



# Mark Scheme (Results)

June 2022

Pearson BTEC Tech Award  
In Sport, Activity and Fitness (21217L)  
Component 2: The Principles of Training,  
Nutrition and Psychology for Sport and Activity

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June 2022

Publications Code 21217L\_2206\_MS

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## **Component 2: The Principles of Training, Nutrition and Psychology for Sport and 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.

### **Specific marking guidance**

The mark grids have been designed to assess learners' work holistically.

Rows in the grids identify the assessment focus/outcome being targeted. When using a mark grid, the 'best fit' approach should be used.

- Examiners should first make a holistic judgement on which band most closely matches the learner's response and place it within that band. Learners will be placed in the band that best describes their answer.
- The mark awarded within the band will be decided based on the quality of the answer in response to the assessment focus/outcome and will be modified according to how securely all bullet points are displayed at that band.
- Marks will be awarded towards the top or bottom of that band depending on how they have evidenced each of the descriptor bullet points.

Question number	Answer	Mark
1(a)	<p>Award <b>1</b> mark for naming an appropriate test for muscular endurance.</p> <ul style="list-style-type: none"> <li>• (One-minute) sit-up test (1)</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(1)</b>

Question number	Answer	Mark
1(b)	<p>Award <b>1</b> mark for:</p> <ul style="list-style-type: none"> <li>• Above average (1)</li> </ul>	<b>(1)</b>

Question number	Answer	Mark
2(a)	<p>Award <b>1</b> mark for <b>giving</b> a correct meaning of anxiety.</p> <ul style="list-style-type: none"> <li>• The level of worry / nervousness / apprehension/ a performer feels (1)</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(1)</b>

Question number	Answer	Mark
2(b)	<p>Award <b>1</b> mark for <b>stating</b> a correct somatic effect of anxiety, up to a maximum of <b>2</b> marks.</p> <ul style="list-style-type: none"> <li>• Butterflies (in the stomach)</li> <li>• Muscle tension</li> <li>• Increased sweat rate</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(2)</b>

Question number	Answer	Mark
2(c)	<p>Award <b>1</b> mark for the <b>identification</b> of the positive characteristics of a pre-match team talk, and <b>1</b> mark for an appropriate <b>expansion</b> on the impact that will have.</p> <ul style="list-style-type: none"> <li>The team talk can provide positive / uplifting messages (1) to reassure the players/ to reduce nervousness (1)</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(2)</b>

Question number	Answer	Mark								
3 (a) & (b)	<p>Award <b>1</b> mark for <b>naming</b> each method of training and <b>1</b> mark for <b>describing</b> each method, up to a maximum of <b>2</b> marks per method of training.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">(3a)</th> <th style="text-align: center;">(3b)</th> </tr> </thead> <tbody> <tr> <td>Static (stretching) (1)</td> <td><u>holding</u> a stretch or position to target a particular joint or muscle group (1)</td> </tr> <tr> <td>Dynamic (stretching) (1)</td> <td><u>movements</u> through the full range of motion for a particular joint or muscle group (1)</td> </tr> <tr> <td>Proprioceptive neuromuscular facilitation /PNF (stretching) (1)</td> <td>using a partner / to create resistance or isometric contraction (when in a fully stretched position) / before relaxing and further extending the stretch / inhibits stretch reflex (1)</td> </tr> </tbody> </table> <p>Accept any other appropriate answer.</p>	(3a)	(3b)	Static (stretching) (1)	<u>holding</u> a stretch or position to target a particular joint or muscle group (1)	Dynamic (stretching) (1)	<u>movements</u> through the full range of motion for a particular joint or muscle group (1)	Proprioceptive neuromuscular facilitation /PNF (stretching) (1)	using a partner / to create resistance or isometric contraction (when in a fully stretched position) / before relaxing and further extending the stretch / inhibits stretch reflex (1)	<b>(4)</b>
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Question number	Answer	Mark
3(c)	<p>Award <b>1</b> mark for <b>stating</b> the correct type of motivation and <b>1</b> mark for a linked <b>expansion</b>.</p> <ul style="list-style-type: none"> <li>Holly is using <u>intrinsic</u> motivation (1) as the motivation is coming from internal factors / from within the performer themselves (1)</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(2)</b>

Question number	Answer	Mark
3(d)	<p>Award <b>1</b> mark for <b>stating</b> each appropriate benefit of increased motivation, up to a maximum of <b>2</b> marks.</p> <ul style="list-style-type: none"> <li>Higher intensity of effort</li> <li>Continuing to train on a regular basis</li> <li>Higher enjoyment levels</li> <li>Increased <u>intrinsic / extrinsic</u> rewards</li> <li>Overcoming adversity</li> <li>Improved concentration</li> <li>Improve fitness <u>more quickly</u></li> </ul> <p>Accept any other appropriate answer.</p>	<b>(2)</b>

