

# Physical Education

Advanced GCE A2 7875

Advanced Subsidiary GCE AS 3875

## Mark Schemes for the Units

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**January 2009**

**3875/7875/MS/09J**

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Mark schemes should be read in conjunction with the published question papers and the Report on the Examination.

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## CONTENTS

**Advanced GCE Physical Education (7875)**

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

### MARK SCHEMES FOR THE UNITS

<b>Unit/Content</b>	<b>Page</b>
2562 The Application of Physiological and Psychological Knowledge to Improve Performance	1
2563 Contemporary Studies In Physical Education	17
2565 Physical Education: Historical, Comparative, Biomechanical and Sport Psychology Options	29
2566 Exercise and Sport Physiology and the Integration of Knowledge of Principles and Concepts Across Different Areas of Physical Education	43
Grade Thresholds	67

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

## Section A

### Application of Anatomical and Physiological Knowledge to Improve Performance

Question			Expected Answer	Mark	Additional Guidance
1	(a)	(i)	Using your anatomical and physiological knowledge, identify the type of joint, articulating bones, agonist and antagonist muscles of the hip joint during the preparation phase of the dive.		1. Accept Synovial Ball and Socket  2. Mark first two only. Accept pelvic girdle/ Ilium 3. Mark first only 4. Mark first only Do not accept gluteals or gluteus medius  Some candidates are mixing up points 3 & 4
			<b>4 marks in total:</b> 1 Joint Type: Ball and Socket 2 Articulating Bones: Pelvis and Femur/Acetabulum of Pelvis and Head of Femur 3 Agonist muscle: iliopsoas 4 Antagonist muscle: Gluteus Maximus/Minimus		
1	(a)	(ii)	What movement will occur at the hip joint as the swimmer pushes off the block? Name an exercise which could be used to strengthen the agonist muscle responsible for this movement.		Do not expect a description of an exercise or a diagram on its own. Candidates should NAME an exact exercise.  2. Mark first answer. Accept Bent Knee Hip Extension. Do not accept squat thrusts
			<b>2 marks in total:</b> 1 Movement: Extension 2 Strength Exercise: Lunges/Squats/Leg Press		

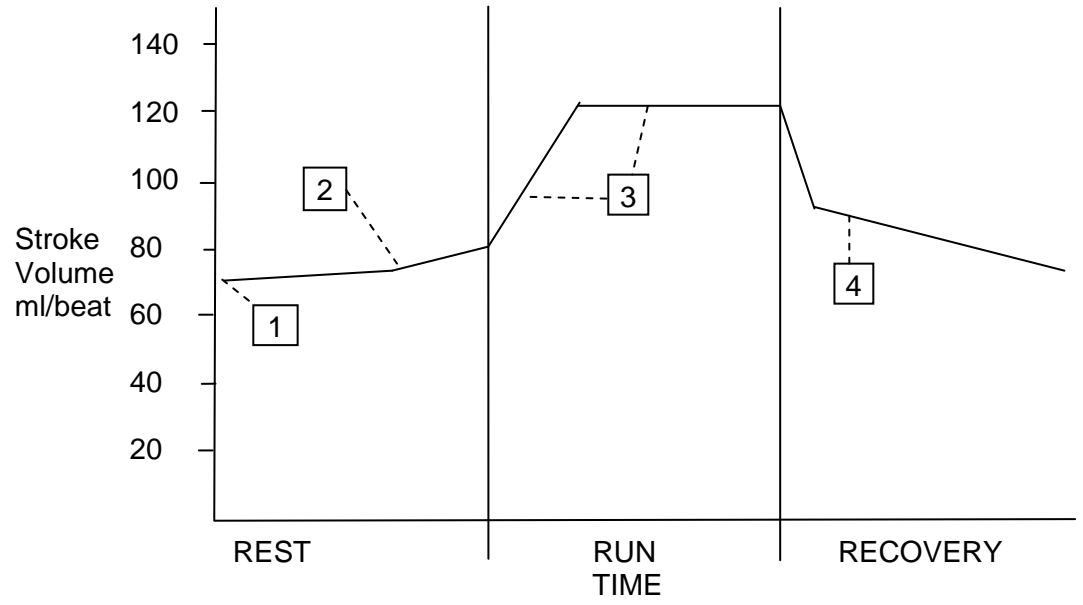
Question	Expected Answer	Mark	Additional Guidance
(iii)	<b>How would a warm up benefit the strength of muscle contractions during the dive?</b>		Ensure candidates have referred to a change i.e. more/less/ reduced/increased Do not accept 'faster blood flow' as it is not relevant to strength of muscle contraction.
	<p><b>3 marks in total:</b></p> <ol style="list-style-type: none"> <li>1 An increase in <b>muscle</b> temperature</li> <li>2 Greater stretch/elasticity (of muscle fibres)</li> <li>3 Faster nerve impulse conduction</li> <li>4 Improve coordination between antagonistic pairs</li> <li>5 Less resistance within muscle/reduced muscle viscosity</li> <li>6 Increased enzyme activity</li> <li>7 More energy available to the muscles</li> <li>8 More force/powerful contractions</li> </ol>	<b>[3]</b>	<p>2. Do not accept 'flexibility</p> <p>8. 'Stronger contractions' is repeat of question must use force or powerful. Accept 'explosive' contractions</p>

