

## **Cambridge Technicals**

### **Sport**

#### **Unit 2: Physical preparation and readiness for sport and physical activity**

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

### **Mark Scheme for January 2018**

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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><b>Four marks for four from:</b></p> <ol style="list-style-type: none"> <li>1. (Improved mood/happiness/well-being) through releasing muscular and mental tension</li> <li>2. (Skin looks healthier) due to increased blood flow to the surface</li> <li>3. (Blood pressure lowers) due to improved function of the cardiovascular system</li> <li>4. (Sleep) is improved to allow muscles time to repair</li> <li>5. (Metabolism is boosted) to convert calories into energy</li> </ol>	4	
2	<p><b>Two marks for two from:</b></p> <ol style="list-style-type: none"> <li>1. Blood flow is directed away from the inactive organs (e.g. gut) or inactive muscles or vasoconstriction (of blood vessels) restricts blood flow to (inactive) organs</li> <li>2. Blood flow is redirected to the (<u>working</u>) muscles or vasodilation (of blood vessels) increases blood flow to (working) muscles</li> <li>3. Blood flow to the brain remains constant</li> </ol>	2	
3	<p><b>Four marks for four from:</b></p> <ol style="list-style-type: none"> <li>1. Breathing (rate) increases, which increases the uptake of oxygen</li> <li>2. Respiratory muscles work harder</li> <li>3. Depth of breathing increases</li> <li>4. Increases the (volume of) oxygen / air into the lungs</li> <li>5. Enabling more oxygen to be supplied to the (working) muscles</li> <li>6. So the runner can keep going/running or can run at a faster pace whilst withstanding fatigue</li> </ol>	4	

Question	Answer	Marks	Guidance
4*	<p><b>Indicative content:</b></p> <ol style="list-style-type: none"> <li>1. an increase in strength and size of the cardiac muscle               <ul style="list-style-type: none"> <li>• this increases the volume of blood that can be pumped by the heart (to working muscles)</li> <li>• increases cardiac out put</li> <li>• decreases resting heart rate</li> </ul> </li> <li>2. the number of red blood cells in the blood increases               <ul style="list-style-type: none"> <li>• allowing more oxygen to be transported around the body</li> <li>• able to sustain physical activity/play the game for longer periods of time</li> </ul> </li> <li>3. an increased number of capillaries in the muscles               <ul style="list-style-type: none"> <li>• allows more blood to reach working muscles</li> </ul> </li> <li>4. the cardiac system becomes more efficient, lowering blood pressure               <ul style="list-style-type: none"> <li>• reducing the risk of cardiovascular disease</li> </ul> </li> <li>5. increased size and strength of the respiratory muscles               <ul style="list-style-type: none"> <li>• increases respiratory volumes</li> <li>• allowing more oxygen to be diffused into the blood</li> <li>• more waste products to be removed from the body</li> </ul> </li> <li>6. increased number of alveoli               <ul style="list-style-type: none"> <li>• improves the efficiency of gaseous exchange</li> <li>• creates a steeper diffusion gradient</li> </ul> </li> <li>7. sustain a healthy lifestyle into old age               <ul style="list-style-type: none"> <li>• be able to do daily tasks without getting out of breath</li> </ul> </li> </ol>	6	<div style="border: 1px solid black; padding: 5px;"> <p>MB3 – 5-6 marks</p> <ul style="list-style-type: none"> <li>• Answer offers suitable suggestion with full justification and considers all/most of the factors.</li> <li>• Quality of written communication show few errors in grammar, punctuation and spelling</li> </ul> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>MB2 – 3-4 marks</p> <ul style="list-style-type: none"> <li>• Answer offers suitable suggestion with justification but may not take all factors into consideration</li> <li>• Quality of written communication show occasional errors in grammar, punctuation and spelling</li> </ul> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>MB1 – 1-2 marks</p> <ul style="list-style-type: none"> <li>• Answer offers suggestions of activities but gives little or no justification.</li> <li>• Answer may not take into consideration all of the factors.</li> <li>• Quality of written communication show errors in grammar, punctuation and spelling may be noticeable and intrusive</li> </ul> </div>
5	<p><b>Two marks for two from:</b></p> <ol style="list-style-type: none"> <li>1. Bones become stronger</li> <li>2. Bones increase in size and density</li> <li>3. Reduces the risk of osteoporosis/disease</li> </ol>	2	