Question number	Answer	Mark
4(a)	<p>Award <b>1</b> mark for <b>giving</b> an appropriate reason for using a health screening questionnaire.</p> <ul style="list-style-type: none"> <li>To plan a safe training programme for Jordan</li> <li>To find out about previous injuries or illnesses</li> <li>To find out about medical conditions (accept examples – asthma, heart condition, back injuries etc)</li> <li>Assess current fitness levels</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(1)</b>

Question number	Answer	Mark
4(b)	<p>Award <b>1</b> mark for <b>identifying</b> why it will aid the training plan and <b>1</b> mark for an expansion.</p> <ul style="list-style-type: none"> <li>Jordan's activity likes will be more enjoyable/engaging (1) meaning she will be more motivated to complete the training plan (1)</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(2)</b>

Question number	Answer	Mark
4(c)	<p>Award <b>1</b> mark for <b>giving</b> the meaning of intensity.</p> <ul style="list-style-type: none"> <li>Intensity is how hard a participant is working (1)</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(1)</b>

Question number	Answer	Mark
4(d)	<p>Award <b>1</b> mark for <b>stating</b>:</p> <ul style="list-style-type: none"> <li>220 – age</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(1)</b>

Question number	Answer	Mark
4(e)(i) and (ii)	<p>Award <b>1</b> mark for <b>calculating</b> each correct estimated heart rate, up to a maximum of <b>2</b> marks.</p> <ul style="list-style-type: none"> <li>(i) 130</li> <li>(ii) 180</li> </ul>	<b>(2)</b>
Question number	Answer	Mark
4(f) (JB)	<p>Award <b>1</b> mark for <b>identification</b> of the appropriate training zone.</p> <ul style="list-style-type: none"> <li>Training zone B (1)</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(1)</b>

Question number	Answer	Mark
5(a)	<p>Award <b>1</b> mark for <b>stating</b> each appropriate component of fitness, up to a maximum of <b>2</b> marks.</p> <ul style="list-style-type: none"> <li>Aerobic endurance</li> <li>Muscular endurance</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(2)</b>



Question number	Answer	Mark
5(b)	<p>Award <b>1</b> mark for <b>identifying</b> how variety will be employed, and a further <b>1</b> mark for a linked expansion.</p> <ul style="list-style-type: none"> <li>Using a variety of methods will prevent boredom (1) and keep Chloe motivated/ increase effort/ increase participation (1)</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(2)</b>

Question number	Answer	Mark
5(c)	<p>Award <b>1</b> mark for <b>naming</b> an appropriate micronutrient, up to a maximum of <b>2</b> marks.</p> <ul style="list-style-type: none"> <li>Vitamin A</li> <li>Vitamin B</li> <li>Vitamin D</li> <li>Iron</li> <li>Potassium</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(2)</b>

Question number	Answer	Mark
5(d)	<p>Award <b>1</b> mark for <b>naming</b> an appropriate food.</p> <ul style="list-style-type: none"> <li>Pumpkin seeds</li> <li>Walnuts / Almonds</li> <li>Avocados</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(1)</b>

Question number	Answer	Mark
5(e)	<p>Award <b>1</b> mark for <b>identifying</b> the function of unsaturated fats and a further <b>1</b> mark for each linked expansion, up to a maximum of <b>3</b> marks.</p> <ul style="list-style-type: none"> <li>• Unsaturated fats provide energy (1) as a secondary source (1) for when carbohydrate stores are depleted (1)</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(3)</b>

Question number	Answer	Mark
6(a)	<p>Award <b>1</b> mark for <b>naming</b>:</p> <ul style="list-style-type: none"> <li>• Carbohydrates</li> </ul>	<b>(1)</b>

Question number	Answer	Mark
6(b)	<p>Award <b>1</b> mark for <b>naming</b> an appropriate food.</p> <ul style="list-style-type: none"> <li>• Bananas</li> <li>• Yoghurt</li> <li>• Sunflower seeds</li> <li>• Potatoes</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(1)</b>

Question number	Answer	Mark
6(c)	<p>Award <b>1</b> mark for <b>identifying</b> the main function of potassium and <b>1</b> mark for a linked expansion, up to a maximum of <b>2</b> marks</p> <ul style="list-style-type: none"> <li>Potassium helps with fluid/electrolyte levels during exercise (1) allowing him to regulate his body temperature (1)</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(2)</b>