Question	Expected Answer	Mark	Additional Guidance																														
1 (b)	Give two structural characteristics of a slow twitch (type 1) muscle fibre.																																
	2 marks in total:																																
	<table border="0"> <thead> <tr> <th data-bbox="344 312 707 346">Structural Characteristics</th> <th data-bbox="949 312 1281 346">Slow Oxidative (Type 1)</th> </tr> </thead> <tbody> <tr> <td data-bbox="344 349 707 381">1 Size</td> <td data-bbox="949 349 1281 381">Small</td> </tr> <tr> <td data-bbox="344 384 707 416">2 Colour</td> <td data-bbox="949 384 1281 416">Red</td> </tr> <tr> <td data-bbox="344 419 707 451">3 Mitochondria</td> <td data-bbox="949 419 1281 451">Many</td> </tr> <tr> <td data-bbox="344 454 707 486">4 Capillaries</td> <td data-bbox="949 454 1281 486">Many</td> </tr> <tr> <td data-bbox="344 489 707 521">5 Motor neurone size</td> <td data-bbox="949 489 1281 521">Small</td> </tr> <tr> <td data-bbox="344 525 707 557">6 Glycogen store</td> <td data-bbox="949 525 1281 557">Small</td> </tr> <tr> <td data-bbox="344 560 707 592">7 Sarcoplasmic reticulum development</td> <td data-bbox="949 560 1281 592">Little</td> </tr> <tr> <td data-bbox="344 595 707 627">8 Myelin sheath</td> <td data-bbox="949 595 1281 627">Thin</td> </tr> <tr> <td data-bbox="344 630 707 662">9 Myosin/ATPase activity</td> <td data-bbox="949 630 1281 662">Low</td> </tr> <tr> <td data-bbox="344 665 707 697">10 Fibres per motor neurone</td> <td data-bbox="949 665 1281 697">Few</td> </tr> <tr> <td data-bbox="344 700 707 732">11 Phosphocreatine stores</td> <td data-bbox="949 700 1281 732">Low</td> </tr> <tr> <td data-bbox="344 735 707 767">12 Myoglobin content</td> <td data-bbox="949 735 1281 767">High</td> </tr> <tr> <td data-bbox="344 770 707 802">13 Oxidative enzyme activity</td> <td data-bbox="949 770 1281 802">High</td> </tr> <tr> <td data-bbox="344 805 707 837">14 Triglyceride stores</td> <td data-bbox="949 805 1281 837">High</td> </tr> </tbody> </table>	Structural Characteristics	Slow Oxidative (Type 1)	1 Size	Small	2 Colour	Red	3 Mitochondria	Many	4 Capillaries	Many	5 Motor neurone size	Small	6 Glycogen store	Small	7 Sarcoplasmic reticulum development	Little	8 Myelin sheath	Thin	9 Myosin/ATPase activity	Low	10 Fibres per motor neurone	Few	11 Phosphocreatine stores	Low	12 Myoglobin content	High	13 Oxidative enzyme activity	High	14 Triglyceride stores	High	[2]	1. Do not accept 'short' 2. Do not accept pink/pale
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1 (c)	<p><b>Define one of Newton's three laws of motion. Use an example from Physical Education or Sport to illustrate your answer.</b></p>										
	<p><b>2 marks in total: 1 mark for definition. 1 mark for example. Example must relate to relevant law.</b></p>										
	<table border="0"> <thead> <tr> <th data-bbox="331 347 851 379"><b>Definition</b></th> <th data-bbox="873 347 1406 379"><b>Example</b></th> </tr> </thead> <tbody> <tr> <td data-bbox="331 384 851 480"> <p><b>1</b> (Law 1 Inertia) An object will remain at rest or constant velocity unless a force is acted upon it.</p> </td> <td data-bbox="873 384 1406 480"> <p><b>2</b> e.g. In a free kick the football will remain at rest until a force is applied to it by the player's foot.</p> </td> </tr> <tr> <td data-bbox="331 485 851 655"> <p><b>3</b> (Law 2: Acceleration) The acceleration/rate of change of momentum of an object is directly proportional to the force applied to it.</p> </td> <td data-bbox="873 485 1406 655"> <p><b>4</b> e.g. A golfer must apply the correct force to the ball in the correct direction to enable a putt to go in the hole/ the harder you kick a football the further it will go</p> </td> </tr> <tr> <td data-bbox="331 660 851 912"> <p><b>5</b> (Law 3: Reaction) For every action there is an equal and opposite reaction.</p> </td> <td data-bbox="873 660 1406 912"> <p><b>6</b> e.g. A swimmer applies a force to the wall during a tumble turn with their feet. The wall applies an equal and opposite reaction propelling the swimmer forward away from the wall.</p> </td> </tr> </tbody> </table>	<b>Definition</b>	<b>Example</b>	<p><b>1</b> (Law 1 Inertia) An object will remain at rest or constant velocity unless a force is acted upon it.</p>	<p><b>2</b> e.g. In a free kick the football will remain at rest until a force is applied to it by the player's foot.</p>	<p><b>3</b> (Law 2: Acceleration) The acceleration/rate of change of momentum of an object is directly proportional to the force applied to it.</p>	<p><b>4</b> e.g. A golfer must apply the correct force to the ball in the correct direction to enable a putt to go in the hole/ the harder you kick a football the further it will go</p>	<p><b>5</b> (Law 3: Reaction) For every action there is an equal and opposite reaction.</p>	<p><b>6</b> e.g. A swimmer applies a force to the wall during a tumble turn with their feet. The wall applies an equal and opposite reaction propelling the swimmer forward away from the wall.</p>	<p>[2]</p>	<p>Candidates do not need to name the law. However if the law is named and the explanation does not match the named law use professional judgement in marking the explanation</p> <p>If candidates mix up 2 definitions but the example applies to one of them you can award the example mark.</p> <p>If the definition is vague but the example is correct then you can award the example mark.</p> <p>If the definition is wrong then no mark for example.</p>
<b>Definition</b>	<b>Example</b>										
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Question	Expected Answer	Mark	Additional Guidance
(d)	Using an example from PE or Sport describe how angular motion is produced.		
	<b>2 marks in total: 1 mark for description, 1 mark for example.</b>		
	<p>1 A force is applied outside the <b>centre of gravity/mass</b> of an object to impart spin.</p> <p>2 When a body or part of a body moves in a circle or part of a circle about an <b>axis</b> (of rotation) / <b>fixed point</b>. E.g. A footballer kicks the ball at the bottom left in order to curl it around the wall in a free kick/ The bowling arm of a cricketer rotates around the shoulder during a delivery/ a gymnast rotates around a bar.</p>	<b>[2]</b>	<p>'Hit off centre of mass' = BOD 'Hit off centre' = Vague 'Hit side/edge of ball creates spin' = Vague</p>
			<b>Total:[15 marks]</b>



