

# Physical Education

Advanced GCE A2 7875

Advanced Subsidiary GCE AS 3875

## Mark Schemes for the Units

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**June 2008**

**3875/7875/MS/08J**

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**Advanced GCE Physical Education (7875)**

**Advanced Subsidiary GCE Physical Education (3875)**

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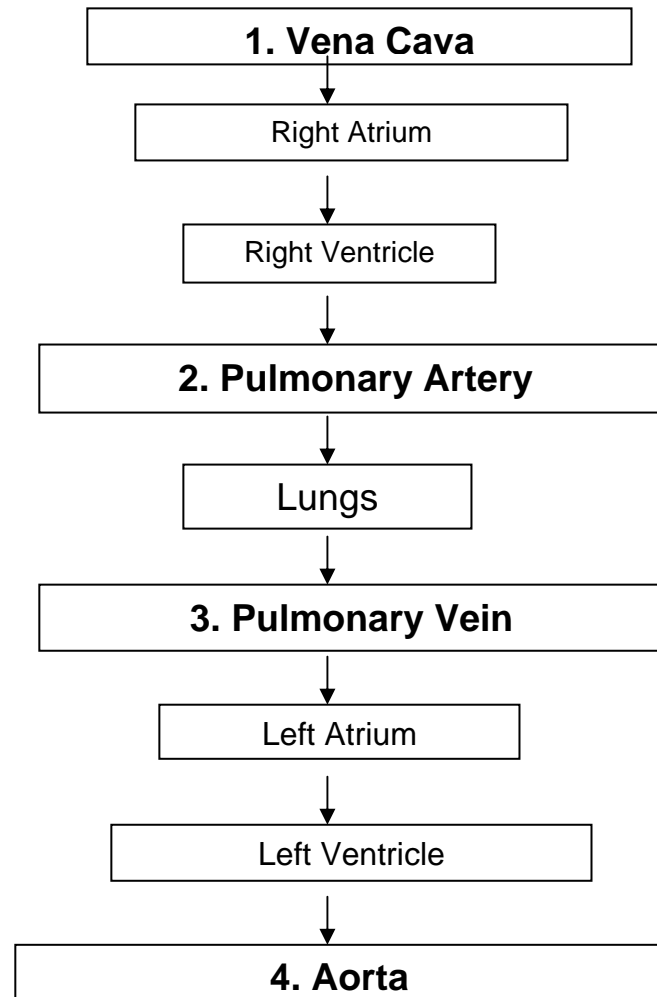
## 2562 The Application of Physiological and Psychological Knowledge to Improve Performance

Question			Expected Answer	Mark
			<b>Application of Anatomical and Physiological Knowledge to Improve Performance</b>	
1	(a)		<b>Fig 1 shows an athlete putting a shot.</b>	
		(i)	<b>Apply your anatomical and physical knowledge to complete the joint analysis table below.</b>	<b>[4]</b>
<b>Joint type</b> <b>Articulating bones</b> <b>Movement</b> <b>Agonist</b> <b>Antagonist</b>			1. Ball and socket 2. Scapula and Humerus <b>Abduction</b> 3. Deltoid 4. Latissimus Dorsi/ Pectoralis Major - Full anatomical name required	
			<b>Figure 2 shows a gymnast holding a crucifix position on the rings.</b>	
		(ii)	<b>What type of contraction is occurring in the shoulder muscles to hold the position in fig 2?</b>  1 Isometric	<b>[1]</b>
		(iii)	<b>What movement is occurring in the ankle joint of the performer in fig 2?</b>  1 Plantarflexion	<b>[1]</b>

Question			Expected Answer	
	(b)		<b>Movement can be described as linear, angular or general motion.</b>	
	(i)		<p><b>Use a practical example to describe how linear motion can be produced.</b></p> <p>1 A force is applied through the centre of mass/gravity of the object.</p> <p>2A golfer/footballer must hit the ball through its centre of mass/gravity to ensure it travels in a straight line.</p>	<b>[2]</b>
	(ii)		<p><b>Using a practical example from PE or sport, explain how the position of the centre of mass enables a performer to resist motion or external forces.</b></p> <p><b>Sub max of 2 for explanation.</b></p> <p>A performer can resist motion or external forces:</p> <p>1 if the line of gravity lies within the base of support</p> <p>2 a wide base of support allows more movement of line of gravity within it</p> <p>3 if the position of the centre of mass is low to the ground</p> <p>1 mark for a suitable example: The example <b>must</b> include a reference to the resistance of force or motion</p> <p>4 a rugby player uses a wider base of support/stance to lower his centre of mass/gravity to ensure he stays on his feet in a tackle.</p>	<b>[3]</b>

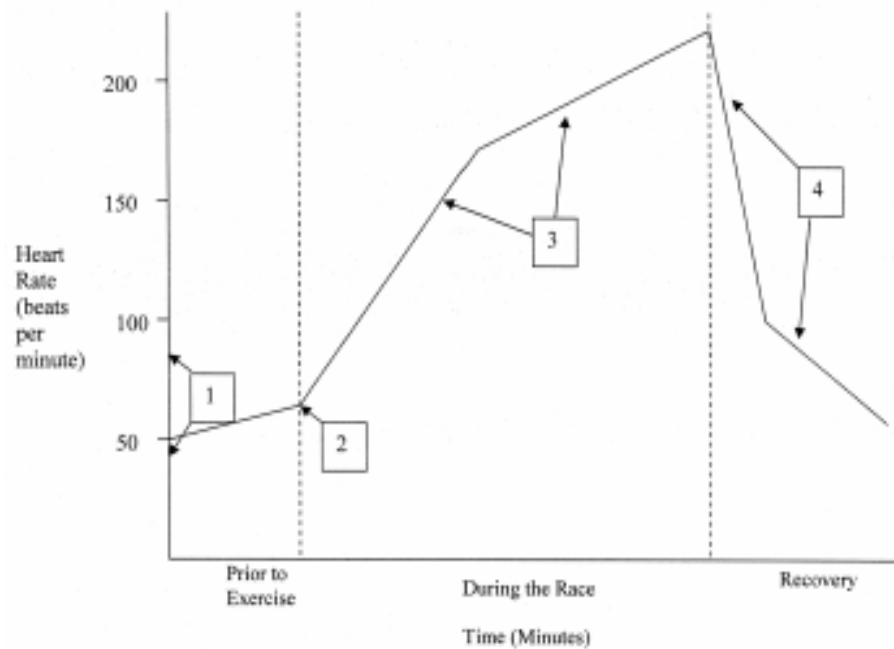
(c)

Complete the flow diagram outlining the flow of blood through the pulmonary circulatory system during exercise.



[4]

Question		Expected Answer	Mark
2	(a)	Fig 3 shows a sprinter involved in a 400 metre race.	
	(i)	<p>Sketch a graph to show the heart rate changes of the sprinter in fig 3 in the following phases of a race.</p> <ul style="list-style-type: none"><li>• Prior to exercise</li><li>• During the race</li><li>• Recovery period</li></ul>	



Question			Expected Answer	Mark
			1 Resting heart rate between 25 – 80 bpm 2 Anticipatory Rise up to 100 bpm 3 Sharp Rise to range 140 -180 followed by more gradual increase to range 190-250bpm 4 Fast decrease in heart rate followed by more gradual decrease to resting levels.	<b>[4]</b>
	<b>(b)</b>		<b>An increase in heart rate during exercise is a result of intrinsic, neural and hormonal responses.</b> <b>Describe the hormonal factors which affect heart rate during exercise.</b>  1 Adrenaline/Epinephrine/Noradrenaline is released 2 From the adrenal gland 3 S/A node is stimulated (by adrenaline)	<b>[2]</b>



Question		Expected Answer	Mark
	(c)	<p><b>During exercise minute ventilation increases. Identify the neural factors which influence the depth of inspiration of the performer.</b></p> <ol style="list-style-type: none"> <li>1 Chemoreceptors detect changes in acidity/ pH</li> <li>2 Baroreceptors detect changes in blood pressure/stretch receptors detect change in pressure on the blood vessel wall</li> <li>3 Proprioceptors detect movement in the muscles/tendons/joints</li> <li>4 This information is sent to the Inspiratory Centre/Respiratory Control Centre/RCC (in the medulla oblongata)</li> <li>5 Information is sent via the phrenic nerves</li> <li>6 Diaphragm is stimulated</li> <li>7 Information is sent via the intercostal nerves</li> <li>8 External intercostals muscles are stimulated</li> <li>9 Other muscles are stimulated/ sternocleidomastoid, scalenes and pectoralis minor</li> </ol>	<b>[4]</b>

Question		Expected Answer	Mark
	(d)	<b>During exercise a performer requires large amounts of oxygen to be transported to the muscles.</b>	
	(i)	<b>Explain how oxygen is transported in the blood.</b>  1 Oxygen combines with haemoglobin 2 To create oxyhaemoglobin/HbO <sub>2</sub> 3 Some oxygen is carried/dissolved/in the plasma	<b>[2]</b>
	(ii)	<b>Explain the process of Carbon Dioxide diffusion at the muscle tissue.</b>  1 Gas diffuses from high to low pressure/concentration. 2 Partial pressure/concentration of carbon dioxide/ PPCO <sub>2</sub> in the muscle cell is high (increases during exercise). 3 Partial pressure/concentration of carbon dioxide/ PPCO <sub>2</sub> in the blood is low (stays the same during exercise). 4 Creating (increasing) a diffusion/concentration gradient. 5 CO <sub>2</sub> diffuses across into the blood (more readily).	<b>[3]</b>
			<b>[Total marks: 15]</b>

Question		Expected Answer	Mark
		<b>Acquiring and Performing Movement Skills</b>	
3	(a)	<p><b>Movement skills can be classified along the organisation continuum. Use practical examples to explain both high and low organisation.</b></p> <p><b>4 marks in total</b></p> <p>(High organisation)</p> <p>1 Closely linked sub-routines/skill not easily broken down into parts/skill best practiced/learned as a whole.</p> <p>2 Suitable examples e.g. golf drive/cycling/cartwheel/running.</p> <p>Example must match <u>correct</u> explanation to gain mark.</p> <p>(Low organisation)</p> <p>3 Sub-routines can be performed separately/skill is easily broken down into parts/can be practised in parts.</p> <p>4 Suitable examples e.g. swimming stroke split into BLABT/triple jump/lay up shot/ gymnastics routine/tennis serve.</p> <p>Example must match <u>correct</u> explanation to gain mark.</p>	<b>[4]</b>

Question		Expected Answer	Mark
(b)	(i)	<p><b>Use the example of triple jump to explain how movement skills can be learned and practised using the progressive part method.</b></p> <p><b>3 marks in total</b>  <b>Must use example of triple jump</b>  <b>Sub max 1 if no example</b></p> <ol style="list-style-type: none"> <li>1 First sub-routine of run taught/practiced/sub-routine A, the run, taught first.</li> <li>2 Second sub-routine of hop taught/practiced/sub-routine B, the hop, taught next.</li> <li>3 The run <b>and</b> hop are put together/sub-routines A <b>and</b> B, the run <b>and</b> hop, are put together.</li> <li>4 Third sub-routine of skip is taught/practised/sub-routine C, the skip, taught next.</li> <li>5 The run, hop, skip are <b>all</b> put together/sub-routines A, the run, B, the hop, C the skip are put together.</li> <li>6 Final sub-routine of the jump taught/practiced/sub-routine D, the jump, taught next.</li> <li>7 The run, hop, skip and jump are <b>all</b> put together/sub-routines A, the run, B, the hop, C, the skip, D, the jump are put together/the triple jump is performed as a whole skill.</li> </ol> <p>Reference must be made to triple jump within each part of their answer.</p> <p>Reverse chaining is acceptable ie. progressions can begin with jump and work backwards</p>	<b>[3]</b>

Question		Expected Answer	Mark
	(ii)	<p><b>Having practised a movement skill, performers can benefit from feedback. Use a practical example to describe knowledge of performance feedback.</b></p> <p><b>2 marks in total</b> <b>Sub max 1 if no example</b></p> <ol style="list-style-type: none"> <li>1 Information on quality of technique/performance/movement.</li> <li>2 Can be internal/intrinsic/kinaesthetic/proprioceptive.</li> <li>3 Can come from coach/teacher/external sources/extrinsic/video of self.</li> </ol> <p>Emphasis on performance not results / not just positive and negative</p>	<b>[2]</b>
	(c)	<p><b>Use a practical example to explain the attention, retention and motor reproduction stages of the model in fig 4.</b></p> <p><b>3 marks in total</b> <b>Sub max 1 if no example</b></p> <p>(Attention)</p> <ol style="list-style-type: none"> <li>1 Focus given to model/cueing into relevant parts of demo/attention greatest if demo is by a rolemodel/attractive/competent/attention span of observer is significant.</li> </ol> <p>Emphasis is on what makes the observer watch the model demonstrating NOT just the observer simply watching the demonstration</p>	<b>[3]</b>

Question			Expected Answer	Mark
			<p>(Retention)</p> <p>2 Allows observer to use mental picture of demo/skill can be visualised/mentally rehearsed/demo must be relevant to observer/repeated demos increases retention/symbolic coding can be used with demo. Emphasis is on what assists the observer in retaining information from the demonstration that they have just seen</p> <p>(Motor reproduction)</p> <p>2 Observer must be physically capable of copying demo/demos must relate to competence of observer. Emphasis must be on the <b>physical capability</b> of doing the skill.</p>	
	(d)	(i)	<p><b>Learners and performers movement skills can often be improved by the use of guidance. What is mechanical guidance?</b></p> <p><b>1 mark in total</b></p> <p>1 Use of apparatus/equipment to shape movement/support/aid performer. Examples are not required but may be used in the answer</p>	[1]
		(ii)	<p><b>Use a practical example to explain manual guidance</b></p> <p><b>2 marks in total</b></p> <p><b>Sub max 1 if no example</b></p> <p>1 Physical manipulation of body/'hands on' help from teacher/coach. 2 Suitable example e.g. coach supports gymnasts legs in handstand. Must have explanation and correct example for maximum marks.</p>	[2]