Question		Answer	Marks	Guidance
6		<p><b>Two marks for two from:</b></p> <ol style="list-style-type: none"> <li>1. Increases the range of movement (at a joint)</li> <li>2. Ensures lubrication (in joints)</li> <li>3. Increases flow of nutrients (to bones)</li> <li>4. Reduces the risk of osteoarthritis/disease</li> </ol>	2	
7	(a)	<p><b>Four marks for four from:</b></p> <ol style="list-style-type: none"> <li>1. (Increase body temperature) to make muscles more pliable</li> <li>2. (Increase heart rate) to deliver more oxygen to the muscles.</li> <li>3. (Increase flexibility) in muscles and joints to increase range of movement</li> <li>4. (Increase blood flow) to deliver oxygen and nutrients and remove waste products</li> <li>5. (Increase speed of muscle contraction) improve power in the game</li> <li>6. (Mentally prepares the performer) to focus on the game</li> </ol>	4	
7	(b)	<p><b>Two marks for two from:</b></p> <ol style="list-style-type: none"> <li>1. Pulse lowering (eg. brisk walk around the court)</li> <li>2. Stretching the muscles used within the game (eg. Triceps stretch)</li> </ol>	2	<p>Accept:</p> <ul style="list-style-type: none"> <li>• Any suitable practical activity for each mark</li> </ul>

Question	Answer	Marks	Guidance
8	<p><b>Six marks for six from:</b></p> <ol style="list-style-type: none"> <li>1. Enjoyment from doing an activity</li> <li>2. Increase her social circles</li> <li>3. Provide her with the opportunity to meet new people</li> <li>4. Prevents loneliness</li> <li>5. Gets her out of the house (to go to the table tennis club)</li> <li>6. Improve her self-confidence/self-esteem</li> <li>7. Improve her mental health/mood</li> <li>8. Helps to avoid depression</li> <li>9. Help her control emotions</li> <li>10. Help her stay independent into later life</li> </ol>	6	
9	<p><b>Four marks for four from:</b></p> <ol style="list-style-type: none"> <li>1. She will develop teamwork skills through being part of a team</li> <li>2. She will improve her communication skills when asking for the ball</li> <li>3. She will develop leadership skills through working with others (e.g. being a captain)</li> <li>4. She will develop empathy/understanding for others by playing with different teammates/people</li> <li>5. She will develop an improved self-esteem/self-confidence from being part of a team (e.g. doing well and winning matches)</li> <li>6. She will make friends through having something in common and trying to achieve together</li> <li>7. She will learn to respect others such as officials, coaches, opposition players</li> <li>8. She will learn about how people take on different roles within a team</li> </ol>	4	<p>Accept:</p> <ul style="list-style-type: none"> <li>• any suitable example of the skill developed</li> </ul>

Question	Answer	Marks	Guidance
10	<p><b>Four marks for four from:</b></p> <ol style="list-style-type: none"><li>1. participant preparation (e.g. training, warm up and cool down, level of fitness) (e.g.) a netballer not warming up may pull a muscle</li><li>2. individual factors (e.g. gender, age, nutrition, sleep patterns) (e.g.) a young persons bones are susceptible to fractures in contact sports</li><li>3. psychological factors (e.g. levels of aggression, motivation and anxiety) (e.g.) a footballer who is losing may show aggression with a poor tackle</li><li>4. posture (e.g.) poor posture when lifting weights may cause a lower back injury.</li></ol>	4	Description can be awarded if embedded within the practical example

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