Question	Expected Answer	Mark	Additional Guidance												
2 (a) (i)	<p>Sketch a graph showing the changes that you would expect to the stroke volume:</p> <ul style="list-style-type: none"> <li>• At rest</li> <li>• During a maximal 400m run</li> <li>• 10 minute recovery period</li> </ul>														
 <p>3 marks in total. MUST HAVE ONE FROM EACH AREA.</p> <table border="0"> <tr> <td>REST</td> <td>1</td> <td>Starting point approx. 70ml. (60-80ml acceptable)</td> </tr> <tr> <td></td> <td>2</td> <td>Anticipatory Rise must end between 50 - 90ml</td> </tr> <tr> <td>RUN</td> <td>3</td> <td>Sharp increase in volume once exercise commences and plateau between 100-140ml (volume may reduce slightly towards the end as HR rises)</td> </tr> <tr> <td>RECOVERY</td> <td>4</td> <td>Sharp decline after exercise ends with gradual return to resting levels</td> </tr> </table>		REST	1	Starting point approx. 70ml. (60-80ml acceptable)		2	Anticipatory Rise must end between 50 - 90ml	RUN	3	Sharp increase in volume once exercise commences and plateau between 100-140ml (volume may reduce slightly towards the end as HR rises)	RECOVERY	4	Sharp decline after exercise ends with gradual return to resting levels		<p><b>MARK POINTS 1, 3 &amp; 4 FIRST AND IF THE CANDIDATE GETS ALL MARKS THEN GO BACK AND MARK POINT 2 TO ACCESS MAXIMUM MARKS.</b></p>
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RECOVERY	4	Sharp decline after exercise ends with gradual return to resting levels													
		[3]	<p>2. total increase in anticipatory rise cannot exceed 20ml</p> <p>3. Must be an increase in angle from the anticipatory rise Plateau should be more than half way across run time</p> <p>4. Stroke volume should show a steeper recovery than a heart rate graph done in previous years</p>												