Question		Expected Answer	Mark
4	(a)	<p><b>Identify two key characteristics of ability and describe how a performer's abilities are used in athletics or swimming.</b></p> <p><b>3 marks in total</b></p> <p><b>Identify</b> <b>Sub max 2 marks</b></p> <ol style="list-style-type: none"> <li>1 Innate/genetic/born with.</li> <li>2 Stable/enduring</li> <li>3 Underlying/foundation of skill</li> </ol> <p><b>Ability in athletics or swimming</b> <b>Sub max 1 mark</b></p> <p>3 E.g. athletic can sprint because they have ability of speed/swimmer good at starting because of fast ability of reaction time.</p> <p>Example must be clearly linked to athletics or swimming and describe HOW ability is used.</p>	<b>[3]</b>
	(b)	<p><b>Memory plays a part in the learning and performance of movement skills.</b> <b>Identify three characteristics of the short term memory</b></p> <p><b>3 marks in total</b></p> <ol style="list-style-type: none"> <li>1 Limited capacity/can hold 5-9 items.</li> <li>2 Can hold information for 30 seconds.</li> <li>3 Information can be chunked together.</li> <li>4 The working/workspace memory.</li> </ol>	

Question			Expected Answer	Mark
			5 Compares immediate information with that stored in the LTM/relevant information is encoded. 6 Initiates movement. 7 Unimportant information is lost. 8 Rehearsal/practice/visualisation helps retain information.	<b>[3]</b>
	<b>(c)</b>		<b>A performer's motivation can affect the quality of their performance.</b>	<b>[1]</b>
		<b>(i)</b>	<b>Define motivation</b>  <b>1 mark in total</b>  1 The (psychological) drive/need/desire to succeed/learn/performance/improve.	
		<b>(ii)</b>	<b>Explain what is meant by extrinsic motivation.</b>  <b>1 mark in total</b>  (Extrinsic)  1 Motivation/drive from external sources.  Emphasis needs to be on the source of motivation.	<b>[1]</b>



Question			Expected Answer	Mark
		(iii)	<p><b>Use a practical example to explain what is meant by intrinsic motivation.</b></p> <p>(Intrinsic)</p> <p>1 Motivation from within oneself/internal drive.  2 Suitable example  e.g. desire to learn a new skill in football as a personal challenge/completing a difficult gymnastics more for personal pride/enjoyment/self satisfaction.</p>	[2]
		(d)	<p><b>Learning can be described as passing through three phases.</b></p>	
		(i)	<p><b>Use a practical example to describe three characteristics of the autonomous phase of learning.</b></p> <p><b>3 marks in total</b>  <b>Sub max 2 if no example</b></p> <p>1 Movements are performed automatically/habitual/over learned/grooved.  2 Performer can focus on environmental information/tactics or strategy.  3 Performer is consistent/ error free  4 Movements are fluent/smooth/efficient.  5 Performer may need to refer back to previous/associative stage.  6 Performer can use kinaesthetic/ internal/ intrinsic feedback to adjust skill</p>	[3]

Question			Expected Answer	Mark
		(ii)	<p><b>What are the advantages of using mental practice/rehearsal for a performer in the autonomous phase of learning?</b></p> <p><b>2 marks in total</b></p> <p>1 Focus of practice can be on tactics/strategy/sequencing.            2 Performer can picture the correct technique.            3 Kinaesthetic/internal/intrinsic feedback can be experienced during mental practice.            4 Schema is enhanced.            5 Can act as a physiological warm up.            6 Can reduce/control arousal levels</p>	<b>[2]</b>

## 2563 Contemporary Studies In Physical Education

Question	Expected Answer	Mark												
1 (a)	<p>Identify a different relationship/role other than instructor, trainer or educator that a coach might adopt in each of the following situations: 3 marks in total</p> <table border="1"> <tr> <td colspan="2"><b>(While organising a sports tour)</b></td> </tr> <tr> <td>1</td> <td>publicity agent / promoter / manager / coordinator / administrator</td> </tr> <tr> <td colspan="2"><b>(When performing regularly arrives late for training)</b></td> </tr> <tr> <td>2</td> <td>disciplinarian / social worker / counsellor / mentor / friend</td> </tr> <tr> <td colspan="2"><b>(When a performer has been playing badly and has lost both interest and confidence)</b></td> </tr> <tr> <td>3</td> <td>motivator / social worker / counsellor / mentor / adviser / friend / role model</td> </tr> </table>	<b>(While organising a sports tour)</b>		1	publicity agent / promoter / manager / coordinator / administrator	<b>(When performing regularly arrives late for training)</b>		2	disciplinarian / social worker / counsellor / mentor / friend	<b>(When a performer has been playing badly and has lost both interest and confidence)</b>		3	motivator / social worker / counsellor / mentor / adviser / friend / role model	[3]
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1 (b) (i)	<p>Three stages of the performance pyramid: 3 marks in total</p> <table border="1"> <tr> <td>1</td> <td>Performance</td> </tr> <tr> <td>2</td> <td>Participation</td> </tr> <tr> <td>3</td> <td>Foundation</td> </tr> </table>	1	Performance	2	Participation	3	Foundation	[3]
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3	Foundation							

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1(b) (ii)	<p data-bbox="297 236 1615 268"><b>Explain factors that might affect participation in regular sport or physical recreation in the UK.</b></p> <p data-bbox="297 308 730 339"><b>6 marks: Levels mark scheme:</b></p> <table border="1" data-bbox="297 371 1200 962"> <thead> <tr> <th colspan="2" data-bbox="297 371 1200 403">L3: 5-6 marks</th> </tr> </thead> <tbody> <tr> <td data-bbox="297 408 398 472">6</td> <td data-bbox="409 408 1200 472">Excellent / accurate knowledge / sound understanding / explanations / thorough / very good coverage of issue</td> </tr> <tr> <td data-bbox="297 477 398 541">5</td> <td data-bbox="409 477 1200 541">Very good / accurate knowledge / sound understanding / less well explained / good coverage of issue</td> </tr> <tr> <th colspan="2" data-bbox="297 545 1200 577">L2 : 3-4 marks</th> </tr> <tr> <td data-bbox="297 582 398 614">4</td> <td data-bbox="409 582 1200 614">Good / some points explained well</td> </tr> <tr> <td data-bbox="297 619 398 683">3</td> <td data-bbox="409 619 1200 683">Satisfactory / some explanation but overall brief / lacks depth / narrow focus</td> </tr> <tr> <th colspan="2" data-bbox="297 687 1200 719">L1 : 1-2 marks</th> </tr> <tr> <td data-bbox="297 724 398 788">2</td> <td data-bbox="409 724 1200 788">Weak / perhaps brief / limited explanation / simplistic / possibly bullets</td> </tr> <tr> <td data-bbox="297 793 398 888">1</td> <td data-bbox="409 793 1200 888">Very weak / perhaps brief / very limited explanation / simplistic / possibly bullets / little knowledge or understanding of issue</td> </tr> <tr> <td data-bbox="297 893 398 925"></td> <td data-bbox="409 893 1200 925"></td> </tr> <tr> <td data-bbox="297 930 398 962">0</td> <td data-bbox="409 930 1200 962">Answer has no merit – level 1 not achieved</td> </tr> </tbody> </table>	L3: 5-6 marks		6	Excellent / accurate knowledge / sound understanding / explanations / thorough / very good coverage of issue	5	Very good / accurate knowledge / sound understanding / less well explained / good coverage of issue	L2 : 3-4 marks		4	Good / some points explained well	3	Satisfactory / some explanation but overall brief / lacks depth / narrow focus	L1 : 1-2 marks		2	Weak / perhaps brief / limited explanation / simplistic / possibly bullets	1	Very weak / perhaps brief / very limited explanation / simplistic / possibly bullets / little knowledge or understanding of issue			0	Answer has no merit – level 1 not achieved	<p data-bbox="1944 954 1989 986"><b>[6]</b></p>
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<b>Indicative content:</b>	
time	lack of time / too much work
funding	low income / unable to afford participation or afford equipment etc / unemployment
ability / skill / fitness	low ability or skill or fitness / not good enough / poor health
transport / access	transport / access to ...(e.g. mountains) / access to or from rural areas
provision / location	lack of availability of: facilities / equipment / activities / clubs / classes / coaching / where you live
choice	choose not to / do other things / unaware of health benefits
esteem	esteem or confidence / intimidation
stereotyping	stereotyping / myths / self-fulfilling prophesy (when a minority group accepts society's view or conforms to stereotype)
media / publicity	power of media to influence participation / unaware of opportunities
family / friends / role models	family interests and influence / encouragement from early age / influence or friends or peers / role models
school	school experience / e.g. if at a sports college or independent school / time devoted to sport and PE in school
discrimination	discrimination / unfair treatment / positive or negative attitudes or beliefs linked to ...
minority groups	<ul style="list-style-type: none"> <li>• Gender / provision of suitable activities / suitable timings / lack of crèche facilities</li> <li>• Disability / specialist facilities</li> <li>• Race or religion / some groups have negative attitudes towards sport / e.g. Asian women may not take part due to sub-cultural values or personal reluctance</li> <li>• Age / young or elderly / bad experience at school so put off for life / lack of suitable instructors or coaches</li> <li>• Class / (real or perceived) class constraints leading to limited access / e.g. access to a polo club or a private tennis or golf club</li> </ul>

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1(c) (i)	<p><b>What is meant by each of the following?</b></p> <p><b>3 marks total: sub max one from each section.</b></p> <table border="1" data-bbox="309 373 1180 858"> <tr> <td colspan="2" data-bbox="309 373 1180 405"><b>(initial elitism)</b></td> </tr> <tr> <td data-bbox="309 405 353 480">1</td> <td data-bbox="353 405 1180 480">Starting off by selecting or funding or concentrating on the best</td> </tr> <tr> <td colspan="2" data-bbox="309 480 1180 512"> </td> </tr> <tr> <td colspan="2" data-bbox="309 512 1180 544"><b>(role models)</b></td> </tr> <tr> <td data-bbox="309 544 353 651">2</td> <td data-bbox="353 544 1180 651">Someone who inspires or motivates or encourages others / heroes or idols or icons / those others look up to or want to be like or aspire to</td> </tr> <tr> <td colspan="2" data-bbox="309 651 1180 683"> </td> </tr> <tr> <td colspan="2" data-bbox="309 683 1180 715"><b>(appeasement)</b></td> </tr> <tr> <td data-bbox="309 715 353 858">3</td> <td data-bbox="353 715 1180 858">to calm or pacify or make people happy / to satisfy or please the people / feel good factor or sense of well being (for people of nation) / policy to achieve peace or reduce conflict or divert attention from (harsh) reality</td> </tr> </table>	<b>(initial elitism)</b>		1	Starting off by selecting or funding or concentrating on the best			<b>(role models)</b>		2	Someone who inspires or motivates or encourages others / heroes or idols or icons / those others look up to or want to be like or aspire to			<b>(appeasement)</b>		3	to calm or pacify or make people happy / to satisfy or please the people / feel good factor or sense of well being (for people of nation) / policy to achieve peace or reduce conflict or divert attention from (harsh) reality	<p>[3]</p>
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1(c) (ii)	<p><b>Outline the effects of pre-colonialism and colonialism on the life and physical activities of tribal cultures such as Samoa.</b></p> <p><b>6 marks total: sub max 4 from one section.</b></p> <table border="1" data-bbox="607 443 1509 1062"> <thead> <tr> <th colspan="2" data-bbox="607 443 1509 480"><b>Effects of Pre-colonialism</b></th> </tr> </thead> <tbody> <tr> <td data-bbox="607 485 869 544">1 (natural)</td> <td data-bbox="875 485 1509 544">natural / simple / they were in/or suited natural environment / they lived a simple life</td> </tr> <tr> <td data-bbox="607 549 869 683">2 (functional)</td> <td data-bbox="875 549 1509 683">functional or useful or served a purpose / accept suitable example with explanation e.g. wrestling to choose chief or erotic dancing to inspire gods to increase fertility</td> </tr> <tr> <td data-bbox="607 687 869 786">3 (survival)</td> <td data-bbox="875 687 1509 786">(linked with) survival / helped communities to continue to exist / accept suitable example with explanation e.g. hunting for food</td> </tr> <tr> <td data-bbox="607 791 869 850">4 (ceremonial)</td> <td data-bbox="875 791 1509 850">ceremonial / on special occasions / celebrations e.g. births, marriages</td> </tr> <tr> <td data-bbox="607 855 869 914">5 (ritual)</td> <td data-bbox="875 855 1509 914">ritual / religious / supernatural / pagan worship / worshipping gods / spiritual</td> </tr> <tr> <td data-bbox="607 919 869 978">6 (community / social)</td> <td data-bbox="875 919 1509 978">community or social occasions / bring community together</td> </tr> <tr> <td data-bbox="607 983 869 1062">7 (traditional)</td> <td data-bbox="875 983 1509 1062">traditional / traditions / passed down through generations / activities were part of culture</td> </tr> </tbody> </table>	<b>Effects of Pre-colonialism</b>		1 (natural)	natural / simple / they were in/or suited natural environment / they lived a simple life	2 (functional)	functional or useful or served a purpose / accept suitable example with explanation e.g. wrestling to choose chief or erotic dancing to inspire gods to increase fertility	3 (survival)	(linked with) survival / helped communities to continue to exist / accept suitable example with explanation e.g. hunting for food	4 (ceremonial)	ceremonial / on special occasions / celebrations e.g. births, marriages	5 (ritual)	ritual / religious / supernatural / pagan worship / worshipping gods / spiritual	6 (community / social)	community or social occasions / bring community together	7 (traditional)	traditional / traditions / passed down through generations / activities were part of culture	
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		<p data-bbox="1834 794 2004 852" style="text-align: center;"><b>TOTAL - 21 MARKS</b></p>														



