners are in doubt regarding the application of the mark grid to a learner's response, a senior examiner should be consulted.

### **Points-Based Mark Scheme Guidance**

Points-based mark schemes are made up of:

1. Mark scheme rubric:

A mark scheme rubric instructs an examiner as to how each mark is awarded.

2. Example responses:

These demonstrate the type of acceptable responses that a learner might provide and where each mark is awarded.

3. Additional marking guidance:

This informs examiners about any parameters which should be applied, for example 'accept any other appropriate/alternative responses'.

### **Applying the points-based mark scheme guidance**

Examiners should follow the mark scheme rubric and use the example responses as a guide for the relevance and expectation of the responses. Learners must be credited for any appropriate response. Should learners provide answers that meet the rubric but in an alternative order, credit should be given.

## **Levels-Based Mark Scheme Guidance**

Levels-based mark schemes (LBMS) have been designed to assess learners' work holistically. They consist of two parts:

### 1. Indicative content:

Indicative content reflects content-related points that a learner might make but is not an exhaustive list. Nor is it a model answer. Learners may make some or none of the points included in the indicative content as its purpose is as a guide for the relevance and expectation of the responses. Learners must be credited for any appropriate response.

### 2. Levels-based descriptors:

Each level is made up of a number of traits which when combined together articulate the quality of response that a learner needs to demonstrate. The traits progress across the levels to demonstrate the different expectations of each level. When using a levels-based mark scheme, the 'best fit' approach should be used.

## **Applying the levels-based descriptors**

Examiners should take a 'best fit' approach to determining the mark.

- Examiners should first make a holistic judgement on which level most closely matches the learner's response. Learners will be placed in the level that best describes their answer. Answers can display characteristics from more than one level, and where this happens markers must use any additional guidance (for example weighting of traits) and their professional judgement to decide which level is most appropriate.
- The mark awarded within the level will be decided based on the quality of the answer and will be modified according to how securely all traits are displayed at that level:
  - marks will be awarded at the top of that level if the learner has evidenced each of the descriptor traits securely.
  - where the response does not securely meet all traits, the marks should be awarded based on how closely the descriptor has been met.

Question number	Answer	Mark
1(a)	Award <b>one</b> mark for: <ul style="list-style-type: none"> <li>• D - Muscular strength (1)</li> </ul>	(1)

Question number	Answer	Mark
1(b)	Award <b>one</b> mark for giving a correct description: <ul style="list-style-type: none"> <li>• Explosive movements (1)</li> <li>• Ability to perform strength-based movements quickly (1)</li> <li>• (Maximum) force in as short a time as possible (1)</li> <li>• Speed x strength (1)</li> </ul> <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
1(c)	Award <b>one</b> mark for: <ul style="list-style-type: none"> <li>• A - Vertical jump test (1)</li> </ul>	(1)

Question number	Answer	Mark
1 (d)(i) & 1 (d)(ii)	<p>Award <b>one</b> mark for naming each method of training and <b>one</b> mark for describing each method, up to a maximum of <b>two</b> marks per method of training.</p> <p>Strength</p> <ul style="list-style-type: none"> <li>• Free weights (1) a weight that is not attached to a machine/spotter is recommended/high loads/low repetitions/example e.g. dumbbell (1)</li> <li>• Fixed/resistance machines (1) weight training equipment – stack/pulley system/high loads/low repetitions (1)</li> </ul> <p>DNA circuit training/weight/weight lifting /strength training  DNA named exercise e.g. bicep curl  DNA fitness test</p> <p>Accept any other appropriate answer.</p>	<b>(4)</b>

Question number	Answer	Mark
1 (e)	<p>Award <b>one</b> mark for giving a correct method to measure intensity.</p> <ul style="list-style-type: none"> <li>• 1RM / 1 Rep Max (1)</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(1)</b>

Question number	Answer	Mark
1 (f)	<p>Award <b>one</b> mark for a description and <b>one</b> mark for linked expansion.</p> <ul style="list-style-type: none"> <li>Results according to gender and age/Average or collected data sets from a population (1) that you can compare against to identify individual fitness levels/e.g. of how the fitness component is rated e.g. poor/good (1)</li> </ul> <p>Accept any other appropriate answer.</p>	(2)

Question number	Answer	Mark
2 (a)	<p>Award <b>one</b> mark for each correctly matched line, up to a maximum of <b>two</b> marks.</p> <p>A Grip dynamometer (1) B One-minute sit-up (1)</p>	(2)

Question number	Answer	Mark
2(b)	<p>Award <b>one</b> mark for identifying a correct reason and <b>one</b> mark for linked expansion.</p> <ul style="list-style-type: none"> <li>Hand-eye coordination/to see the ball coming and use hand/arm to swing/bring the racket up (1) to hit the ball/return the ball (over the net) (1)</li> </ul> <p>DNA two or more body parts</p> <p>Accept any other appropriate answer.</p>	(2)