Question	Expected Answer	Mark	Additional Guidance
2 (a) (ii)	An increase in stroke volume is one of the reasons why cardiac output is increased during exercise. Describe other factors that cause an increase in cardiac output during exercise.		
<b>3 marks in total.</b>			
	<ol style="list-style-type: none"> <li>1 Increase in heart rate</li> <li>2 Adrenaline/nor adrenaline/epinephrine (released)</li> <li>3 Increase in venous return/muscle pump/respiratory pump/more blood returning to heart</li> <li>4 Wall of right atrium stretched more increasing firing rate of SA node</li> <li>5 Information sent by proprioceptors/baroreceptors/chemoreceptors/thermoreceptors sent <b>to the CCC</b></li> <li>6 Impulse is sent down the accelerator nerve to the SA node</li> <li>7 Increase in sympathetic control</li> <li>8 Increase in temperature speeds up nerve impulses</li> </ol>	<b>[3]</b>	<p>1. BOD = causing the heart to beat more</p> <p>7 &amp; 8 There must be a reference to a rise/increase of sympathetic control/temperature</p>

Question	Expected Answer	Mark	Additional Guidance
2 (b)	Describe the vascular system mechanisms which allow redistribution of blood to occur.		
	4 marks in total.		
	1 Blood is distributed from the organs to the working muscles/vascular shunt		
	2 The arteries/arterioles/ feeding the organs <u>vaso</u> constrict		2. Must refer to organs
	3 The pre-capillary sphincters feeding the organs contract/ (vaso) constrict/close		3. Must refer to organs
	4 The arteries/ arterioles/feeding the working muscles <u>vaso</u> dilate		4. Must refer to muscles
	5 The pre-capillary sphincters feeding the muscles relax/ (vaso) dilate/open		5. Must refer to muscles
	6 Controlled by the Vasomotor control centre/ VCC	[4]	
2 (c)	Name the respiratory muscles used to force more air out of the lungs during exercise.		
	2 marks in total.		
	1 <b>Internal</b> intercostals		
	2 Rectus abdominus/Transverse abdominus/external obliques/internal obliques		2. Do not accept 'rectus abdominals'
		[2]	Obliques/abdominals = Vague

Question	Expected Answer	Mark	Additional Guidance
2 (d)	Describe oxygen diffusion from the alveoli to the pulmonary capillaries during exercise.		
	<p><b>3 marks in total.</b></p> <p>1 Oxygen will move from an area of high pressure/concentration to an area of low pressure/concentration</p> <p>2 Partial pressure of oxygen (PPO<sub>2</sub>) is high/remains the same in the lungs/alveoli</p> <p>3 Partial pressure of oxygen (PPO<sub>2</sub>) is lower than at rest /decreases from a resting level in the blood/capillaries</p> <p>4 Increased concentration gradient/pressure gradient/diffusion gradient</p> <p>5 Causing oxygen to diffuse quicker/faster</p> <p>6 Greater amounts of oxygen diffuse from the alveoli into the blood</p>	<b>[3]</b>	<p>Do not accept 'air' or 'gas'</p> <p>Accept concentration of oxygen as being the same as PPO<sub>2</sub></p> <p>'pressure' on its own = vague for points 2 &amp; 3</p> <p>2. Do not accept 'higher'</p> <p>3. Must be compared to resting rate</p> <p>4. Do not accept 'Steep/high' only 'Steeper/higher'</p> <p>6. Must refer to greater/increased/more amounts of oxygen</p>
			<b>Total: [15 marks]</b>