Question	Expected Answer	Mark																
2 (a) (i)	<p data-bbox="297 237 1823 272"><b>What values might a young person gain when participating in outdoor and adventurous activities?</b></p> <p data-bbox="297 304 1823 339"><b>4 marks total: no sub max</b></p> <table border="1" data-bbox="477 371 1641 1126"> <tbody> <tr> <td data-bbox="477 371 775 475">1 (physical)</td> <td data-bbox="775 371 1641 475">physical values or skills / e.g. <u>gaining knowledge of</u> or <u>learning</u> camp craft or first aid or map reading / improved health or fitness / physical or mental well being / survival skills</td> </tr> <tr> <td data-bbox="477 475 775 715">2 (personal)</td> <td data-bbox="775 475 1641 715">personal values or skills / leadership / self awareness or development or confidence or esteem or respect or fulfilment or discipline / self-realisation / knowledge of strengths &amp; weaknesses or self-actualisation / overcome fears / character building / independence / mental strength / sense of achievement / emotional control / responsibility / challenge / a spiritual experience / sense of freedom</td> </tr> <tr> <td data-bbox="477 715 775 783">3 (cognitive)</td> <td data-bbox="775 715 1641 783">cognitive or thinking skills / decision making / problem solving / learn how to overcome challenges</td> </tr> <tr> <td data-bbox="477 783 775 852">4 (safety)</td> <td data-bbox="775 783 1641 852">respect for or knowledge of potential danger / knowledge of risk or safety or survival / real or perceived risk</td> </tr> <tr> <td data-bbox="477 852 775 887">5 (commitment)</td> <td data-bbox="775 852 1641 887">commitment / determination</td> </tr> <tr> <td data-bbox="477 887 775 959">6 (social)</td> <td data-bbox="775 887 1641 959">social skills / socialisation / teamwork / bonding / sharing / co-operation / communication / trust / loyalty</td> </tr> <tr> <td data-bbox="477 959 775 1027">7 (preparation)</td> <td data-bbox="775 959 1641 1027">preparation for active leisure / preparation for career / gain awards or qualifications / Dof E / BELA / kayak 1 star</td> </tr> <tr> <td data-bbox="477 1027 775 1126">8 (qualitative / environment)</td> <td data-bbox="775 1027 1641 1126">improved quality of life / aesthetic appreciation or awareness / respect or appreciation of outdoors or environment or nature or countryside</td> </tr> </tbody> </table>	1 (physical)	physical values or skills / e.g. <u>gaining knowledge of</u> or <u>learning</u> camp craft or first aid or map reading / improved health or fitness / physical or mental well being / survival skills	2 (personal)	personal values or skills / leadership / self awareness or development or confidence or esteem or respect or fulfilment or discipline / self-realisation / knowledge of strengths & weaknesses or self-actualisation / overcome fears / character building / independence / mental strength / sense of achievement / emotional control / responsibility / challenge / a spiritual experience / sense of freedom	3 (cognitive)	cognitive or thinking skills / decision making / problem solving / learn how to overcome challenges	4 (safety)	respect for or knowledge of potential danger / knowledge of risk or safety or survival / real or perceived risk	5 (commitment)	commitment / determination	6 (social)	social skills / socialisation / teamwork / bonding / sharing / co-operation / communication / trust / loyalty	7 (preparation)	preparation for active leisure / preparation for career / gain awards or qualifications / Dof E / BELA / kayak 1 star	8 (qualitative / environment)	improved quality of life / aesthetic appreciation or awareness / respect or appreciation of outdoors or environment or nature or countryside	<p data-bbox="1834 1086 2056 1126" style="text-align: right;"><b>[4]</b></p>
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2 (a) (ii)	<p><b>What are the differences between tennis when performed as a physical recreation and tennis when performed as a sport?</b></p> <p><b>4 marks total: must make direct contrast to gain each mark.</b></p>		
<b>tennis as recreation .....whereas .....tennis as sport</b>			
1 (access)	available to all	selective / elite	
2 (timings)	time flexible or decided by agreement / no set time/ in spare or leisure or own time	strict timings / set time	
3 (where)	space decided by agreement / space or boundaries or location need not be clearly defined / or set space / (can be) basic facilities	space or location clearly defined / boundaries / specialised facilities	
4 (rules / organisation)	(can have) limited or flexible rules / limited or low organisation or structure / (usually) no officials / play with who you want	rules / NGB rules / codification / organised or structured / officials / leagues / tournaments / set teams or pairings	
5 (competitive)	(can have) limited or little or low levels of competition	competitive / competitions	
6 (skill)	(can have) limited or little or low levels of skill or fitness / don't need to be good	skilful / high(er) level of fitness	
7 (coach/train)	serious training or coaching or commitment not required	high(er) levels of training or coaching or commitment req'd	
8 (media)	not usually covered by media / few or no spectators / limited sponsorship or funding	media interest / spectators / sponsorship / funding	
9 (status / motive)	amateurs / pre-occupation / not paid / intrinsic / voluntary / hobby / (often) non-serious / taking part more important than winning / enjoyment / fun / social / for health or relaxation or stress relief or other suitable motive	professional / profession / occupation / paid / extrinsic / obligation / serious / winning or outcome important / prizes	
10(equipment)	basic equipment / basic clothing / (can be) inexpensive	high tech or expensive or proper equipment / specialist clothing	
			<b>[4]</b>

Question	Expected Answer	Mark																		
2 (b)	<p data-bbox="297 236 1821 271"><b>What does Top Sport or Dragon Sport do to help develop physical skills in young children?</b></p> <p data-bbox="297 303 1821 335"><b>2 marks total:</b></p> <p data-bbox="297 367 1821 406"><b>Top Sport and Dragon Sport</b></p> <table border="1" data-bbox="510 406 1608 686"> <tbody> <tr> <td data-bbox="510 406 891 438">1 (training)</td> <td data-bbox="891 406 1608 438">training for teachers or deliverers</td> </tr> <tr> <td data-bbox="510 438 891 470">2 (variety)</td> <td data-bbox="891 438 1608 470">includes range or variety of activities</td> </tr> <tr> <td data-bbox="510 470 891 542">3 (equipment)</td> <td data-bbox="891 470 1608 542">provides equipment / equipment is child-friendly or colourful or attractive or suitable or modified</td> </tr> <tr> <td data-bbox="510 542 891 574">4 (resource cards)</td> <td data-bbox="891 542 1608 574">provides resource cards</td> </tr> <tr> <td data-bbox="510 574 891 606">5 (activities)</td> <td data-bbox="891 574 1608 606">activities modified to suit age range / adapted games</td> </tr> <tr> <td data-bbox="510 606 891 686">6 (participation)</td> <td data-bbox="891 606 1608 686">encourages club membership or participation out of school / increase participation or mass participation</td> </tr> </tbody> </table> <p data-bbox="297 718 1821 758"><b>Dragon Sport only</b></p> <table border="1" data-bbox="521 790 1597 893"> <tbody> <tr> <td data-bbox="521 790 891 821">7 (parents/volunteers)</td> <td data-bbox="891 790 1597 821">parents or volunteers involved</td> </tr> <tr> <td data-bbox="521 821 891 853">8 (fair play / inclusion)</td> <td data-bbox="891 821 1597 853">fair play emphasised</td> </tr> <tr> <td data-bbox="521 853 891 893">9 (inclusion)</td> <td data-bbox="891 853 1597 893">inclusion emphasised</td> </tr> </tbody> </table>	1 (training)	training for teachers or deliverers	2 (variety)	includes range or variety of activities	3 (equipment)	provides equipment / equipment is child-friendly or colourful or attractive or suitable or modified	4 (resource cards)	provides resource cards	5 (activities)	activities modified to suit age range / adapted games	6 (participation)	encourages club membership or participation out of school / increase participation or mass participation	7 (parents/volunteers)	parents or volunteers involved	8 (fair play / inclusion)	fair play emphasised	9 (inclusion)	inclusion emphasised	[2]
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2 (c)	<p data-bbox="304 236 1800 304"><b>How do schools, UK Sport and sponsorship for promising young performers each contribute to the pursuit of sporting excellence in the UK?</b></p> <p data-bbox="304 339 994 371"><b>7 marks total: sub max of 3 from any one section.</b></p> <table border="1" data-bbox="311 405 1637 1027"> <thead> <tr> <th data-bbox="311 405 763 442">Schools</th> <th data-bbox="763 405 1637 442"></th> </tr> </thead> <tbody> <tr> <td data-bbox="311 442 763 544">1 (provision)</td> <td data-bbox="763 442 1637 544">provide high quality coaching or teaching or equipment or facilities</td> </tr> <tr> <td data-bbox="311 544 763 683">2 (links)</td> <td data-bbox="763 544 1637 683">encourage club membership/encourage school-club links or <u>links with</u> sports colleges or with NGBs / PESSCL strategy / SSCOs / multi-skills academies / SDOs</td> </tr> <tr> <td data-bbox="311 683 763 751">3 (pathway)</td> <td data-bbox="763 683 1637 751">(opportunities for) trials or centres of excellence or development squads</td> </tr> <tr> <td data-bbox="311 751 763 788">4 (sports college)</td> <td data-bbox="763 751 1637 788">have or <u>apply</u> for sports college status</td> </tr> <tr> <td data-bbox="311 788 763 857">5 (profile)</td> <td data-bbox="763 788 1637 857">give sport high profile / raise profile of elite sport in school / celebrate or reward success / focus sports / sporting champions</td> </tr> <tr> <td data-bbox="311 857 763 925">6 (funding)</td> <td data-bbox="763 857 1637 925">provide funding / give advice about funding or Sport Aid / 'gifted and talented' or scholarships</td> </tr> <tr> <td data-bbox="311 925 763 994">7 (time)</td> <td data-bbox="763 925 1637 994">flexible about time off (for competition or training) / Junior Athlete Education – JAE / G&amp;T programme</td> </tr> <tr> <td data-bbox="311 994 763 1027">8 (school representation)</td> <td data-bbox="763 994 1637 1027">provide inter-school fixtures or opportunity to represent school</td> </tr> </tbody> </table>	Schools		1 (provision)	provide high quality coaching or teaching or equipment or facilities	2 (links)	encourage club membership/encourage school-club links or <u>links with</u> sports colleges or with NGBs / PESSCL strategy / SSCOs / multi-skills academies / SDOs	3 (pathway)	(opportunities for) trials or centres of excellence or development squads	4 (sports college)	have or <u>apply</u> for sports college status	5 (profile)	give sport high profile / raise profile of elite sport in school / celebrate or reward success / focus sports / sporting champions	6 (funding)	provide funding / give advice about funding or Sport Aid / 'gifted and talented' or scholarships	7 (time)	flexible about time off (for competition or training) / Junior Athlete Education – JAE / G&T programme	8 (school representation)	provide inter-school fixtures or opportunity to represent school	
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<b>UK SPORT</b>		
9	(UKSI)	works with or oversees UKSI or National Institutes of Sport e.g. EIS
10	(funding)	funding to elite performers / World Class Programme / distributes lottery or government funding / TASS 2012
11	(talent ID)	talent identification schemes
12	(attract events)	attracts or bids for major events/World Class events
13	(behaviour)	promotes ethical sport or sportsmanship / runs anti-doping programme / 100% ME / drug test performers
14	(sharing)	shares best practice with other nations / runs international programme to research best practice overseas
15	(advice)	Performance Lifestyle Advice
<b>Sponsorship for promising young performers</b>		
16	(time)	more time for training / don't need (part time) work
17	(funding for....)	provides funding for: coaching or transport or kit or equipment or fees or other suitable example / free kit or equipment
18	(status/confidence)	status or esteem or confidence or sense of security or motivation increased

[7]

Question	Expected Answer	Mark																		
(2) (d)	<p data-bbox="304 236 1433 272"><b>What might stop performers with disabilities achieving excellence in their sport?</b></p> <p data-bbox="304 304 501 341"><b>4 marks total:</b></p> <table border="1" data-bbox="584 440 1536 1131"> <tbody> <tr> <td data-bbox="584 440 880 576">1 (funding)</td> <td data-bbox="880 440 1536 576">limited sponsorship or National Lottery or World Class funding / need to work / unable to train full time / expense of specialist equipment / lack of funding for equipment or other suitable e.g.</td> </tr> <tr> <td data-bbox="584 576 880 746">2 (provision for elite)</td> <td data-bbox="880 576 1536 746">lack of specialist or high quality or best facilities / lack of clubs or organisations or activities / limited sport science support / distance from or difficult access to national institutes or to training facilities</td> </tr> <tr> <td data-bbox="584 746 880 783">3 (esteem)</td> <td data-bbox="880 746 1536 783">limited esteem or confidence or self belief</td> </tr> <tr> <td data-bbox="584 783 880 820">4 (awareness)</td> <td data-bbox="880 783 1536 820">lack of awareness of opportunities available</td> </tr> <tr> <td data-bbox="584 820 880 922">5 (media / role models)</td> <td data-bbox="880 820 1536 922">limited or poor media coverage of disability sport / few role models</td> </tr> <tr> <td data-bbox="584 922 880 991">6 (coaches)</td> <td data-bbox="880 922 1536 991">few specialist or highly qualified coaches</td> </tr> <tr> <td data-bbox="584 991 880 1027">7 (discrimination)</td> <td data-bbox="880 991 1536 1027">discrimination / unfair treatment / stereotyping</td> </tr> <tr> <td data-bbox="584 1027 880 1096">8 (competition)</td> <td data-bbox="880 1027 1536 1096">limited high level or regular or suitable competitions or competitors</td> </tr> <tr> <td data-bbox="584 1096 880 1131">9 (talent ID)</td> <td data-bbox="880 1096 1536 1131">limited talent identification</td> </tr> </tbody> </table>	1 (funding)	limited sponsorship or National Lottery or World Class funding / need to work / unable to train full time / expense of specialist equipment / lack of funding for equipment or other suitable e.g.	2 (provision for elite)	lack of specialist or high quality or best facilities / lack of clubs or organisations or activities / limited sport science support / distance from or difficult access to national institutes or to training facilities	3 (esteem)	limited esteem or confidence or self belief	4 (awareness)	lack of awareness of opportunities available	5 (media / role models)	limited or poor media coverage of disability sport / few role models	6 (coaches)	few specialist or highly qualified coaches	7 (discrimination)	discrimination / unfair treatment / stereotyping	8 (competition)	limited high level or regular or suitable competitions or competitors	9 (talent ID)	limited talent identification	<p data-bbox="1921 1155 1966 1192"><b>[4]</b></p>
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		<b>TOTAL 21 MARKS</b>																		

Marks for Quality of Written Communication have been awarded based upon the quality of responses from candidates where extended writing is required.

