

Cambridge Technicals Sport

Unit 2C: Physical preparation and readiness for sport and physical activity

Level 2 Cambridge Technical in Sport and Physical Activity
05885 - 05886

Mark Scheme for January 2023

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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Question	Answer	Marks	Guidance															
1	<p>Four marks for four from:</p> <ul style="list-style-type: none"> • (Improved mood/happiness/well-being) through releasing muscular and mental tension • (Skin looks healthier) due to increased blood flow to the surface • (Blood pressure lowers) due to improved function of the cardiovascular system • (Sleep) is improved to allow muscles time to repair • (Metabolism is boosted) to convert calories into energy 	4																
2	<p>Four marks for:</p> <table border="1"> <thead> <tr> <th>Musculoskeletal Effect</th> <th>Short term</th> <th>Long term</th> </tr> </thead> <tbody> <tr> <td>cartilage in joints grows thicker and strengthens the joint</td> <td></td> <td>✓</td> </tr> <tr> <td>lactic acid builds in the working muscles resulting in muscle soreness and fatigue</td> <td>✓</td> <td></td> </tr> <tr> <td>ligaments are able to hold more load as collagen fibres increase</td> <td></td> <td>✓</td> </tr> <tr> <td>muscle fibre tears mean muscle soreness and fatigue</td> <td>✓</td> <td></td> </tr> </tbody> </table>	Musculoskeletal Effect	Short term	Long term	cartilage in joints grows thicker and strengthens the joint		✓	lactic acid builds in the working muscles resulting in muscle soreness and fatigue	✓		ligaments are able to hold more load as collagen fibres increase		✓	muscle fibre tears mean muscle soreness and fatigue	✓		4	
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Question	Answer	Marks	Guidance
3	Two marks for two from: <ul style="list-style-type: none"> • Blood flow is directed away from inactive organs (e.g. gut) • Blood flow is directed away from inactive muscles • Blood flow is redirected to the working muscles • Blood flow remains constant to the brain 	2	Accept answer if embedded within an example Accept any relevant answer
4	Two marks for: <ul style="list-style-type: none"> • Activity completed without oxygen • Utilise glycogen as the fuel to create energy 	2	Accept mark if embedded within an example
5	Four marks for four from: <ul style="list-style-type: none"> • improve balance and co-ordination, therefore less likely to fall • improves flexibility and mobility, enabling everyday tasks to be completed • help maintain a healthy posture, reduces back problems later in life • delay the onset/prevent of osteoporosis, reduce the chances of breaking bones • delay the onset/prevent of osteoarthritis, reduce the chances of joint pain • sustain a healthy lifestyle into old age • improves metabolic rate, to control her body weight • reduces risk of chronic diseases, eg diabetes, stroke, heart disease • improves cardio-vascular health, eg lower blood pressure 	4	Accept answer if embedded within an example Accept any relevant answer

Question		Answer	Marks	Guidance						
6	(a)	<p>Three marks for:</p> <p>An increase in strength and size of the cardiac muscle increases the volume of blood that can be pumped by the heart to the working muscles</p> <p>Word bank</p> <table border="1"> <tbody> <tr> <td>blood</td> <td>brain</td> <td>carbon dioxide</td> </tr> <tr> <td>decrease</td> <td>increase</td> <td>working muscles</td> </tr> </tbody> </table>	blood	brain	carbon dioxide	decrease	increase	working muscles	3	
blood	brain	carbon dioxide								
decrease	increase	working muscles								
6	(b)	<p>One mark for:</p> <ul style="list-style-type: none"> False 	1							