## Section B

## Acquiring and Performing Movement Skills

Question		Expected Answer	Mark	Additional Guidance
3	(a)	<p><b>Use a practical example to explain each stage of movement skills development shown in Fig 2</b></p> <p><b>3 marks in total: Sub max 2 with no/incorrect examples.</b></p> <p>1 (Motor abilities) born with/innate/genetic individual movement characteristics/form the basis of fundamental motor skills (e.g. speed/flexibility)</p> <p>2 (Fundamental motor skills) movement skills that form the basis of sport specific skills/without FMS more specific sports skills cannot be developed/basic skills (e.g. catching/kicking/running)</p> <p>3 (Sport specific skills) learned/goal directed movement related directly to a sport/sports skills are developed by combining our abilities with the FMS (e.g. catching a ball in cricket/kicking a football/running a sprint event)</p>	[3]	<p>Do not accept an example with no explanation</p> <p>1. Must have same aspect relating to movement i.e. innate plus some movement Accept: Power, coordination, agility, balance, speed, cardiovascular fitness, stamina, endurance, flexibility, muscular endurance</p> <p>3. Must have suggestion of combination of an ability and a FMS</p>

Question			Expected Answer	Mark	Additional Guidance
3	(b)		<b>Use practical examples to explain the low and high classification of movement skills.</b>		
			<b>4 marks in total.</b>		
		1	(Low organisation) sub routines are easily separated/skill can be broken down into sections		1 & 2 Do not credit quantity i.e. low has few parts/high has lots of parts
		2	(Example) swimming strokes/triple jump/tennis serve		
		3	(High organisation) sub routines closely linked together/skill difficult to break down into sections		
		4	(Example) golf drive/cartwheel/cycling	<b>[4]</b>	
3	(c)	(i)	<b>Define reaction time.</b>		
			<b>1 mark in total</b>		
		1	The time from the onset of the stimulus to the initiation of the response		'React' = Repeat of question Accept: beginning of movement/start of stimulus/start of response/ from stimulus Do not accept just 'movement' it must be the <u>start</u> of the movement/response
				<b>[1]</b>	

Question	Expected Answer	Mark	Additional Guidance
3 (c) (ii)	Sketch a graph to illustrate the effect of choice reaction time (Hick's Law) on physical performance.	[3]	
	<p data-bbox="362 274 1272 306">3 marks in total</p> <div data-bbox="439 331 1030 746"> </div> <p data-bbox="362 785 907 880"> 1 <b>Both</b> axes correctly labelled  2 <b>Both</b> axes contain increasing scale  3 Correct shape of curve </p>		<ol data-bbox="1402 338 2042 513" style="list-style-type: none"> <li>1. Must have <b>choice</b> reaction time</li> <li>2. Allow arrows/numbers for increasing scale Scale can be credited even if remainder of graph is incorrect</li> <li>3. Line must start at the corner</li> </ol> <p data-bbox="1402 545 1706 577">BOD for a linear graph</p>
		[3]	

Question		Expected Answer	Mark	Additional Guidance
3	(d)	<b>Describe closed loop motor control.</b>		
		<b>4 marks in total.</b>		
		1 Kinaesthetic/proprioceptive/internal feedback informs performer about position of body		1. 'Feedback' alone is vague. It must come from within/ yourself not outside sources. Kinaesthetic feedback is acceptable on its' own. Accept inner senses/intrinsic /intrinsicly
		2 Information goes to central control mechanism		4. Accept 'more slowly' but must refer to changes being made. BOD for the converse e.g. 'not fast/ rapid movement'
		3 Comparison made between actual movement and motor programme stored in LTM/comparison made between perceptual trace and memory trace		6. Kinaesthetic feedback must be qualified. Candidates cannot gain a second mark for just simply stating Kinaesthetic awareness.
		4 Changes that may be required are initiated by the effector mechanism/changes may be made because a skill takes longer to perform		7 & 8 Must make reference to <u>levels</u> and include appropriate description
		5 (Muscular system) adjusts the body/corrects the mistake		
		6 Kinaesthetic/proprioceptive feedback <b>occurs again</b>		
		7 Level 2 involves sub-conscious control/limited attention to process is required		
		8 Level 3 involves conscious control/greater attention to process is required	<b>[4]</b>	