Question number	Answer	Mark
2 (c)(i)	Award <b>one</b> mark for <ul style="list-style-type: none"> <li>• Below average</li> </ul>	(1)

Question number	Answer	Mark
2 (c)(ii)	Award <b>one</b> mark for each of the following linked points, up to a maximum of <b>two</b> marks. <ul style="list-style-type: none"> <li>• Speed, agility and quickness training/SAQ (1)</li> <li>• So that Sophie can change direction on the court at speed (1)</li> </ul> DNA agility ladder/hurdles	(2)

Question number	Answer	Mark
2 (d)	Award <b>one</b> mark for: <ul style="list-style-type: none"> <li>• Variation (1)</li> </ul>	(1)

Question number	Answer	Mark
2 (e)(i) & 2 (e)(ii)	<p>Award <b>one</b> mark for naming each type of training method up to a maximum of <b>two</b> marks per type. Award <b>one</b> mark for describing each type of training method, up to a maximum of <b>two</b> marks per type.</p> <p>Aerobic endurance</p> <ul style="list-style-type: none"> <li>• Continuous training (1) steady pace/moderate intensity/without rest for 30 minutes (1)</li> <li>• Fartlek training (1) intensity varies over different terrains (1)</li> <li>• Interval training (1) work period followed by rest period (1)</li> <li>• Circuit training (1) number of stations/exercises with rest periods (1)</li> </ul> <p>Muscular endurance</p> <ul style="list-style-type: none"> <li>• Free/fixed weights/resistance training (1) high reps and low loads (1)</li> <li>• Circuit training (1) using body resistance exercises or weights (1)</li> </ul> <p>DNA weight lifting/ training DNA Circuit training twice</p> <p>Accept any other appropriate answer.</p>	<b>(4)</b>

Question number	Answer	Mark
3(a)	<p>Award <b>one</b> mark for:</p> <ul style="list-style-type: none"> <li>• C - 220 – age (1)</li> </ul>	<b>(1)</b>

Question number	Answer	Mark
3 (b)	Award <b>one</b> mark for: <ul style="list-style-type: none"> <li>• Beats per minute (1)</li> </ul>	<b>(1)</b>

Question number	Answer	Mark
3 (c)	Award <b>one</b> mark for identifying a correct reason (1) and <b>one</b> mark for linked expansion. (1) <ul style="list-style-type: none"> <li>• Identify health/medical conditions (1) to reduce risk of illnesses/on health (1)</li> <li>• Identify injuries (1) to ensure the activities do not cause further injury (1)</li> <li>• Identify any medication (1) that could put the individual at risk when exercising/seek GP advice before training (1)</li> <li>• Identify any reason that the participant should not take part (1) so that there are no incidents/risks (1)</li> </ul> DNA past sporting activities.  Accept any other appropriate answer.	<b>(2)</b>

Question number	Answer	Mark
3 (d)	<p>Award <b>one</b> mark for identifying a correct reason and <b>one</b> mark for linked expansion.</p> <ul style="list-style-type: none"><li>• Gradual pulse/breathing rate lowering activity/gentle jog/walk (1) to reduce the heart rate (1)</li><li>• Stretching (static) (1) to reduce muscle stiffness/soreness/reduce/remove lactic acid build up/reduce the risk of injury (1)</li></ul> <p>Accept any other appropriate answer.</p>	<p><b>(2)</b></p>

Question number	Answer	Mark
3 (e)	<p>Award <b>one</b> mark for each identification, up to a maximum of <b>two</b> marks. Award <b>one</b> mark for each linked explanation, up to a maximum of <b>two</b> marks.</p> <p>Advantage</p> <ul style="list-style-type: none"> <li>• Easy to complete/can be done anywhere (1) minimal equipment needed/you can use a ruler and bench/alternative equipment if the box is unavailable (1)</li> <li>• Quick to carry out (1) therefore does not take up the full session (1)</li> </ul> <p>Disadvantage</p> <ul style="list-style-type: none"> <li>• Does not test the flexibility of the whole body/it only tests certain parts/only measures lower body and back (1) therefore test may not be valid (1)</li> <li>• Some methods differ (1) therefore there is inconsistencies in results (1)</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(4)</b>