Question	Answer	Marks	Guidance
7*	<p>Indicative content:</p> <p>Warm Up</p> <ol style="list-style-type: none"> 1. Pulse raising exercise <ul style="list-style-type: none"> • (E.g.)Jogging the lines of the court • 5-7 minutes 2. Mobility exercise <ul style="list-style-type: none"> • (E.g.)Arm circles to warm the shoulder joint • Focus on the areas that he will be using in a game • Should be full body 3. Dynamic movements <ul style="list-style-type: none"> • (E.g.)Cone carrying • Any activity that involves changes of direction/sharp movements to replicate runs he will make in the game 4. Stretching <ul style="list-style-type: none"> • (E.g) Tricep stretch • Should be full body 5. Skill rehearsal <ul style="list-style-type: none"> • Skill related drill that would be used (E.g.) Serving/net drop shot • Opportunity to practice the skills he is using in the game. <p>Greater Range of Movement and Improved Flexibility</p> <ol style="list-style-type: none"> 1. More synovial fluid is secreted in the joint <ul style="list-style-type: none"> • providing more lubrication 2. The viscosity of the synovial fluid is reduced <ul style="list-style-type: none"> • allow for friction free movement 3. Temperature of muscles increases <ul style="list-style-type: none"> • Increases the pliability • they can stretch more, so improving flexibility and mobility • reducing the risk of injury/strains 4. Tendons are stretched improves flexibility 	6	<p>MB3 – 5-6 marks</p> <ul style="list-style-type: none"> • Answer offers suitable suggestion of suitable warm up with full justification and considers all/most of the factors. • Improved flexibility and greater range of movement is clearly explained • Quality of written communication show few errors in grammar, punctuation and spelling <p>MB2 – 3-4 marks</p> <ul style="list-style-type: none"> • Answer offers suitable suggestion of warm up with justification but may not take all factors into consideration • Explanation of improved flexibility and greater range of movement has been attempted • Quality of written communication show occasional errors in grammar, punctuation and spelling <p>MB1 – 1-2 marks</p> <ul style="list-style-type: none"> • Answer offers suggestions of warm up activities but gives little or no justification • Answer may not take into consideration all of the factors of how flexibility and range of movement is improved. • Quality of written communication show errors in grammar, punctuation and spelling may be noticeable and intrusive

Question		Answer	Marks	Guidance
8		<p>Three marks for three from:</p> <ul style="list-style-type: none"> • help reduce the effects of depression/anxiety, relieves stress • <u>helps relax, aids</u> sense of calmness • forget what is causing the problems • improves mood/endorphins released • increases social circle/build support network • improves self-esteem • make them feel good about their body/control body weight • success from achieving goals/can lead to doing more activity 	3	<p>Accept answer if embedded within an example</p> <p>Accept any relevant answer</p>
9	(a)	<p>One mark for the example and one mark for description:</p> <ul style="list-style-type: none"> • (example) give a rules card out before starting a game • (description) for people with hearing difficulties, so they understand the rules of the game, for those who do not lip read • (example) sitting volleyball • (description) adapted for those people who have paralyses of the legs. • (example) use a ball with a bell in it • (description) for visually impaired people so they can hear where the ball is 	4	<p>One mark for the example and one mark for description</p> <p>Accept any relevant example and description</p> <p>2 marks maximum for examples alone</p>
	(b)	<p>Three marks for three from:</p> <ul style="list-style-type: none"> • swimming pools are always warm with moist air, so less chance of bringing an asthma attack on • will not need to worry about the cold dry air bringing on an asthma attack in outdoor sports in winter • swimming strengthens the respiratory muscles • increase number of alveoli, improving efficiency of gaseous exchange • increases respiratory volumes e.g. total lung volume • reduces the effects of asthma 	3	<p>Accept answer if embedded within an example</p> <p>Accept any relevant answer</p>

Question		Answer	Marks	Guidance
10		Two marks for: <ul style="list-style-type: none">• Head injury/concussion• Any severe acute injury	2	Accept if embedded within an example
11		Two marks for: <ul style="list-style-type: none">• lead to tiredness/fatigue• can lead to poor/incorrect technique• can lead to poor decision making• can lead to poor co-ordination	2	Accept if embedded within an example

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