# 2565 Physical Education: Historical, Comparative, Biomechanical and Sport Psychology Options

## Section A

### Historical Studies in Physical Education

- 1 (a) (i) Identify different functions of pre-industrial bathing. [2]

2 marks total:

1	(safety)	Learn to swim to be safe/avoid drowning
2	(hygiene)	Bathe for a wash/hygiene/no facilities at home
3	(recreation)	Recreation/fun on hot summer day

- (ii) What activities might have occurred at a pre-industrial fair or festival? [2]

2 marks total:

1	(cruel activities)	Baiting sports/blood sports
2	(violent/combat activities)	Mob games/single sticks/wrestling
3	(races)	Races/smock races/racing for prizes/sack races
4	(simple activities/folk sports)	Folk sports/whistling matches/jingling matches/gurning or grinning contests/chasing greasy pigs/climbing greasy poles or other suitable example
5	(feasting/drinking)	Feasting/drinking/wagering
6	(courtship)	Courtship/sexual activity
7	(hiring)	Hiring of labour

- (iii) In what ways was real tennis different from most other popular recreations? [3]

3 marks total

1	(courtly)	Courtly/played by elite
2	(rules)	It had written/complex rules/it was structured
3	(not violent)	It was not cruel or violent/it had etiquette/it was high culture/it was sophisticated/skilful
4	(regular)	It was played regularly
5	(facilities)	It had purpose built facilities/expensive court/not natural facility/it had specialist or expensive equipment
6	(not local)	Not local/the upper class players had transport and so could travel to play

- (b) (i) Outline features of stage one, before Dr Thomas Arnold became Headmaster of Rugby School. Refer to both the technical development of sports and games and social relationships within Public Schools in your answer. [5]

5 marks total: sub max of 3 from one section

Technical developments		
1	(facilities)	Natural or simple or basic facilities/not specialist or purpose built facilities/accept suitable example eg cloisters at Charterhouse/use of natural environment of surrounding countryside (eg for hare and hounds)
2	(equipment/kit)	Not specialist kit or specialist equipment/used what was available/made own equipment
3	(force/skill/coaching)	Force or violence rather than skill/eg mob games/no coaching or coaches/low levels of skill/often brutal
4	(rules)	Simple or changeable or 'home made' rules
5	(regularity)	Occasional/not regular/no fixture list or leagues/in free time
6	(organisation)	Simple structure or organisation/spontaneous/casual/organised by boys themselves/no teacher involvement/informal activities/not for spectators/boy culture
7	(adaptations)	Activities adapted from home/eg steeplechase or hare and hounds
8	(pop rec)	Institutionalised popular recreation/a reflection of popular recreation/eg bare fist fights or poaching or blood sports/some simple or childlike activities/eg skipping or hoops or dice
Social relationships		
9	(staff/boys)	Poor relationships between staff and boys/violent punishments/birching/lack of trust/no teacher involvement out of school
10	(6 <sup>th</sup> form and boys)	Poor relationships between 6 <sup>th</sup> form and younger boys/tyrant v slave/fagging system/bullying and brutality
11	(loyalty)	Limited house or school loyalty/self preservation/no team work
12	(enjoyment)	Games played for enjoyment or to relieve boredom/games not played to develop character/games not played for social control



- (ii) What evidence is there of rational sport in the cricket match in *Tom Brown's Schooldays*? [3]

**3 marks total:** Quotes from TBS are in italics: **exact** words not needed to gain mark – accept equivalent words that show correct knowledge and understanding.

1	(regularity)	Annual match/regular fixture/match v MCC/ <i>great event of cricketing year</i> ' (or equivalent)/games afternoon
2	(rules)	Rules/codified/officials/structure/organisation/regulated/umpire/scoring/scoring table
3	(skill)	Skill/physical prowess/' <i>well bowled or well played</i> '/' <i>Tom played with style</i> '/' <i>the bowling and fielding are superb</i> ' (or equivalent)/non-violent/respectable
4	(shots)	Technical names for shots/eg cover drive/specific shots played
5	(roles)	Roles within team/eg cover point/Tom captain
6	(values)	Sportsmanship/cricket needed discipline or teamwork or leadership/significance of role of captain/' <i>what a post it, that is, requiring skill and gentleness and firmness and other qualities</i> '/' <i>what a noble game</i> ' (or equivalent)
7	(wagering)	Little evidence of wagering
8	(facility/equipment/kit)	Team kit/specialist facility/' <i>groundsmen watered and rolled pitch</i> ' (or equivalent)
9	(spectators)	Spectators/match played ' <i>to great delight of town and neighbourhood</i> ' (or equivalent)
10	(transport)	National game/MCC arrived by train/bus took them back to station

- (c) Explain the development of public baths in urban industrial communities in the second half of the nineteenth century.

[6]

**Indicative content**  
**6 marks total:**

1	(size)	Towns grew as a result of industrialisation/overcrowding
2	(washing)	Only wealthy could afford bathrooms in their homes
3	(pollution)	Rivers or natural water supplies polluted/rivers no longer suitable for washing
4	(disease)	Problems of disease/cholera/in first half of 19 <sup>th</sup> century there were two major cholera epidemics in England (1832 and 1849)
5	(Wash Houses Act)	Wash Houses Act/local authorities could apply for grants to provide public washing facilities (1846)/public bath houses built/washing facility/prevention of disease/improve public health
6	(absenteeism)	Absenteeism from ill health reduced
7	(safety)	Public baths safer to bathe in than rivers
8	(class)	First and second class facilities/cheap entrance/1d for 2 <sup>nd</sup> class bath/working class could afford it/penny baths
9	(swimming)	Plunge baths for swimming/recreational use a spin off/middle class influence/formation of ASA (1884)
10	(local amenity)	baths showed status of town/social reform/part of civilising process
11	(facilities)	Most major towns built public bath house/facility might include hot and cold water baths and/or plunge baths and/or public wash-house with laundry and drying facilities

**Level 3: 5-6 marks**

- here candidates have excellent or very good knowledge and understanding of the development of public baths in the second half of the C19th
- many points are covered well
- some points are developed with explanations and/or examples
- other points may simply be identified.

**Level 2: 3-4 marks**

- here candidates have good or satisfactory knowledge and understanding of the development of public baths
- some points are covered well
- other relevant points are made but are not developed.

**Level 1: 1-2 marks**

- here candidates have limited or very limited knowledge and understanding of the development of public baths
- points are brief and/or superficial and lack development
- few, if any points are developed.

### Comparative Studies in Physical Education

- 2 (a) (i) Explain why American Football is one of the most popular professional sports in the USA. [3]

3 marks total

1	(Sensational)	It is popular because it has sensational appeal/the game is sensational/good entertainment/entertaining/spectacle
2	(Commercial)	American Football is an industry/commercialised/business orientated/generates money
3	(Lombardian)	Opportunity to display Lombardianism/allows win at all cost
4	(Masculine)	Masculine appeal/tough/manly appeal
5	(Aggression)	Aggressive game/violent/contact/collision
6	(Frontierism)	Game reflects frontier image/ethic/USA history/legacy from past
7	(American adaptation)	Adapted into an American game/game adapted to suit culture/belongs to America/is part of American culture
8	(Isolation)	Fits with isolation policy/helped to form separate culture
9	(Media promotion)	The game is well promoted by media/media makes it more appealing/hypes up the game

- (ii) What are the features of the USA college system that can help prepare an athlete for a career in professional sport? [4]

4 marks total

1	(Provision/facilities/equipment/coaching)	The college system provides <u>high quality</u> equipment/facilities/stadiums/ <u>high quality</u> coaching/coach hire and fire puts pressure on coaches to produce excellence
2	(Scholarship)	Offers scholarship to High School players/offers progression via the scholarship system/college has flexible curriculum to combine study with sport
3	(Competition)	Preparation through a high standard of competition/high standards/opportunity to play major college sports
4	(Reflection/copy)	College sport reflects/copies professional sport and therefore is good preparation
5	(Business)	College sport is organised as a business that has an interest in producing talent
6	(Entertainment)	Players are expected to be entertaining/entertainment is priority/large crowds/media coverage is part of professional preparation
7	(Centre of excellence)	College is perceived as a centre of sporting excellence/college system is a magnet of sporting excellence
8	(Pro-draft)	Opportunity for pro-draft/chance to be seen by pro clubs

- (b) (i) **Why has the French government put strategies in place to increase the status of Physical Education in French schools?** [3]  
3 marks total

1	(Attitude/value/education)	Strategies to increase status to change the attitude/perception shown towards the subject/to increase the value of the subject/to increase credibility/to make PE into a viable/valuable subject in education
2	(Intellectual)	So that PE is seen to make an intellectual contribution/input/cultural value/France values intellectualism therefore PE is given intellectual status
3	(Mass participation)	Help increase mass participation
4	(Excellence)	To improve the chances of developing excellence
5	(Progression)	To ensure the subject is progressing/updating the subject
6	(Appeal)	Increasing appeal to children/teachers/parents
7	(Image)	To bring the image up to date/lose the military image/connection/association

- (ii) **Outline the aims of INSEP (French National Academy for Sport and Physical Education).** [4]  
4 marks total

1	(Multi-sports provision)	<b>Aims to be</b> a Multi-sport provider/to offer/aims to promote a range of sports/25 sports
2	(Elite performers)	Aims to produce elite performers/athletes/top performers/international performers
3	(Sports education)	Aims to be a major centre for sports education
4	(Sports development)	Aims to develop sports in France
5	(Education/training of <b>athletes</b> )	Aims to deliver academic/professional training/aims to provide athletes with a career after retirement from sport
6	(Health)	Aims to maintain health of elite performers
7	(Ethics)	Aims to achieve high ethical standards
8	(Funding)	Aims to distribute money to sports federations according to needs
9	(Network)	Aims to establish network links with Europe

- (c) Explain the factors that have helped Australia to become a leading nation in sport. [7]

Indicative content  
7 marks total

1	(School PE)	Strong PE provision/fundamental skills programme/emphasis on learning skill early/talent identification
2	(School sport)	SEPEP/inter-school/inter-state competition
3	(Club links)	Linkage scheme/strong school to club links
4	(Mass participation)	Mass participation has a high priority/strong links with health/widest possible base for selection/small population utilised
5	(Pathways)	Structured pathways for progression through clubs to pro-sport
6	(Pathways)	Structured pathways for progression through institute to pro-sport
7	(Institutes)	Sports institutes/centres of excellence in each State
Cultural factors		
8	(Political)	Government support/back/invest in sport
9	(Ideological)	Sport linked to national pride/development of nation/values/an ambitious nation reflected in sport/sport a benchmark of progress/the country is said to have a 'sports obsession'
10	(Climate)	Climate is good for sporting development/favourable climate helps sport.
11	(Sociological)	Sport helps address equality/egalitarian values/equality involves more people in sport/multiculturalism
12	(Colonialism)	Colonial influences/rule encouraged sport development/motherland rivalry
13	(Economy)	Wealth of nation helps sport
14	(Tradition)	Australia has long/historical links with sport/with sporting success

#### Levels mark scheme

##### Level 3: 6-7 marks

To achieve this level a candidate will develop at least one point from 8-14 (cultural factors).

Answers will show sound knowledge and understanding of other factors (1-14). Answers will be well structured.

##### Level 2: 3-5 marks

A candidate at this level will show some knowledge of at least one point from 8-14.

Some knowledge will be demonstrated but detail may be lacking. Answers will show some structure.

##### Level 1: 1-2 marks

Limited knowledge or understanding of any factors will be demonstrated. Answers here will lack depth, detail and structure.

Quality of Language

Three marks are available for the quality of Written Communication.