Question number	Answer	Mark
3 (f)	<p>Responses will be credited according to the learner's demonstration of knowledge and understanding of the material, using the indicative content and level descriptors below.</p> <p>The indicative content that follows is not prescriptive. Responses may cover some or all indicative content, but learners should be rewarded for other relevant responses.</p> <p><b>Assessment may consider:</b></p> <p><b>Intensity</b></p> <ul style="list-style-type: none"> <li>• How hard/used to identify how hard Norman is/should train (MP1)</li> <li>• by using <math>220 - \text{age}/\%HR/RPE/\text{borg}</math> scale to measure the intensity (MP2)</li> </ul> <p><b>Progressive overload</b></p> <ul style="list-style-type: none"> <li>• Training should be more demanding/difficult/<u>harder than they are used to</u> (MP3)</li> <li>• So that fitness/flexibility <u>keeps</u> improving overtime (throughout the programme) (MP4)</li> </ul> <p><b>For either Principle (but award only once)</b></p> <ul style="list-style-type: none"> <li>• Training intensity/time/frequency is increased (MP5)</li> <li>• So that adaptation can occur (MP6)</li> <li>• To increase range of movement/flexibility of ligaments and tendons (MP7)</li> <li>• Increase should be gradual/slow/overtime/after starting at low intensity (MP8)</li> <li>• So, there is a reduced risk of injury/strain/tear/heart attack (MP9)</li> </ul>	<b>(6)</b>

	<ul style="list-style-type: none"> <li>• Due to Norman's age/return to exercise/flexibility training (MP10)</li> </ul> <p>Accept any other appropriate answer.</p>	
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Level	Mark	Descriptor
	0	No rewardable content
1	1 – 2	<ul style="list-style-type: none"> <li>• Demonstrates isolated knowledge and understanding, there will be major gaps or omissions.</li> <li>• Few of the points made will be relevant to the context in the question.</li> <li>• Limited assessment which contains generic assertions rather than considering the factors or events and their relative importance, leading to judgements which are superficial or unsupported.</li> </ul>
2	3 – 4	<ul style="list-style-type: none"> <li>• Demonstrates some accurate knowledge and understanding, with only minor gaps or omissions.</li> <li>• Some of the points made will be relevant to the context in the question, but the link will not always be clear.</li> <li>• Displays a partially developed assessment which considers some of the factors or events and their relative importance leading to partially supported judgements.</li> </ul>
3	5 – 6	<ul style="list-style-type: none"> <li>• Demonstrates mostly accurate and thorough/detailed knowledge and understanding.</li> <li>• Most of the points made will be relevant to the context in the question, and there will be clear links.</li> <li>• Displays a well-developed and logical assessment which clearly considers the factors or events and their relative importance, leading to supported judgements.</li> </ul>

Question number	Answer	Mark
4 (a)	Award <b>one</b> mark for: <ul style="list-style-type: none"> <li>• How you feel/your thoughts/mindset (1)</li> <li>• How positive or negative you feel (1)</li> <li>• How motivated <u>you feel</u> towards something? (1)</li> </ul> DNA motivation on own  Accept any other appropriate answer.	<b>(1)</b>

Question number	Answer	Mark
4 (b)(i)	Award <b>two</b> marks for: <ul style="list-style-type: none"> <li>• Increased effort/attitude during participation (1)</li> <li>• Increased levels of performance (1)</li> <li>• Increased levels of fitness (1)</li> <li>• Higher enjoyment levels (1)</li> <li>• Increased levels of participation (1)</li> <li>• Increased desire to participate (1)</li> </ul> Accept any other appropriate answer.	<b>(2)</b>

Question number	Answer	Mark
4 (b)(ii)	<p>Award <b>two</b> marks for:</p> <ul style="list-style-type: none"> <li>• Money (1)</li> <li>• Medals (1)</li> <li>• Certificates (1)</li> <li>• Prizes (1)</li> <li>• Trophies (1)</li> <li>• Praise (1)</li> <li>• Crowd cheering (1)</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(2)</b>

Question number	Answer	Mark
4 (c)	<p>Award <b>one</b> mark for each identification, up to a maximum of <b>two</b> marks. Award <b>one</b> mark for each linked explanation, up to a maximum of <b>two</b> marks.</p> <ul style="list-style-type: none"> <li>• Gaining informed consent (1) evidence that the participant is aware of all of the information (1)</li> <li>• Pre-screening/PAR-Q (1) to inform of any medical/health conditions or injuries (1)</li> <li>• Calibration of equipment (1) to check the accuracy of the testing equipment/reliability/fair test (1)</li> <li>• Prepare form for recording age, height, etc. (1) so that the results can be compared to normative data/are reliable (1)</li> <li>• Check step height (1) to ensure it is regulation height/reliable results (1)</li> <li>• Check metronome/CD (1) so that it has the right beat for the timings/reliability/intensity is correct (1)</li> <li>• Warm up (1) so that the participants body is prepared for exercise (1)</li> </ul> <p>Accept any other appropriate response.</p>	<b>(4)</b>