Question		Expected Answer	Mark	Additional Guidance
4	(a)	<b>Use a practical example to describe the characteristics of the autonomous phase of learning.</b>		<p>Candidates can access maximum marks with only one example providing that the example is linked specifically to one of the mark scheme points.  <b>Do not accept just naming a sport e.g. In football...</b>            Do not accept: high/advanced/elite performer.</p> <p>1. Vague = almost automatic/naturally/instinctive.            BOD = well learned</p> <p>2. 'Not thinking about the skill' = vague</p> <p>5. Accept 'proprioception'. Be careful not to award 'kinaesthesia' on its own</p> <p>7. 'Consistent must relate to repeated success. Consistent on its' own is insufficient. Accept 'repeatedly well'.            BOD = aesthetically pleasing</p>
		<b>3 marks in total: Sub max 2 with no example.</b>		
		1 Movements are automatic/grooved/over learned/habitual/perfected 2 Minimum concentration directed to sub routines/movements performed without conscious control 3 External factors such as tactics/strategy can be focused upon 4 The movement can be relagated to a sub routine of another motor programme 5 Kinaesthetic/internal feedback can be acted upon by the performer/errors detected and corrected without assistance from external sources 6 Information processing time is reduced 7 Skill is efficient/fluent/accurate/consistently well 8 Continued practice needed to remain in this phase	<b>[3]</b>	
4	(b)	<b>Describe the long term memory.</b>		<p>1. Accept limitless/has no maximum.            Vague = large capacity/high capacity/huge capacity</p> <p>2. Accept 'never forget'.            Vague = stored for years/long duration</p>
		<b>2 marks in total.</b>		
		1 Stores unlimited amount of information 2 Stores information for an unlimited amount of time 3 Holds motor programmes 4 LTM is used to compare information passed on from STM/decodes information back to STM	<b>[2]</b>	

Question		Expected Answer	Mark	Additional Guidance
4	(c)	<b>Describe the roles of insight learning, intervening variables, past experience and whole learning within the cognitive theories.</b>	[4]	
		<b>4 marks in total.</b>		
		1 (Insight learning) the learner understands the relationship between all the stimuli presented/when an 'insight' is gained the movement can suddenly 'all come together'		2. Accept: Planning how a skill is going to performed/ thinking part/ logic used to solve problem/ decision making
		2 (Intervening variables) the mental process occurring between receiving a stimulus and initiating a response		3. Accept: learn by associating past experience with new ones
		3 (Past experience) previous situations assist performer in solving the problem/performing a new skill/experiences stored in LTM assist in perceptual process		4. BOD = skill performed as a whole
		4 (Whole learning) skills (according to Gestaltists) are best learned/performed as a whole and not split up into sections.		
4	(d)	(i)	<b>What is meant by motivation?</b>	[1]
			<b>1 mark in total.</b>	
		1 The drive/need/want to perform/learn/the internal mechanisms and external stimuli which arouse and direct behaviour.		Accept: Reasons to achieve Encouragement = vague

Question	Expected Answer	Mark	Additional Guidance
(ii)	<p><b>Describe and apply intrinsic motivation to a practical example.</b></p> <p><b>2 marks in total: Sub max 2 marks with no example.</b></p> <p>1 The internal drive of a performer/performer wants to learn for personal reasons</p> <p>2 (Example) a gymnast wanting to learn a round off for personal challenge/jogging on a regular basis because of enjoyment of activity.</p>	<b>[2]</b>	<p>1. BOD = comes from within/themselves. Do not accept: Self motivation/self satisfaction</p> <p>2. Examples need to relate to pride/challenge/enjoyment/self esteem/satisfaction Accept: personal best</p>
(iii)	<p><b>Use a practical example to explain the Inverted U theory of arousal.</b></p> <p><b>3 marks in total: Sub max 2 marks with no example</b></p> <p>1 Under arousal will produce poor performance</p> <p>2 As arousal increases so does performance</p> <p>3 Optimum/moderate arousal will produce optimum performance.</p> <p>4 Further increase in arousal/over arousal will result in deterioration of performance</p>	<b>[3]</b>	<p>Accept a diagram if each point is supported by an explanation</p>
<b>Total: [24 marks]</b>			

