

## PE. Paper 1: Physical factors affecting performance checklist

<u>Specification point</u>	<u>Topic area</u>	<u>You must know / be able to</u>	<u>R</u>	<u>A</u>	<u>G</u>
<b>1.1.a. The structure and function of the skeletal system</b>	<ul style="list-style-type: none"> <li>Location of major bones</li> </ul>	<ul style="list-style-type: none"> <li>State the name and location of the following bones (cranium, vertebrae, ribs, sternum, clavicle, scapula, pelvis, humerus, ulna, radius, carpals, metacarpals, phalanges, femur, patella, tibia, fibula, tarsals, metatarsals.)</li> </ul>			
	<ul style="list-style-type: none"> <li>Functions of the skeleton</li> </ul>	<ul style="list-style-type: none"> <li>Describe the functions of the skeleton and provide examples of how it is used in sports (support, posture, protection, movement, blood cell production, storage of minerals.)</li> </ul>			
	<ul style="list-style-type: none"> <li>Types of synovial joints</li> </ul>	<ul style="list-style-type: none"> <li>Define what a synovial joint is</li> <li>State the bones which articulate to make the two hinge joints (knee and elbow)</li> <li>State the bones which articulate to make the two ball and socket joints (hip and shoulder)</li> </ul>			
	<ul style="list-style-type: none"> <li>Types of movements performed at synovial joints</li> </ul>	<ul style="list-style-type: none"> <li>Describe the types of movements at a hinge joint (flexion and extension) and be able to use a sporting example of this movement</li> <li>Describe the types of movements at a ball and socket joint (flexion, extension, rotation, abduction, adduction, circumduction.) and be able to use a sporting example of this movement</li> </ul>			
	<ul style="list-style-type: none"> <li>Other components of joints</li> </ul>	<ul style="list-style-type: none"> <li>Describe the roles of ligaments, cartilage, synovial fluid and tendons</li> </ul>			

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<b>1.1.b. The structure and function of the muscular system</b>	<ul style="list-style-type: none"> <li>Location of major muscle groups</li> </ul>	<ul style="list-style-type: none"> <li>State the name and location of the following muscle groups (deltoid, trapezius, latissimus dorsi, pectorals, biceps, triceps, abdominals, quadriceps, hamstrings, gluteal, gastrocnemius.) and be able to use them in a sporting example</li> </ul>			
	<ul style="list-style-type: none"> <li>The roles of muscles in movement</li> </ul>	<ul style="list-style-type: none"> <li>The definition of antagonistic muscle pairs</li> <li>Use an example of muscles working in pairs to complete a skill</li> <li>The definition and role of the following (agonist, antagonist and fixator)</li> </ul>			

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<b>1.1.d. The cardiovascular and respiratory systems</b>	<ul style="list-style-type: none"> <li>Structure of the cardiovascular system</li> </ul>	<ul style="list-style-type: none"> <li>Identify the location of the different structures of the heart (atria: right and left atrium, ventricles: left and right, bicuspid, tricuspid and semilunar valves, septum: separates left and right side of heart, aorta pulmonary artery, vena cava, pulmonary vein)</li> <li>Describe the pathway oxygenated and deoxygenated blood takes through the heart</li> <li>Describe the structures of the different blood vessels: arteries, veins and capillaries</li> <li>Define heart rate (HR/BPM), Stroke volume (SV), and cardiac output (Q)</li> </ul>			
	<ul style="list-style-type: none"> <li>Function of the cardiovascular system</li> </ul>	<ul style="list-style-type: none"> <li>Explain blood passes through the heart twice as it is a double circulatory system (systemic: heart/body) and (pulmonary: lungs/heart)</li> <li>Describe functions of the 3 blood vessels</li> <li>Explain the role of blood (red blood cells, white blood cells)</li> </ul>			

	<ul style="list-style-type: none"> <li>• Structure of the respiratory system</li> </ul>	<ul style="list-style-type: none"> <li>• Describe the pathway air takes through the respiratory system (mouth, nose, trachea, bronchi, bronchiole, alveoli)</li> </ul>			
	<ul style="list-style-type: none"> <li>• Function of the respiratory system</li> </ul>	<ul style="list-style-type: none"> <li>• Explain the role of respiratory muscles when breathing diaphragm, intercostals and the effect they have on the rib cage and partial pressures inside the lungs</li> <li>• Define breathing rate, tidal volume and minute ventilation</li> </ul>			
	<ul style="list-style-type: none"> <li>• Aerobic and anaerobic exercise</li> </ul>	<ul style="list-style-type: none"> <li>• Define aerobic and anaerobic exercise</li> <li>• Provide practical examples of aerobic and anaerobic activities in relation to intensity and duration.</li> </ul>			