- High: A well reasoned, well ordered developmental explanation.  
In clear, concise and continuous prose.  
Sentences and paragraphs follow on from one another smoothly and logically.  
There will be **few, if any, errors** of grammar, punctuation and spelling. 3 marks
- Middle: Reasoned statements employing sound use of language.  
Candidates express straightforward ideas clearly.  
Sentences and paragraphs may not always be connected.  
There may be **some errors** of grammar, punctuation and spelling, but not such as to suggest a weakness in these areas. 2 marks
- Low: An attempt at explanation with limited quality of language.  
The candidate expresses simple ideas clearly but may be imprecise and awkward in dealing with complex or subtle concepts.  
Errors in grammar, punctuation and spelling may be **noticeable and intrusive** suggesting weaknesses in these areas. 1 mark

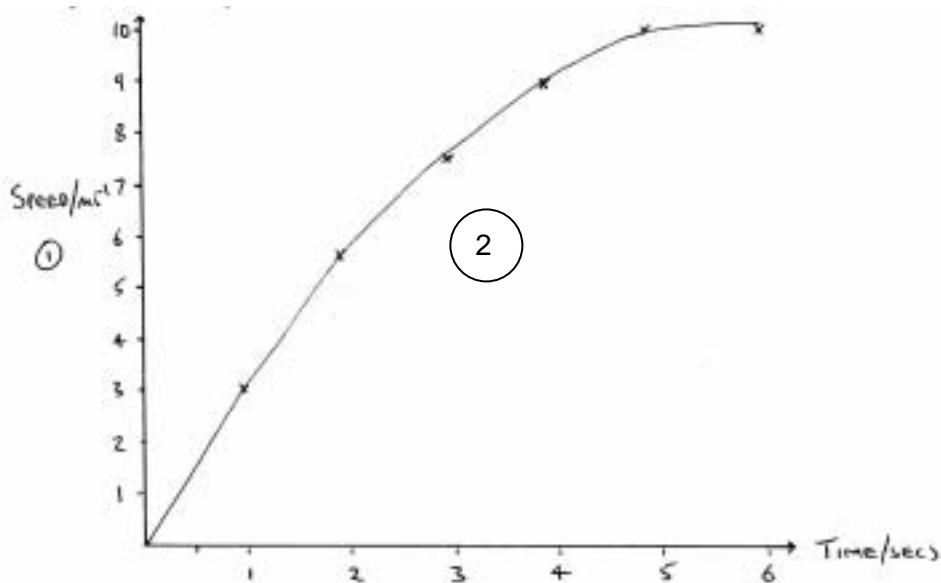
## Section B

## Biomechanical Analysis of Human Movement

- 3 (a) Plot a graph of speed against time for the long jumper during their run up. [2]

2 marks total:

- 1 Correctly labelled axes including units.
- 2 Points plotted correctly and accurate curve of best fit.



- (b) Calculate the average acceleration of the long jumper during the first two seconds of the run up. Show all working. [2]

2 marks total:

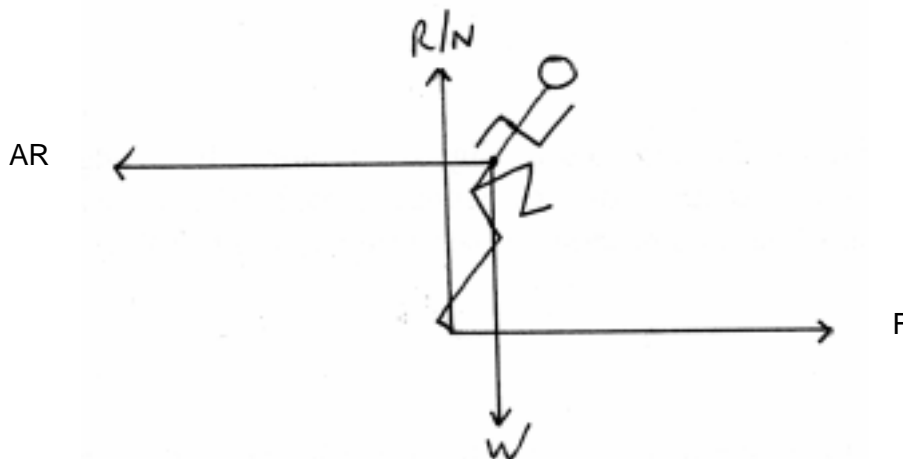
- 1 Acceleration =  $\frac{\text{change in speed}}{\text{time taken}}$  /  $a = \frac{v-u}{t}$  /  $a = \frac{5.5-0}{2}$
- 2 =  $2.75\text{ms}^{-2}$  or  $\text{m/s/s}$  or  $\text{m/s}^2$  (Units must be correct)

- (c) Sketch a free body diagram showing all the forces acting on the long jumper between 5 and 6 seconds of the run up. Use Newton's Laws of Motion to explain the shape of the curve during this time. [5]

5 marks total:

Submax 2:

- 1 Correct vertical forces of same length (Weight/w from CM and Reaction/R/Normal/N from foot).
- 2 Correct horizontal forces of same length (Friction from foot parallel to ground and Air resistance from CM/body)



Submax 3:

- 3 (Newton 1) An object will remain at constant velocity unless acted upon by an unbalanced force.
- 4 Horizontal forces/friction and air resistance cancel each other out/are balanced.
- 5 Resultant/net force acting on runner is zero.
- 6 (Newton 2) The acceleration/rate of change in momentum of an object is directly proportional to the (net) force applied.
- 7 Resultant/net force acting on runner is zero therefore acceleration/rate of change in momentum is zero (therefore speed is constant).



- (d) Identify and explain factors that affect the two horizontal forces acting on the long jumper during the final stages of the run up. [5]

5 marks total:

**Submax 3**

(Air resistance)

- 1 Speed of long jumper/wind against – faster leads to greater AR/or opposite.
- 2 Forward/frontal cross-sectional area of LJ – larger leads to greater AR/or opposite.
- 3 Smoothness of surface of LJ/clothing – rougher leads to greater AR/or opposite.
- 4 Shape of LJ/streamlining – streamlining leads to less AR.
- 5 Altitude – higher leads to less AR/or opposite.

**Submax 3**

(Friction)

- 6 Roughness of footwear – rougher/use of spikes leads to increase friction.
- 7 Roughness of surface – rougher leads to increase friction.
- 8 Normal reaction – larger/pressing more into ground leads to increase in friction.

- (e) Explain the concept of centre of mass. Describe how a high jumper performing a Fosbury Flop changes the position of their centre of mass at take off and during flight in order to maximise performance. [7]

**Indicative content. 7 marks total:**

(Concept of CM)

- 1 CM is the point at which a body is balanced (in all directions)/point at which weight appears to act.
- 2 Position of CM depends on distribution of mass of body/can lie outside body/can be varied by changing the shape of the body.
- 3 CM follows a predetermined flight path/height that CM reaches is predetermined at take off.
- 4 Body will rotate about the CM during flight.

(Take off)

- 5 High position of CM/CM is raised by.
- 6 Raising knee/arms at take off.
- 7 Reaction force passes outside CM.
- 8 Creates moment of force/torque on HJ.
- 9 Gives HJ angular momentum.
- 10 HJ rotates during flight/is able to land on back.

(During flight)

- 11 HJ lowers position of CM.
- 12 Lowering knee/arms.
- 13 Therefore HJ can reach higher (due to point 3).
- 14 HJ moves CM outside body.
- 15 By arching/hyperextending back.
- 16 CM can pass under bar.
- 17 While HJ passes over bar.

Level 3 6-7 marks

Responses will fully explain the concept of CM and relate it to the changes the HJ makes at take off **and** during flight. There will be a full, coherent explanation as to the effects of these changes on performance although at the bottom of this level this may not be fully considered.

Level 2 3-5 marks

Responses should define CM. Changes in body position at take off and during flight should be correctly identified and an explanation as to their effects should be coherent but not necessarily relate to both phases of the jump. At the top of this level the candidate should understand how changes in body shape affect the position of the centre of mass.

Level 1 1-2 marks

Definition will be limited and description lack clarity. For top of this level both the take off and flight must be referred to.

**[Total 21 marks]**

## Psychology of Sport Performance

- 4 (a) Coaches of sports teams often identify the need for team players to work together as a group for the good of the team.

Figure 2 is a representation of Steiner's model of group performance

<b>Actual productivity = Potential productivity – Losses due to faulty processes</b>
--------------------------------------------------------------------------------------

**Using a team example from a sport of your choice, explain the model shown in figure 2 and identify how these faulty processes could have occurred.** [5]

**(1 mark max for lack of sports team examples explaining the model)**

**Sub max 3**

- 1 (actual productivity) how a team performs/winning/losing of a team depends on...
- 2 (potential productivity) the sum of the players' abilities/how good they are/what they are capable of achieving
- 3 (faults 1) team performance/productivity is affected by social loafing/lack of individual motivation/poor motivation can decrease performance/productivity/learned helplessness of individuals/attributions of failure to internal stable factors
- 4 (faults 2) co-ordination losses/Ringelmann effect/ individual performance decreases as group size increases

**Sub max 3**

- 5 lack of identifiable roles/goals for team members
- 6 insufficient accountability/individual efforts not recognised
- 7 team performance affected by players not synchronising (co-ordinating if not given in point 4) well
- 8 injury/illness of players
- 9 lack of team cohesion/lack of social cohesion/disputes/perceptions that others are not trying
- 10 insufficient incentives to work together
- 11 inadequate leadership
- 12 poor team tactics/strategies
- 13 too high/too low a level of competition/anxiety of team/individuals/goal perceived to be unachievable
- 14 negative effects of an audience
- 15 environmental factors/stressors.

- (b) **Having low self-confidence can often impede performance in sport. How would a coach seek to increase a performer's level of self-confidence or self-efficacy?** [5]

**5 marks total:**

- 1 ensuring success/give achievable goals/performance accomplishments/past experiences/mastery of skill/styling
- 2 vicarious experiences/show someone else performing the task/successfully/safely
- 3 (using a role model) of similar ability/age to motivate
- 4 encouraging/verbal persuasion/praise/positive feedback
- 5 helping them to control their arousal levels/emotional control/calming them down/reducing their anxiety levels/cognitive/somatic stress management techniques
- 6 by encouraging positive attributions/perceptions/thinking positively
- 7 negative thought-stopping/not thinking negatively
- 8 attributing positively/attributing failure to controllable factors
- 9 attributing success to internal factors.

**(c) Success in sport is often linked to the performer having the appropriate personality or unique behavioural characteristics.**

**(i) The trait perspective of personality identifies the characteristics of extroversion, introversion, neuroticism and stability. What is meant by each of these four terms? [4]**

**4 marks total:**

- 1 (extroversion) – affiliate to other people/outgoing/sociable/lively (NOT Nach).
- 2 (introversion) – shy/reserved/prefers isolation from others/nervous/unsociable (NOT Naf).
- 3 (neuroticism) – extreme emotions/unreliable/mood swings/anxious/unpredictable/unstable/illogical
- 4 (stability) – reliable/predictable/balanced/calm/even tempered/controlled/logical

- (ii) Using examples from sport, explain the interactionist approach to personality and identify the limitations of personality profiling. [7]

7 marks total:

**Indicative content:  
(interactionist)**

- 1 traits that are triggered by environmental/situations/  
B=f(pe)/social environment
- 2 involves a combination of trait and social learning
- 3 typical responses may be affected by circumstances  
(Hollander)
- 4 therefore behaviour is not predictable
- 5 sportspeople's personalities change in different situations.

**(limitations of profiling)**

- 6 profiling results too vague/do not link cause and effect
- 7 results cannot be generalised (to the behaviours of others)/lacks external validity/sample not representative
- 8 results lack ecological validity/are not true to real life/do not relate to sports performance
- 9 profiling too subjective/results explained differently by different people/unreliable interpretations
- 10 links between personality and sports performance/sport choice/task persistence too tenuous (sceptical approach)
- 11 too many demand characteristics/behaviour of performer may be altered due to profiling/internally invalid.

Level 3 (6-7 marks)

- goes beyond recall and gives effective sports context
- good use of psychological vocabulary
- must visit points from interactionist
- must visit points from profiling limitations.

Level 2 (3-5 marks)

- mostly recall and gives some attempt at sports context
- some use of psychological vocabulary
- must visit point from interactionist
- must visit point from profiling limitations.

Level 1 (1-2 marks)

- recall with little or no sports context
- little or no use of psychological vocabulary
- little or no valid response from one of the two areas.

**[TOTAL OF 21 MARKS]**

# 2566 Exercise and Sport Physiology and the Integration of Knowledge of Principles and Concepts Across Different Areas of Physical Education

## Section A – Exercise and Sport Physiology

1 Aerobic capacity or  $\text{VO}_2$  max is an important fitness component.

- (a) (i) Define  $\text{VO}_2$  max and identify a common method used to evaluate it. [2]

2 marks in total.

- 1 the **maximum** volume of **oxygen** that can be (taken in/transported and) utilised/**consumed** by the body **in one minute**/per unit of time
- 2 multistage fitness test/Harvard step test/Queen's College step test/Cooper 12 minute run/PWC<sub>170</sub> test/direct gas analysis test in sports science lab.

- (ii) Explain three physiological reasons why males tend to have higher values for  $\text{VO}_2$  max than females. [3]

3 marks in total.