Question number	Answer	Mark
6(d)	<p>Award <b>1</b> mark for <b>identifying</b> the appropriate timing of intake and <b>1</b> mark for a linked expansion, up to a maximum of <b>2</b> marks</p> <p>Protein shakes should be consumed directly <u>after</u> training (1) to reduce recovery time for the next training session (1)</p> <p>Accept any other appropriate answer.</p>	<b>(2)</b>

Question number	Answer	Mark
6(e)	<p>Award <b>1</b> mark for <b>stating</b> an appropriate disadvantage of using legal supplements.</p> <ul style="list-style-type: none"> <li>Weight gain</li> <li>Increased bowel movements</li> <li>Energy peaks and troughs</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(1)</b>

Question number	Answer	Mark
6(f)	<p>Award <b>1</b> mark for <b>identifying</b> an appropriate characteristic of a type of amino acid and <b>1</b> mark for contrasting this with another type of amino acid.</p> <ul style="list-style-type: none"> <li>Essential amino acids have to be eaten as part of our diet (1) but non-essential amino acids can be produced within the body (1)</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(2)</b>

Question number	Indicative content	Mark
7	<p>Responses may include the following.</p> <p>Analysis of Fluid Intake</p> <p><u>Day 1</u></p> <ul style="list-style-type: none"> <li>She will be well hydrated / fluid intake is at correct level</li> <li><u>Due to</u> no activity / cool weather</li> <li><u>Recommended daily intake (RDI)</u> is 2 litres</li> </ul> <p><u>Day 2</u></p> <ul style="list-style-type: none"> <li>Fluid intake is too low / insufficient</li> <li><u>Due to</u> activity levels / hot weather</li> <li>She will become dehydrated / harmful loss of fluids</li> <li>She will sweat more</li> <li>She needs to add <u>1 litre of fluid intake for every hour of activity</u> in hot conditions</li> <li>Correct intake should be 5 litres</li> </ul> <p><u>Day 3</u></p> <ul style="list-style-type: none"> <li>She will be well hydrated / fluid intake is at correct level</li> <li>Has made the <u>correct adjustments</u> to fluid intake because of activity levels / weather on day</li> <li>She will sweat (more)</li> <li>She needs to add <u>1 litre of fluid intake for every hour of activity</u> in hot conditions</li> </ul> <p><u>Impacts of sufficient fluid intake</u></p> <ul style="list-style-type: none"> <li>Blood plasma volume increases (blood gets thinner / less viscous)</li> <li>Allowing efficient delivery of blood /oxygen /nutrients to the muscles.</li> </ul>	<b>(9)</b>

	<ul style="list-style-type: none"> <li>• <u>Maintaining</u> higher intensity of effort for duration of match</li> <li>• Delaying fatigue / OBLA / build-up of waste products / lactic acid</li> <li>• Increasing <u>ability</u> to sweat</li> <li>• Maintaining body temperature</li> <li>• Preventing overheating during matches</li> <li>• Lubrication of joints</li> <li>• Enabling free movement</li> <li>• *<u>To</u> execute skills (passing, shooting, dribbling, running) smoothly and effectively</li> </ul> <p>Accept opposite and appropriate responses linked to dehydration</p>	
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Level	Mark	Descriptor
Level 0	0	No rewardable material.
Level 1	1-3	<ul style="list-style-type: none"> <li>• Demonstrates isolated elements of knowledge and understanding.</li> <li>• Breaks the situation down into component parts and a few of the points made will be relevant to the context in the question.</li> <li>• Limited analysis which contains generic assertions rather than interrelationships or linkages.</li> </ul>
Level 2	4-6	<ul style="list-style-type: none"> <li>• Demonstrates some accurate knowledge and understanding.</li> <li>• Breaks the situation down into component parts and some of the points made will be relevant to the context in the question.</li> <li>• Displays a partially developed analysis which considers some interrelationships or linkages but not always sustained.</li> </ul>
Level 3	7-9	<ul style="list-style-type: none"> <li>• Demonstrates mostly accurate knowledge and understanding.</li> <li>• Breaks the situation down into component parts and most of the points made will be relevant to the context in the question.</li> <li>• Displays a developed and logical analysis which clearly considers interrelationships or linkages in a sustained manner.</li> </ul>

Question number	Answer	Mark
8(a)	<p>Award <b>1</b> mark for <b>giving</b> each correct reason, up to a maximum of <b>2</b> marks.</p> <ul style="list-style-type: none"> <li>• His <u>run up / running</u> will be slower (1) so will have less momentum / unable to propel /launch himself (1) so will not jump as far (1)</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(2)</b>