## 2563 Contemporary Studies In Physical Education

Question		Additional Guidance	
<b>1 (a) (i)</b>	<b>Identify possible benefits of Physical Education – other than health and fitness. 4 marks in total:</b>		
		<b>Accept</b>	<b>Do not accept</b>
1 (physical/skill)	physical (values or skills ) / sport skills	examples e.g. a tennis serve or agility	references to health and fitness (in Qu) / skill(s) or ‘teaches new skills’ on own
2 (knowledge)	knowledge of: sports / rules / tactics / body / theory / nutrition /benefits of exercise		healthy balanced lifestyle/ health / fitness
3 (preparation)	preparation (values or skills) / preparation for leisure or sport / take up activity / increased participation / join club / chance to play competitive sport / preparation for career or work or (later) life e.g. become teacher or professional performer or coach or other suitable example	hobby	reference to creating elite performers
4 (personal / leadership)	personal (values or skills) / leadership / self-confidence or esteem or realisation or development / knowledge of strengths and weaknesses or self-actualisation / discipline / character building / loyalty / learn to win-lose / sense of achievement / responsibility / independence / to be competitive / enjoyment	accept defeat / learn about themselves / fun	to play competitive sport / skills for school or life or work / sense of adventure
5 (social /teamwork)	social (values or skills) / teamwork / sharing / co-operation / communication / socialisation / independence	interaction	socialise / make friends /improve social life / be more sociable
6 (commitment / mental)	commitment / determination / motivation / meeting or overcoming challenges / mental strength / emotional control		
7 (cognitive)	cognitive or thinking skills / decision making / problem solving		
8 (sportsmanship)	sportsmanship / fair play / positive behaviour / morals / respect for others (or other suitable example)	not to cheat	‘respect’ on own
9 (Q of L)	qualitative values / (improved) quality of life / chance to be creative / achieving excellence		mental well being / relieve stress / break from academic work (part of health)
10 (aesthetic)	aesthetic appreciation or awareness		ref natural environment

1 (a) (ii)		Suggest reasons why regular, high quality Outdoor Education is only available in some schools. 3 marks total:	
		Accept	Do not accept
		positives / opposites e.g. some schools have the specialist staff or are located close to natural environment	ref to lack of opportunity or provision or esteem
1 (staff)	lack of: staff expertise or qualified staff / specialist training needed / staff ratios	specialist 'coaches' rather than staff	no 'trained' staff / lack of staff / not enough staff
2 (funding /equipment/ facilities )	lack of <b>funding for</b> : using artificial facilities or specialist equipment or specialist facilities lack of <b>funding for</b> : specialist staff training or transport or residential / need for voluntary contributions  <b>lack of</b> transport or specialist facilities or specialist equipment e.g. canoes	correct/ suitable/ appropriate equipment or facilities	'lack of funding for trips' on own / lack of facilities or equipment on own / no space / lack of resources / lack of provision / OEd is too expensive
3 (risk)	teachers reluctant to take on responsibility / staff uneasy with risk factors / some staff put off by paperwork or risk assessment procedures / lack of parental consent / health and safety concerns		not safe
4 (time)	lack of time / restrictions on timetable / pressure on curriculum / pressures of exam work		
5 (distance)	distance from natural environment or artificial facilities or suitable area		location of schools / schools in middle of city / access to facilities
6 (NC)	not a <u>compulsory</u> part of NC / low status in (some) schools / not seen as important by some teachers or Head Teachers		not on NC / 'attitudes' of HTs on own

<b>1 (a) (iii)</b>		<b>Identify current initiatives and strategies to develop sport in schools. 4 marks in total:</b>	
		<b>Accept</b>	<b>Do not accept</b>
1 (TOP Sport)	TOPSport / Dragon Sport	Ref. to TOPS programme(s) Sportsability / TOPLink	TOPS on own / or any other TOP programme
2 (sports colleges / schools )	sports colleges / partnerships (SSPS) / school-club links		
3 (SSCOs)	SSCOs / school sports co-ordinators / sports ambassadors		Primary link teachers FESCOs (college provision)
4 (competitions)	competitions / accept suitable examples such as Daily Mail Cup / competition managers		'give chance to compete' / school teams and ref. to extra curricular
5 (YST)	(work of) Youth Sport Trust		
6 (SDOs)	SDOs / work of Sports Development Officers		
7 (PESSCL)	PESSCL / PESSYP / Sport Unlimited / Extended Schools / 3 or 5 hour entitlement / Step into Sport	more time for PE / Junior sports leaders or Community sports leaders awards	
8 (coaching)	community coaching schemes / sports coaches in schools / coaching for teachers / professional development or INSET courses for teachers		provide coaching / better training for teachers
9 (kite marks)	Sportsmark / recognition for schools that reach targets in PE and community sport / Activemark awards / Healthy Schools	sportsmark gold / activemark gold / Active Schools	
10 (G & T )	G&T / gifted and talented (programmes) / sportsearch / talent ID / linking children with appropriate sport.		
11 (NC)	Requirements of new National Curriculum		National Curriculum on own