- 1 Men have larger muscles/greater % of muscle **which means** more mitochondria/aerobic enzymes
- 2 men have higher testosterone concentrations/greater % of muscle **which means** that they are bigger/have larger muscle mass (allowing for greater energy supply/ATP resynthesis)
- 3 men have less % body fat/oestrogen **which means** they carry less mass that uses energy (but does not produce it/less non-functional weight)
- 4 men have larger hearts/ventricles **which means** that more blood can enter and leave the heart per beat/per minute/they have a higher stroke volume/cardiac output
- 5 men have a larger blood volume **which allows** for more efficient transport of gases (around the body)
- 6 men have greater haemoglobin/red blood cells concentration in blood **which benefits** the transport of oxygen (around the body)
- 7 men have higher lung **volumes/capacity**/tidal **volume**/minute ventilation **which means** more oxygen enters/carbon dioxide leaves the body per breath/per minute

**(b) A weight training programme can develop maximum strength.**

- (i) Outline the main features of a weight training programme designed to develop maximum strength.**

**[4]****4 marks in total.**

General outline/ programme	1	form of intermittent/interval/circuit/pyramid training	} (allow any number within range)
	2	can be altered (depending on level of fitness)/its flexibility	
	3	training principles apply/overload/progression/ specificity/warm up/cool down/medical check/pre-test	
	4	heavy weights/low reps/long rest between sets	
Specific values/ session	5	(frequency) 3-7 times a week	
	6	(intensity) at 85% or more of 1RM	
	7	(time 1) 2-5 sets	
	8	(time 2) 2-6 reps	
	9	(time 3) with 3-5 minute rest between sets	

- (ii) Identify two physiological adaptations that take place during the training programme and explain how each helps to improve maximum strength.**

**[4]****4 marks in total (mark in pairs – explanation must be linked to adaptation for second mark).****SUB MAX 2 FOR IDENTIFICATION.**

<b>Adaptation</b>	<b>Explanation</b>
1 greater number of motor units recruited	2 increases the contraction of the muscle/for greater force to be generated/improved co-ordination
3 reduced autogenic/neurological inhibition/Golgi tendon function	4 these mechanisms prevent muscles from exerting more force than the bones/connective tissue can tolerate/reducing these mechanisms (produces greater levels of strength)
5 muscle hypertrophy/more protein synthesis/larger muscles	6 provides more sites for force production/allows for a greater force/contraction
7 muscle hyperplasia/fibre splitting/increases the number of muscle fibres	8 allowing for a greater force of contraction
9 increased levels of muscle phosphogens/ATP/PC	10 increases the efficiency of the ATP-PC/anaerobic system/allowing high intensity exercise to carry on for longer (resulting in an overall gain to maximum strength)

- (iii) A performer may decide to take steroids to further improve their maximum strength.  
Describe two long term health risks associated with taking steroids. [2]

2 marks in total (Accept first two answers only)

2 marks for 2 of:

- 1 testicular/genital atrophy/decreased levels of testosterone/reduced sperm count/enlargement of breasts in males/infertility
- 2 disruption of menstrual cycle/reduction of breast size/deepening of voice/growth of facial hair in females/ infertility (only give once)/decrease in oestrogen
- 3 liver damage/tumours/problems/cancer
- 4 increased risk of coronary heart disease/heart attack/failure/reduction in HDL cholesterol/high blood pressure
- 5 Psychological problems/addiction/extreme aggression

**TOTAL = [15 MARKS]**



## Section B

## 2 (Scientific focus)

- (a) (Application of Anatomical and Physiological Knowledge to Improve Performance)

## PART ONE

Fig 1 shows (a) the anatomy of the spine and (b) a sporting action associated with the spine.

Identify the different types of joint in the spine and describe where they are located.

Identify three muscles from the spine and lower limb that contract concentrically to push the swimmer from the wall.

Explain why a warm up enables these muscles to contract with greater speed and force.

## MARK SCHEME

## Types of joint and identification of muscles (submax 4)

(1 mark for each if linked with description of where found)

- |   |                                     |                                                                                                                               |
|---|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 1 | pivot                               | between atlas/C1 and axis/C2 (in cervical spine)/top two vertebrae/atlantoaxial joint                                         |
| 2 | gliding                             | between articulating surfaces/transverse/spinous processes/ of adjacent vertebrae (in cervical/thoracic/lumbar spine)         |
| 3 | cartilaginous/<br>slightly moveable | between bodies of adjacent vertebrae/between vertebrae where discs of cartilage are found (in cervical/thoracic/lumbar spine) |
| 4 | fibrous/fixed/fused<br>immoveable   | (between) individual bones in sacrum/coccyx                                                                                   |

## Muscles

**(3 muscles correctly identified – 1 mark) Accept first 3 only**

- |   |                                                                                                                                      |
|---|--------------------------------------------------------------------------------------------------------------------------------------|
| 5 | gastrocnemius/soleus/rectus femoris/vastus lateralis/vastus medialis/vastus intermedius/gluteus maximus/erector spinae/sacrospinalis |
|---|--------------------------------------------------------------------------------------------------------------------------------------|

**Warm up (submax 4)**

- 6 all benefits are due to an increase in temperature (of the muscles)  
 7 which allows for faster speed of contraction of agonist muscles  
 8 and relaxation of antagonist muscles/improved coordination between antagonist  
 pairs  
 9 improved reciprocal inhibition  
 10 speed of nerve transmission is increased  
 11 decrease in muscle/blood viscosity causing more efficient contractions  
 12 higher blood oxygen saturation/supply to muscles/delays OBLA/use aerobic system  
 quicker/delays lactic acid production  
 13 increase in extensibility of tendons/ligaments/connective tissue/flexibility  
 14 increased elasticity (of muscles)  
 15 increased enzyme activity

**Elite swimmers have large lung volumes and capacities.**

**Define tidal volume and using your knowledge of the mechanics of breathing explain why tidal volume increases during exercise.**

**MARK SCHEME****(tidal volume) (submax 1)**

- 16 the volume of air inspired **or** expired per breath (**do not** accept volume of air inspired **and** expired per breath)

**(tidal volume during exercise) (submax 7)**

- 17 because increased demand for oxygen by the muscles/increase in CO<sub>2</sub> production  
 18 during exercise additional muscles are recruited to increase the rate/depth of breathing
- (during inspiration)
- 19 sternocleidomastoid/scalenes/pectoralis minor contract  
 20 diaphragm/external intercostals contracting **with more force**  
 21 this increases **further** the volume in the thoracic cavity/pulls ribs outwards **and** upwards **further**/elevates **further**  
 22 decreasing pressure in the lungs  
 23 causing **more** air to rush in  
 24 decreasing inspiratory reserve volume
- (during expiration)
- 25 expiration becomes active  
 26 internal intercostals/rectus abdominus/obliques contract  
 27 diaphragm/external intercostals relaxing  
 28 this decreases **further** the volume in the thoracic cavity/ribs pulled inwards and downwards **further**  
 29 increasing pressure in the lungs  
 30 causing **more** air to rush out  
 31 decreasing expiratory reserve volume

**TOTAL KNOWLEDGE MARKS = [13]**

**(b) (Acquiring and Performing Movement Skills)**

**Explain the role of each component of the information processing model when performing a movement skill.**

**8 MARKS FOR: (3 Marks for i/d only)  
(Accept practical examples as equivalent and give 1 x P)**

- 1 (input) information/stimuli from/via the **environment**.
- 2 Need this to **assess** what is required in the movement/to assess own position.
- 3 (sense organs) the receptors/vision/audition/proprioception/kinaesthesia
- 4 Need to receive stimuli (effectively and efficiently/quickly)
- 5 (perceptual mechanism) The **interpretation** of the stimuli/**judgement** of information.  
(Not 'the way we see things')/encoding/ decoding/selective attention/dcr process
- 6 Need to **formulate** a motor plan/a plan of action/response/make decisions/form schemes/programmes/response specifications
- 7 (effector mechanism/muscular system/response) Decisions/**messages sent** to muscular system
- 8 Muscles **move** in response to messages from brain.
- 9 (Intrinsic feedback) Kinaesthesia/proprioception information/knowledge of performance from within/sensory consequences
- 10 Used to reinforce correct actions/correct errors.
- 11 (Extrinsic feedback) Information/knowledge of results/performance from external sources.
- 12 Use for motivation/to improve future actions/find out what is wrong/right/reinforcement

**What is meant by a motor programme and how are motor programmes formed?**

**7 MARKS FOR:**

What is meant by

- 13 Are (generalised series/patterns of) movements stored in the LTM/Memory.
- 14 Allow movement without much/little/no conscious control/automatic/autonomous movement/does not have to think much about what is required/basis of open loop control/one decision to bring about a movement/habitual/overlearned/grooved
- 15 Allow for increase capacity to attend to peripheral stimuli/can take into consideration peripheral aspects of the environment/can focus on other things

How they are formed

- 16 Is formed through **repetition**/practise/mental rehearsal
- 17 **Association**/transfer/comparing what has been learned with new stimuli/the influence of one skill on the learning of another.
- 18 **Meaningful**/need/perceived requirement/incentive value
- 19 **Novelty**/interest/emotional intensity/pleasure/enjoyment/feedback.
- 20 Gaining **success**/reinforcement/praise/reward/strengthening S-R bond/past experiences
- 21 Perceptual trace/closed loop to form patterns/memory trace
- 22 Guidance allowing kinaesthesia experiences/copying/observing

**TOTAL KNOWLEDGE MARKS [13]**

## PART TWO

**(c) (Exercise and Sport Physiology)**

Swimmers often rely heavily on the use of the lactic acid system for ATP resynthesis.

Describe the lactic acid energy system and discuss the advantages and disadvantages of using this system.

**MARK SCHEME (submax 8)****(description) (sub-submax 5)**

(type of reaction)	1	anaerobic/without oxygen
(fuel used)	2	glycogen/glucose/carbohydrate
(site of reaction)	3	sarcoplasm/cytoplasm
(controlling enzyme)	4	glycogen phosphorylase/PFK/LDH
(energy yield)	5	breakdown of glycogen to pyruvic acid/glycolysis
(specific stages)	6	2 ATP/1:2 ratio
	7	works on a coupled reaction principle
	8	reaction 1 is exothermic/releases energy
	9	reaction 2 is endothermic/uses energy
	10	resynthesis of ATP from ADP and P
(by products)	11	lactic acid

**(advantages and disadvantages) (sub-submax 5)****(advantages)**

- 12 few chemical reactions/relatively quick/simple
- 13 good for high intensity exercise between 10 seconds and 2/3 minutes/bursts of energy during/at end of exercise/lasts longer than ATP-PC system
- 14 does not require oxygen therefore can use it early in exercise period before (steady state is reached)
- 15 the by product/lactic acid can be converted back to glycogen in the liver and used for fuel/Cori cycle
- 16 the by product/lactic acid can be broken down to CO<sub>2</sub> and H<sub>2</sub>O and energy

**(disadvantages)**

- 17 only a relatively small amount of energy is released (from the partial breakdown of glycogen)/less efficient than the aerobic system
- 18 (accumulation of lactic acid) lowers pH/inhibits enzyme activity/reduces ability to resynthesis ATP
- 19 lactic acid can only be broken down in presence of oxygen so exercise intensity must be reduced/stopped for this to happen/causes fatigue

**Interval training is a versatile type of training in which periods of work are interspaced with periods of recovery.**

**Outline an interval training session that is designed to stress the lactic acid system. Explain how you would apply the training principles of overload, specificity and reversibility to ensure your sessions remain effective throughout a training programme.**

**Interval training (submax 4)**

**(session)**

- |    |                                                  |                                                                       |
|----|--------------------------------------------------|-----------------------------------------------------------------------|
| 20 | (duration of interval)                           | *from 10 seconds to 3 minutes                                         |
| 21 | (intensity of interval)                          | very high/close to $\text{VO}_2$<br>max/75%+/high % of max<br>HR/85%+ |
| 22 | (work: relief ratio/duration of recovery period) | *1:2/1:3                                                              |
| 23 | (number of work/relief intervals)                | *2-5 sets/5-20 reps                                                   |

**\* Accept any number within range**

**(training principles) (submax 6)**

**(overload)**

- 24 the body must be pushed beyond the level at which it is accustomed for improvements to be made/increase stress/harder
- 25 the body will adapt to this overload and further improvements to the efficiency of the lactic acid system will occur/increased tolerance to lactic acid
- 26 must be progressive or injury/overtraining can occur/moderation
- 27 manipulate variables
- 28 duration of work interval increased/intensity of work interval increased/number of sets/reps increased/work: relief ratio decreased/increase frequency/more often

**(specificity)**

- 29 training should be relevant/appropriate to the sport/individual
- 30 in terms of energy system/muscles involved/fibre types recruited/type of contraction/movement patterns
- 31 therefore ensure interval training sessions are undertaken in correct environment for athlete  
(eg sprinter: on the track/swimmer: in the pool/sprint cyclist: on the bike/ergometer etc)
- 32 peaking/periodisation must also be considered to ensure athlete is in top physical condition for competition

**(reversibility)**

- 33 the deterioration in performance/lose the benefits that occur if training stops/intensity decreases/ineffective overload
- 34 sessions must be interesting/varies to ensure training is maintained