Question number	Answer	Mark
8(b)	<p>Award <b>1</b> mark for <b>stating</b> each appropriate advantage of SAQ training, up to a maximum of <b>2</b> marks.</p> <ul style="list-style-type: none"> <li>• Requires only limited equipment</li> <li>• Low cost</li> <li>• Can be done in a range of environments</li> <li>• Easy to set up</li> <li>• Easy to progress</li> <li>• Sport specific / replicates movements in some sports</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(2)</b>

Question number	Answer	Mark
8(c)	<p>Award <b>1</b> mark for <b>identifying</b> a disadvantage of SAQ training and <b>1</b> mark for a linked expansion related to long jumping, up to a maximum of <b>2</b> marks.</p> <p>SAQ training/Agility involves quick changes of direction (1) but long jump performers only run in a straight line / (1)</p> <p>Accept any other appropriate answer.</p>	<b>(2)</b>

Question number	Answer	Mark
8(d)	<p>Award <b>1</b> mark for <b>naming</b> an appropriate training method for speed.</p> <ul style="list-style-type: none"> <li>Interval training</li> <li>Sprint training</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(1)</b>

Question number	Answer	Mark
8(e)	<p>Award <b>1</b> mark for <b>identifying</b> that this is an area of weakness, and a further <b>1</b> mark for each expansion linked to participant differences and needs, up to a maximum of <b>3</b> marks.</p> <ul style="list-style-type: none"> <li>Anthony test result shows this is an area of weakness (1) the Cooper 12-minute run tests aerobic endurance (1) and the long jump is explosive / uses sprinting / is short duration / does not involve running long distance (1)</li> </ul> <p>Accept any other appropriate answer.</p>	<b>(3)</b>

Question number	Indicative content	Mark
9	<p>Responses may include the following.</p> <ul style="list-style-type: none"> <li>• Self-confidence is <u>the belief</u> in oneself / <u>belief</u> that a desired behaviour can be performed.</li> </ul> <p><u>Methods to Increase Confidence</u></p> <ul style="list-style-type: none"> <li>• <u>Extrinsic motivation</u> from the coach</li> <li>• In the form of praise / positive reinforcement / rewards etc</li> <li>• Setting Goals / targets</li> <li>• That are realistic /achievable</li> <li>• Provides feelings of success / achievement</li> <li>• Training with a partner of <u>similar ability</u></li> <li>• Performer sees that they are as able</li> <li>• Learn and improve together</li> <li>• <u>Self-talk</u></li> <li>• Repeating positive messages to oneself</li> <li>• Such as "I can do this"</li> <li>• Creating a positive environment</li> <li>• Mixing with other players / allowed to make mistakes</li> <li>• Feel comfortable / supported</li> </ul> <p><u>Benefits of Increased Confidence</u></p> <ul style="list-style-type: none"> <li>• Improved performance</li> <li>• Improved effort</li> <li>• Increased participation levels</li> <li>• Performer feels less nervous</li> <li>• Increased <u>intrinsic motivation</u></li> <li>• Improved concentration</li> <li>• Increased self-belief</li> <li>• Positive attitude to the sport</li> <li>• Increased ability to overcome adversity</li> <li>• Increased enjoyment</li> </ul>	(9)
Level	Mark	Descriptor
Level 0	0	No rewardable material.



Level 1	1-3	<ul style="list-style-type: none"> <li>• Demonstrates isolated elements of knowledge and understanding.</li> <li>• Breaks the situation down into component parts and a few of the points made will be relevant to the context in the question.</li> <li>• Limited analysis which contains generic assertions rather than interrelationships or linkages.</li> </ul>
Level 2	4-6	<ul style="list-style-type: none"> <li>• Demonstrates some accurate knowledge and understanding.</li> <li>• Breaks the situation down into component parts and some of the points made will be relevant to the context in the question.</li> <li>• Displays a partially developed analysis which considers some interrelationships or linkages but not always sustained.</li> </ul>
Level 3	7-9	<ul style="list-style-type: none"> <li>• Demonstrates mostly accurate knowledge and understanding.</li> <li>• Breaks the situation down into component parts and most of the points made will be relevant to the context in the question.</li> <li>• Displays a developed and logical analysis which clearly considers interrelationships or linkages in a sustained manner.</li> </ul>





Llywodraeth Cynulliad Cymru  
Welsh Assembly Government

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with its registered office at 80 Strand, London, WC2R 0RL, United Kingdom