Question number	Answer	Mark
4 (d)	<p>Award <b>one</b> mark for each identification, up to a maximum of <b>two</b> marks. Award <b>one</b> mark for each linked explanation, up to a maximum of <b>two</b> marks.</p> <ul style="list-style-type: none"> <li>• Use a gym bench/step (1) for the individual to step up and down onto (1)</li> <li>• Metronome/CD/speaker (1) to set the beat for the steps (1)</li> <li>• Stopwatch/timer (1) to time the test/five minutes/step up and down (1)</li> <li>• Heart rate monitor (1) to measure the heart rate one, two and three minutes/at the end of the test (1)</li> <li>• Assistant (1) to start/stop the test (1)</li> </ul> <p>DNA reference to the participant exercising as long as they can/how long they have taken</p> <p>Accept any other appropriate answer.</p>	<b>(4)</b>

Question number	Answer	Mark
4 (e)	<p>Award <b>one</b> mark for:</p> <ul style="list-style-type: none"> <li>• Body Mass Index (BMI) (1)</li> <li>• Bioelectrical Impedance Analysis (BIA) (1)</li> <li>• Waist to hip ratio (1)</li> <li>• Skinfold Calliper test (1)</li> </ul> <p>Accept acronyms</p> <p>Accept any other appropriate answer.</p>	<b>(1)</b>

Question number	Answer	Mark
4 (f)	<p>Award <b>one</b> mark for identifying a correct reason. Award <b>one</b> mark for expansion.</p> <ul style="list-style-type: none"> <li>• Heart increases in size/strength (1) so that <u>more</u> blood can be pumped per beat/increase stroke volume (1)</li> </ul> <p>Reference to oxygen needs to be in <u>blood</u> or to pump <u>more</u> oxygen around the body</p> <p>DNA link to lungs</p> <p>For this response the expansion <b>can</b> be awarded without the identification.</p>	<b>(2)</b>

Question number	Answer	Mark
5	<p>Responses will be credited according to the learner's demonstration of knowledge and understanding of the material, using the indicative content and level descriptors below.</p> <p>The indicative content that follows is not prescriptive. Responses may cover some or all indicative content, but learners should be rewarded for other relevant responses.</p> <p><b>Evaluation may consider:</b></p> <p><b>Frequency</b></p> <ul style="list-style-type: none"> <li>• The number of training sessions completed over the week (MP1)</li> <li>• Ikram completes three training sessions and one practice fight/sparring (MP2)</li> </ul> <p>Changes:</p> <ul style="list-style-type: none"> <li>• To add an extra session of training in week 4/more training/Decrease the rest days (MP3)</li> </ul> <p>Application:</p> <ul style="list-style-type: none"> <li>• Ensure progressive overload/adaptation occurs (MP4)</li> <li>• Maintain some rest days to allow for rest and recovery or adaptation (MP5)</li> <li>• Increase the frequency <u>gradually</u> (MP6)</li> </ul>	

	<p><b>Type</b></p> <ul style="list-style-type: none"> <li>• The <u>method(s)</u> of training that you use (MP7)</li> <li>• Training <u>methods</u> are appropriate for the sport/activity and to achieve the aim (MP8)</li> <li>• Using circuit training and Interval training (MP9)</li> </ul> <p>Changes:</p> <ul style="list-style-type: none"> <li>• Different training <u>method/named</u> (different) method of training other than those identified, e.g. Fartlek, free weights (MP10)</li> </ul> <p>Application:</p> <ul style="list-style-type: none"> <li>• Justification of method, e.g. Fartlek – variation within training (to avoid boredom/increase motivation), Free weights – to improve strength (for boxing performance) (MP11)</li> </ul> <p>DNA specific exercises</p>	<p><b>(6)</b></p>
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Level	Mark	Descriptor
	0	No rewardable content
1	1-2	<ul style="list-style-type: none"> <li>• Demonstrates isolated knowledge and understanding, there will be major gaps or omissions.</li> <li>• Few of the points made will be relevant to the context in the question.</li> <li>• Limited assessment which contains generic assertions rather than considering the factors or events and their relative importance, leading to judgements which are superficial or unsupported.</li> </ul>
2	3-4	<ul style="list-style-type: none"> <li>• Demonstrates some accurate knowledge and understanding, with only minor gaps or omissions.</li> <li>• Some of the points made will be relevant to the context in the question, but the link will not always be clear.</li> <li>• Displays a partially developed assessment which considers some of the factors or events and their relative importance leading to partially supported judgements.</li> </ul>
3	5-6	<ul style="list-style-type: none"> <li>• Demonstrates mostly accurate and thorough/detailed knowledge and understanding.</li> <li>• Most of the points made will be relevant to the context in the question, and there will be clear links.</li> <li>• Displays a well-developed and logical assessment which clearly considers the factors or events and their relative importance, leading to supported judgements.</li> </ul>





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