**TOTAL KNOWLEDGE MARKS = [13]**

## APPENDIX

*Suggested links - not intended to be exhaustive*

<b>AS → AS</b>	<b>A2</b>	
<b>joint type/muscles</b> <ul style="list-style-type: none"> <li>↳ range of movement</li> <li>↳ strengthening exercises</li> <li>↳ type of contraction</li> </ul>	<b>force</b> <b>impulse</b> <b>projectile motion</b> <b>levers</b>	<b>energy systems</b> <b>explosive/elastic strength</b> <b>flexibility</b> <b>reaction time</b>
<b>warm up</b> <ul style="list-style-type: none"> <li>↳ type of contraction</li> <li>↳ heart rate response to exercise</li> <li>↳ blood supply during exercise</li> <li>↳ respiratory response to exercises</li> </ul>	<b>energy systems</b> <b>DOMS</b> <b>cool down</b>	
<b>lung volumes/capacities</b> <ul style="list-style-type: none"> <li>↳ respiratory control</li> <li>↳ increased gaseous exchange</li> <li>↳ altitude training</li> </ul>	<b>aerobic capacity</b> <b>adaptations to training</b>	
<b>A2 → A2</b>	<b>AS</b>	
<b>lactic acid energy system</b> <ul style="list-style-type: none"> <li>↳ energy continuum</li> <li>↳ elastic/explosive strength</li> <li>↳ recovery</li> </ul>	<b>muscle fibre types</b> <b>heart rate</b> <b>blood supply</b> <b>respiratory response</b>	
<b>interval training</b> <ul style="list-style-type: none"> <li>↳ recovery</li> <li>↳ circuit training</li> <li>↳ ergogenic aids</li> </ul>	<b>heart rate curves</b> <b>heart rate control</b>	
<b>training principles</b> <ul style="list-style-type: none"> <li>↳ periodisation</li> <li>↳ adaptations to training</li> <li>↳ recovery</li> </ul>	<b>action of individual muscles</b> <b>types of muscular contraction</b> <b>muscle fibre types</b>	

**(d) (Biomechanical Analysis of Human Movement)**

**Using Newton's Laws of Motion describe how an object or body becomes a projectile in sport.**

**Identify and explain the factors at take off that determine the trajectory of a projectile in sport.**

**Spin can affect the flight path of projectiles in sport.**

**Explain how factors other than spin can affect the flight path of a projectile in sport.**

**(Newton's Laws)**

- 1 (Newton 1) An object will remain on the ground unless acted upon by an upward force greater than its weight/net upward force.
- 2 (Newton 2) Greater (upward) force applied means greater distance/height.
- 3 (Newton 2) The upward acceleration/rate of change of momentum takes place in the same direction as the force applied.
- 4 (Newton3) Force applied by body to the ground is equal and opposite to the force applied to the body by the ground/the force applied by the foot on the ball is equal and opposite to the force applied by the ball to the foot

**(Trajectory factors) Sub max of 6 marks from;**

- 5 Speed of release/take off.
- 6 Faster means further/higher.
- 7 Height of release.
- 8 Higher means further.
- 9 Angle of release.
- 10 45° is optimum angle for maximising distance (if landing height is the same as release height eg long jump).
- 11 Less than 45° if release height is higher than landing height (eg shot, javelin).
- 12 More than 45° if release height is lower than landing height (eg raised fairway relative to tee height in golf)

**(Factors) Submax of 6 marks from:**

- 13 Air resistance/wind reduces distance/height achieved.
- 14 By reducing air resistance distance/height can be increased.
- 15 Less frontal X-sectional area means less air resistance/fluid friction or opposite.
- 16 Smoother surface of projectile means less air resistance or opposite.
- 17 Streamlining/tapering of shape/teardrop shape means less air resistance or opposite.
- 18 Altitude/less air density means less air resistance.
- 19 Aerofoil shape.
- 20 Creates angle of attack (to the direction of airflow).
- 21 Air travels further over top of subject.
- 22 Air travels faster over top of subject.
- 23 Low pressure created above object.
- 24 Pressure gradient formed from high to low pressure
- 25 causes Bernoulli/lift/upwards force on object.
- 26 Greater lift force lengthens flight path.
- 27 Air resistance/Bernoulli leads to non parabolic/asymmetric flight path.
- 28 The greater the weight of the object the more parabolic the flight path.

**TOTAL KNOWLEDGE MARKS [13]**

T1 links

Newton's Laws – Reaction Forces

Trajectory factors – Impulse/follow through  
- Work done/power

Factors affecting FP – Force/pin diagrams

T2 Links

Newton's Laws – Definitions

Trajectory factors – Linear motion/forces applied through centre of mass



**(e) (Psychology of Sport Performance)**

**Effective leadership is recognised as being important in sport.**

**What makes an effective leader?**

**Explain the different circumstances in which an autocratic leadership style and a democratic leadership style would be used.**

**Concentration and attentional control including cue utilisation are essential for top-level performance in sport.**

**Explain what is meant by cue utilisation and how it effect on performance in sport.**

**What makes an effective leader?**

**3 MARKS FOR:**

- 1 Good communication/listener
- 2 Vision/clear goals/strong mission/ambitious
- 3 Enthusiastic/self-motivated/determined/confident
- 4 Empathy/can see point of view of others/integrity/high values
- 5 High skill level in the sport
- 6 Knowledgeable/experienced
- 7 Charismatic/has presence/commands respect/influential/inspirational/well liked/popular/motivational
- 8 Adaptable/flexible depending on situation/can change if circumstances demands it/perceptive/good decision maker/use different styles when necessary

**Explain the different circumstances in which an autocratic leadership style and a democratic leadership style would be used.**

**6 MARKS FOR:**

(autocratic) – SUB MAX 3 MARKS

- 9 When discipline/control is needed/hostile groups/weak authority/position/to gain control/newly formed groups
- 10 If lack of time/time too short for more democratic approach/tasks that need completion quickly
- 11 For large groups/when communication is difficult
- 12 In early stage/cognitive stage of learning/to establish what is required/beginners
- 13 For team players (who generally prefer training and instruction style)/games situations
- 14 Males (prefer autocratic style)
- 15 If in a dangerous situation/have control for health and safety.
- 16 (Fiedler) Task style better in situations that are extremely favourable/positive and extremely unfavourable/extremes of favourableness.
- 17 When task is clear/unambiguous
- 18 If leaders **personality** is task orientated/autocratic/authoritarian.

(Democratic) – SUB MAX 3 MARKS

- 19 When group member's can/wish to participate in decision-making/those who prefer democratic approach/develop teamwork/communication
- 20 For more advanced performers (who have knowledge to contribute)
- 21 To motivate group members/ownership/feel valued/to give reinforcement
- 22 If demands of situation is social (friendly match).
- 23 When task demands greater interpersonal communication/co-active sports
- 24 If leader and group members are well known to each other.
- 25 Females (prefer democratic/social approach)
- 26 Task structure is not dangerous (and therefore allows other ideas)
- 27 For small numbers/individual sports (because communication is easier)
- 28 (Fiedler) In situations that are moderately favourable
- 29 If leader's personality lends itself to democratic/social approach.

**Concentration and attentional control, including cue utilisation, are essential for top-level performance in sport.**

**Explain what is meant by cue utilisation and how its effect on performance in sport.**

4 MARKS FOR:

- 30 Use of **relevant** stimuli/information/signals from the environment/cues
- 31 As arousal increases (must link to point 32)
- 32 Attention is narrowed/focussed/perceptual narrowing
- 33 Then arousal decreases
- 34 If attention is too narrow, can miss cues/signals
- 35 (Narrow attention) can help concentration/right decisions made/better reaction time
- 36 Lowering arousal/anxiety/stress can help concentration
- 37 Enter zone of optimal functioning/peak flow experience/effecting performance positively/building confidence/well-being
- 38 Low arousal can widen perceptual field
- 39 Widening perceptual field could lead to missed cues
- 40 Widening perceptual field enables use of peripheral information

**LINKS**

T1: A/S > A/S

IP < > Motor programmes/schema

Reinforcement

Selective attention

Motivation

Reaction time

Transfer

Autonomous phase of learning

Operant conditioning

T1: A2 > A2

Personality

Achievement motivation

Stress and stress management

Attentional control/Nideffer

Emotional control/confidence/self efficacy

T2: A/S > A2

IP > concentration/confidence/attentional control

Programmes > Concentration/emotional control / peak flow/ Zone

T2: A2 > A/S

Leadership > Motivation/arousal/observational learning/operant conditioning

Cue utilisation > arousal theories/motivation/programmes/schema/transfer

**Section B****3 (Socio-cultural focus)****Part one****(a) (Contemporary Studies in Physical Education)**

**Physical Education, recreation and sport are different aspects of physical activity in schools.**

**Describe how each of these aspects can be experienced by young people in schools.**

**Discuss Physical Education in schools with reference to: benefits of Physical Education, current initiatives and strategies in school sport and possible constraints on Physical Education departments.**

Sub max 3

**Describe how each of these aspects can be experienced by young people in schools.**

- |   |              |                                                                                                                                                                                                                                                                   |
|---|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | (mix)        | Physical Education, (physical) recreation and sport are all experienced in schools or provided by PE departments/Physical Education, (physical) recreation and sport can all be experienced in one lesson/different parts of a lesson can have different emphases |
| 2 | (PE)         | NC/curricular PE/what you are actually taught in the lesson in terms of skills/values/behaviour/examination work/theory/rules/safety/compulsory                                                                                                                   |
| 3 | (recreation) | PE run clubs or activities/extra curricular activities/free time/school trips/emphasis on participation/enjoyment/not selective                                                                                                                                   |
| 4 | (sport)      | inter-house/inter-school fixtures/leagues/playing to rules/opportunities to represent country/region/competitive part of PE lesson/organised trip to sporting event.                                                                                              |

Sub max 10: <b>Discuss Physical Education in schools with reference to: benefits of Physical Education, current initiatives and strategies in school sport and possible constraints on Physical Education departments.</b>	
<b>Benefits of PE: sub sub max 5</b>	
<b>Physical/cognitive values:</b>	
5	development of physical/mental skills/some children may gain nothing
6	health benefits/healthy lifestyle/active lifestyle/stress relief/catharsis
7	physical development/fitness
8	knowledge of game/rules/tactics/some children may have no interest and therefore learning limited or non-existent
9	knowledge of the body
<b>Preparation values:</b>	
10	preparation for leisure/after school clubs or extra-curricular/a negative experience may convince some that they do not want to participate again
11	career preparation/qualifications (eg teacher, prof., coach, armed forces)
<b>Personal/social values:</b>	
12	opportunities for leadership/decision making
13	Teamwork/sharing encouraged/co-operation
14	positive morals developed/sportsmanship/fair play
15	self-confidence/self esteem/independence/individuality/but under some circumstances could lose/reduce self esteem
16	positive attitudes/commitment/responsibility/competitiveness/motivation/loyalty but could develop negative attitudes
17	development of social/communication skills/making friends
<b>Quality of life values:</b>	
18	aesthetic appreciation of performance/environment/enjoyment
19	challenging/dangerous situation encountered/overcome
20	opportunities for creativity eg creative dance

<b>Current initiatives and strategies in school sport: sub sub max 4</b>	
21	<b>(Top Sport or equivalent Home Country initiative):</b> training for teachers/variety of sport skills/supports NC/in partnership with LEAs/schools/LAS/SDOs/NGBs/sports clubs/promotes participation/encourages club membership
22	<b>(Top Sport or equivalent Home Country initiative):</b> activities modified/equipment provided/child-friendly equipment/resource cards provided
23	<b>(Sports Colleges):</b> opportunities for elite/high level competitions/opportunities for mass participation/wide range of activities/links with community clubs/other links/regional focal point or hub site
24	<b>(Sports Colleges):</b> more money/initial grant/access to lottery funding/more time for sport/flexible time table/high quality facilities/more staff/high quality teaching or coaching/sport specific qualifications
25	<b>(Youth Sport Trust):</b> helps schools apply for Sports college status/supports SCs/helps develop quality PE and sport/provides sporting pathway to higher levels/encourages lifetime sport/encourages sporting competition
26	<b>(Sports Development Officers):</b> work for LAs/work with leisure services departments and ed. Establishments/general or sport specific/work to increase access/opportunity/provision/coaching/courses for sport/organised festivals/help set up clubs
<b>Other possible points:</b>	
27	<b>(SSCOs/FESCOs – school sport co-ordinations)</b> work in partnership with a family of schools/primary, secondary and special schools/school sports partnership
28	<b>(PESSCL – PE School Sport Club Links)</b> increase participation by 5-16yr olds/increase numbers receiving minimum 2hrs high quality PE and sport per week/aim – 85% by 2008 8 strands/ <i>candidates to mention any two of the following:</i> specialist sports colleges/school sports partnerships/professional development/step into sport/school club links/gifted and talented/swimming/QCA investigations 5 hr offer
29	Focus of any alternative suitable/accurate initiative/strategy
<b>Constraints: sub sub max 3</b>	
30	lack of time/demands of time table/sports hall/gym used for exams
31	lack of space/facilities transport to fields/pool/other suitable example/lack of access to outdoor resources
32	number of staff/few staff/lack of specialist staff/limited experience or qualifications or enthusiasm of specialists/lack of support from other staff eg to help with teams
33	esteem of PE within the school/views of management/Head teacher
34	lack of funding/finance/good quality equipment/resources
35	lack of pupil motivation
36	Health and safety/supervision

Alternative valid points/equivalents should be accepted.

**TOTAL KNOWLEDGE MARKS [13]**

**Part two.****(b) (Historical Studies in Physical Education)**

**Discuss physical activity in State Elementary Schools during the first half of the twentieth century with particular reference to the objectives, content and teaching method of lessons in 1902, 1933 and the 1950's.**

**13 marks: 1 mark for each response up to a maximum of 13**

<b>Sub max 5</b>		
<b>1902 objectives sub sub max 2</b>		
1	(military fitness)	military fitness/preparation for war/avoid future embarrassment as caused by poor performance in Boer War
2	(discipline)	discipline/for working class to 'know their place' in society
3	(weapons – drill)	weapons training/proficiency with guns
<b>1902 content sub sub max 2</b>		
4	(drill)	<u>military</u> drill/marching
5	(exercises)	static exercises/eg press ups or other suitable example
6	(weapons – drill)	dummy weapons drill/weapons handling/stave work
<b>1902 methodology sub sub max 2</b>		
7	(command)	command style/didactic/instruction
8	(centralised)	centralised/everyone doing same thing at same time/no group work/individuality
9	(ranks)	in ranks/rows
10	(NCOs)	(by low ranking) army personnel/NCOs
11	(where?)	Playground/classroom/road/no specialist facility

<b>Sub max 5</b>		
<b>1933 objectives sub sub max 2</b>		
12	(fitness)	(Physical) fitness
13	(therapeutic)	therapeutic results/health/wellbeing
14	(posture)	good posture/good physique
<b>1933 content sub sub max 2</b>		
15	(athletic)	athletic skills/eg sprint starts/hurdling/other suitable example
16	(gymnastic)	gymnastic skills/eg vaulting or cartwheels or other suitable example
17	(games)	games skills/eg ball passing or ball heading or other suitable example
<b>1933 methodology sub sub max 2</b>		
18	(C&D)	centralised and decentralised/half way between or containing parts of 02 method and 50's method/5x20 min per week
19	(group work)	group work/varied group activities at end of lesson
20	(kit)	specialist kit
21	(equipment)	equipment/minor games equipment/simple equipment/eg bean bags or sticks or ropes or balls
22	(teachers)	some specialist teachers
23	(outdoors)	outdoors recommended/in fresh air for health



**Sub max 5 marks**

<b>1950s objectives</b>	<b>Sub-submax 2</b>
24 (enjoyment)	enjoyment/having fun
25 (participation)	participation/the experience
26 (holistic)	holistic development/development of whole child/not just physical benefits eg. cognitive/social skills
<b>1950s content</b>	<b>Sub-submax 2</b>
27 (ed gym)	educational gymnastics
28 (m to m)	movement to music/dance
29 swimming	swimming
<b>1950s methodology</b>	<b>Sub-submax 2</b>
30 (decentralised)	decentralised/different people doing different things/not all doing same thing at same time
31 (problem solving)	problem solving/thinking/cognitive work/creativity/discovery
32 (child-centred)	child centred/guidance rather than instruction
33 (facility/apparatus)	in gymnasias/purpose built facility/full apparatus/apparatus resembling army assault course
34 (teachers)	with specialist (PE) teachers

**TOTAL KNOWLEDGE MARKS [13]****T1 – links within AS Contemporary Studies**

- benefits also available through **outdoor education**
- importance of winning or win ethic or **win at all costs** (sport and commercialism) in some schools or to some teachers or pupils
- **ethics and deviance** – scope of PE to instil good behaviour and to stop deviance/sportsmanship v gamesmanship
- **role of coach** – variety of roles possible during ‘sport’ aspect of PE/eg instructor, trainer, motivator

**T1 – links within A2 Historical Studies**

- contrast opportunity and provision in late C19th Public Schools and State Schools
- Contrasts include:

<b>Public Schools</b>	<b>v</b>	<b>State Schools</b>
development of character		development of health or military or physical fitness
lots of time		limited time
lots of space		limited space
Other suitable contrasting points should be accepted		

- contrasts based on class between public school boys and state school children/middle and upper class v working class
- gender variables
- limited free time in state schools compared to increased free time for working class in society at the time
- Dr Arnold as great reformer in Public Schools v George Newman as reformer in State Schools

**T2 – links between AS (contemporary) and A2 (historical)**

- varied opportunities in state schools today v limited opportunities in state schools in first half of C20th
- PE, recreation and sport today v military training or physical training in early C20th
- same constraints of limited time, money, space and resources both now and then.

## (c) (Comparative Studies in Physical Education)

**Describe the factors that have helped to improve sport and Physical Education either in French Schools or Australian Schools.**

French Schools: Sub max 7

1	(Decentralisation)	Schools design own curriculum/more suited to individual schools/needs/decentralisation
2	(Government initiatives UNSS)	UNSS helps schools to deliver sport/schools have outside help to deliver sport/association sportif/AS/more regular sports afternoons
3	(Government initiatives Sport Sections)	Sports sections promote sporting excellence/departments within school that promote sports excellence
4	(Government initiatives Primary Sport Schools)	Primary Sport Schools/primary schools with outstanding facilities
5	(Government initiatives Les Classes Transplantees)	Les Classes Transplantees/Classes for primary school children that involve physical and academic work/Classe Vert/neige/mer
6	(Provision)	Improve provision and quality of equipment across the country/FNDS distributes lottery funding
7	(Teacher Training)	Upgraded teacher training/introduction of CAPEPS/STAPS
8	(Secondary Review)	Curriculum review (14-18)
9	(Inspection)	Schools are inspected regularly (every two years)
10	(Attitude)	Attitude toward subject has changed/PE of academic value/holistic education
11	(Examinations)	PE is part of the Baccalaureate examination
Australian Schools:		Sub max 7
12	(SEPEP)	Sport Education and Physical Education Project (SEPEP)/100 minutes per week for each of PE and sport/loose footwork as a teaching guide
13	(Structure)	Intra and Inter school games/structured competition/SSA/School Sport Australia
14	(Electives)	A broad range of electives/options to cater for all interests/needs/in year 9-10/outdoor education
15	(Fundamental Skills Programme)	Basic skills make up Primary programme/a skilful child is more likely to continue participation/Fundamental Motor Skills Programme
16	Physical and Sport Education (PASE)	Physical and Sport Education (PASE) is a professional development programme for teachers
17	(Sports linkage)	Liaisons between club and school/sharing facilities/talented children are passed on to clubs
18	(Exemplary Schools)	Exemplary schools share good practice/Schools with good programmes are funded to share good practice
19	(Sports/Talent Search)	Sports/Talent Search allows students to select sports which suit them best by accessing database
20	(Awards)	State awards/Blues/de Coubertin for excellence/participation/fair play/sports person in schools programme
21	(ACE)	Athletic Career Education programme (ACE) star performers used as role models/Sports Person in Schools Project
22	(Sports leaders)	Sports leaders help delivery/older pupils help deliver to youngsters
23	(Teacher Games)	Teacher games sets example to children/teacher participation sets example
24	(Fitness initiatives)	Australian Fitness Education Award/Blue Earth initiatives/ACHPR

**T1 – relate to France, Australia, USA**

**T2 – compare with UK**

**Compare sport in specialist Sports Colleges in the UK with sport in High Schools in the USA with reference to aims, funding and organisation.**

Sub max 9

	UK Sports Colleges	USA High Schools
<b>Aims</b>		
25 (Standards)	Raise standards of achievement in PE/sport	Raise standards of achievement in sport
26 (Inclusivity)	Includes children across the ability range	Selects talented children to play sport/High school is Centre of Sports Excellence
27 (Community)	Community provision/sharing facilities	No evidence of sharing facilities/community is involved as spectators/sponsors
28 (Partnerships)	Links/share good practice with other school	In competition with other schools
29 (Progression)	Provide a structure through which young people can progress to careers in PE/sport	A programme of excellence/an aim is to prepare athlete for scholarship/professional sport
30 (Participation)	To increase participation	To increase expertise/skill of individual/promote elitism
31 (Club links)	Club link strategy	No such links
32 (National initiatives)	Involved in National initiatives/eg Step into Sport	Operates as autonomous/independent body/High schools work on their own
33 (Quality)	To provide high quality teaching/facilities	Coaching standards/facilities are of high quality
<b>Funding</b>		
34 (Funding)	Schools raise initial money from private sector sponsorship/£50,000 raised by schools/UKSI	Funding for elite sport is provided by school/alumni/sponsorship/commercial enterprise
35 (Funding)	Additional funding from the Department for Education & skills (DfES)/government	No direct government funding
36 (Development plan)	Funding granted on receipt/acceptance of Development Plan	No such external development plan
<b>Organisation</b>		
37 (Teacher/coach)	Teacher in charge of curriculum delivery (see T1 links)	Coach/Athletic Director in charge of sports delivery
38 (Specification)	To teach skills to all abilities	To develop skills of elite performers
39 (Specification)	To teach a broad range of sports	To coach/specialise in one sport
40 (Aim of teacher/coach)	To develop participation/enjoyment/develop learning environment	To win
41 (Contract teacher/coach)	Permanent contract	Coach 'Hire & Fire' contact
42 (Ethos)	Participation/sport is for all	Lombardian/sport for elite
43 (Image)	Does not copy the professional sport scene	Reflects the professional sports scene
44 (Structure)	Well structured eg Programme Development Managers/School Sports Coordinators/Primary Link Teachers	Well structured eg Head Coach, Athletic Director, Supporters group chairman

Just mention USA =

**TOTAL KNOWLEDGE MARKS [13]**

T1

Examples of T1 links

**French schools**

Sport and Nationalism  
 The economic plan (de Gaulle)  
 PE and sport and Intellectualism  
 Previous low status of PE  
 Le Classe transplantee and Naturalism  
 Mass participation  
 Joint provision  
 Rise of 'New Games' eg golf  
 Progression pathways CREPS & INSEP

Examples of T1 links

**Australian schools**

Reference to cultural factors eg tradition of sport, political involvement and climate  
 Reference to 'Sport Obsession'  
 Demographical factors eg small population  
 Government involvement in promoting SEPEP  
 Progression to high level sport eg AIS and work of ASC  
 AIS Education Programme (ACE) and schools link eg Sports Person in Schools Project  
 Mass participation and ASC  
 Social issues in sport eg Equality

Examples of T1 links

<b>UK Sports Colleges</b>	<b>USA High Schools</b>
Role of Youth Sports Trust	Reference to Little League sport
Schemes linked to YST eg The Tops Programmes	Links to Scholarship and Pro-Draft opportunities
Drawbacks of Sport College organisation/ethos	School PE and practical assessment methods
Specific linkage schemes eg Physical Education, School Sport and Clubs Links Strategy (PESSCL)	Crisis of school PE curriculum & strategies to regenerate PE eg Physical Education for Progress (PEP)
Developing excellence UKSI and progression pathways	Limited Mass Participation policy
The work of Sportscoach UK	Professional sport and commercialism/entertainment
Sport for All policy & work of Sport England	Professional sport and sensationalism/violence
Special Interest Groups eg Disability Sport England	Link to American cultures eg opportunity & American Dream. Reference to accountability and Capitalism

## Banded criteria for synoptic assessment

16 - 19	<p>A comprehensive response:</p> <ul style="list-style-type: none"> <li>• <b>Comprehensive knowledge has been consistently and clearly linked to practical performance.</b></li> <li>• <b>Relevant links and connections between and within study areas have been made successfully.</b></li> <li>• <b>Responses at the top of this level will demonstrate sound analytical and evaluative skills.</b></li> <li>• There is evidence of well-argued, independent opinion and judgements supported by sound examples.</li> <li>• Technical and specialist vocabulary is used accurately.</li> <li>• The Quality of Written Communication is generally fluent with few errors.</li> </ul>
11 - 15	<p>A competent answer:</p> <ul style="list-style-type: none"> <li>• Substantial knowledge has been linked to practical performance and the majority of examples will be well considered.</li> <li>• Relevant links between and within subject areas have been made with some success.</li> <li>• Evidence of sound analysis is apparent.</li> <li>• Independent opinions and judgements will be present but towards the bottom of this level, not always supported by sound examples.</li> <li>• Technical and specialist vocabulary is used with some accuracy.</li> <li>• The Quality of Written Communication is generally fluent with few errors.</li> </ul>
6 - 10	<p>A straightforward answer:</p> <ul style="list-style-type: none"> <li>• <b>There will be evidence that some knowledge has been linked to practical performance. Connections are made between and within study areas but at the bottom of this level, links will be tenuous.</b></li> <li>• Analysis will be limited and restricted to the obvious.</li> <li>• Opinion and judgement will be unsupported.</li> <li>• Technical and specialist vocabulary is used with limited success.</li> <li>• The Quality of Written Communication lacks fluency and there will be errors.</li> </ul>
0 - 5	<p>A limited answer:</p> <ul style="list-style-type: none"> <li>• There will be limited knowledge with few links to practical performance.</li> <li>• Connections within and between study areas rarely made.</li> <li>• Opinion and judgement almost entirely absent.</li> <li>• <b>Little or no attempt to use technical and specialist vocabulary at the bottom of this level.</b></li> <li>• <b>Errors in Quality of Written Communication will be intrusive.</b></li> </ul>

# Grade Thresholds

Advanced GCE Physical Education (3875/7875)  
June 2008 Examination Series

## Unit Threshold Marks

Unit		Maximum Mark	a	b	c	d	e	u
2562	Raw	60	41	36	31	27	23	0
	UMS	120	96	84	72	60	48	0
2563	Raw	45	33	30	27	24	21	0
	UMS	90	72	63	54	45	36	0
2564	Raw	90	70	63	56	49	42	0
	UMS	90	72	63	54	45	36	0
2565	Raw	45	33	30	27	25	23	0
	UMS	90	72	63	54	45	36	0
2566	Raw	60	45	41	37	33	29	0
	UMS	120	96	84	72	60	48	0
2567	Raw	90	71	64	58	52	46	0
	UMS	90	72	63	54	45	36	0

## Specification Aggregation Results

Overall threshold marks in UMS (ie after conversion of raw marks to uniform marks)

	Maximum Mark	A	B	C	D	E	U
3875	300	240	210	180	150	120	0
7875	600	480	420	360	300	240	0

The cumulative percentage of candidates awarded each grade was as follows:

	A	B	C	D	E	U	Total Number of Candidates
3875	12.25	28.08	47.28	68.03	85.10	100	14279
7875	13.83	35.39	60.31	82.38	96.31	100	10978

For a description of how UMS marks are calculated see:

[http://www.ocr.org.uk/learners/ums\\_results.html](http://www.ocr.org.uk/learners/ums_results.html)

Statistics are correct at the time of publication.

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