1 (b)		Why would the Olympic Games be classified as sport rather than as physical recreation? 4 marks total:	
We are looking for why the Olympic Games <b>is</b> sport – not why the Games are <b>not</b> physical recreation.			
		Accept	Do not accept
1 (organisation / time)	<u>strict</u> or <u>set</u> or NGB rules / codified / highly organised or structured / <u>high level</u> officials / pre-organised / pre-planned / set date / set time	Ref. in context to BOA or IOC	the Olympic Board reject: rules on own / organised on own / structured on own / referees on own / officials on own / 'governing bodies' on own
2 (place / facilities / equipment)	specialist or purpose built stadia or facilities / designated space or place or location / high tech or high level or specialist equipment	Olympic Village / specialist clothing	fixed boundaries / proper or better equipment
3 (competitive)	highly competitive / high level of competition		competitive / competition
4 (commitment)	(performers need): commitment / dedication / determination / effort / endeavour / intensive training (performers): make sacrifices / fulfil dreams		demanding / goal directed / training on own
5 (high level)	(performers show) <u>high levels</u> of skill or fitness / physical prowess (performers receive): <u>specialist</u> or <u>top level</u> coaching (performers are): high-level / elite / the best	elitist / top class / international / high standard	tactical / ref to sportsmanship
6 (extrinsic serious)	extrinsic rewards / a job / professional / money or fame / winning or outcome important / serious / huge amount at stake / <u>Olympic medals</u>		winners and losers / to break records / intrinsic values or rewards
7 (media / sponsorship / global)	media coverage / commercialism / expensive to host / official sponsors / sponsorship / The Olympic Partner (TOP) programme / international event / global spectacle		spectators
8 (drug tests)	drug testing involved		

<b>1 (c)</b>	<b>Explain how sponsorship can have both positive and negative effects on performers. 6 marks in total: sub max 4 from one section</b>		
<b>NB – take care to scroll whole answer and note sub max on negative aspects</b>			
<b>Positive:</b>		<b>Accept</b>	<b>Do not accept</b>
1 (full time / no work)	can concentrate fully on sport or training or competing / do not need to work / financial security / secure after retirement	performer can be fully dedicated or focused	money no concern / 'stability' on own
2 (money for...)	money for... living expenses or coaching or equipment or facilities or transport or accommodation / free kit or equipment	other accurate examples of how money can be used e.g. competition entry fees	
3 (quality of life)	improved quality of life or standard of living		
4 (confidence / image)	increased confidence or motivation or esteem/  good to be associated with high profile sponsor or product / raised profile / more recognition / enhanced image	more popular / performer promoted	become a role model
<b>Negative:</b>			
5 (exploitation)	exploitation or manipulation of performers / loss of privacy / constant attention / demands of sponsor	ref. to lower performance or focus due to distractions made available through money	'media attention' on own / ref. to laziness
6 (not for all)	sponsorship only available to few	ref to widens gap between performers	
7 (withdrawal)	sponsorship can be withdrawn / fear of losing sponsorship		
8 (reliance)	performers can become reliant on sponsor		
9 (negative image)	potential negative image (for performer or sport) e.g. alcohol or sponsorship		
10 (lack of choice)	lack of choice re products / required to wear specific kit or use specific equipment	dislike of provided products	
11 (pressure)	pressure from sponsor may lead to lower performance or playing when injured		'pressure' on own / pressure to take drugs



2 (a) (i)	In the context of sporting excellence explain the following terms: policy, provision and administration. 3 marks total		
1 (policy)	(government) initiatives or strategies or plans or procedures / <b>based on</b> ideology or beliefs or values	<b>Accept</b>	<b>Do not accept</b> 'ideology' on own (as govt policy is based on ideology of a country) / 'aims' on own
2 (provision)	facilities / equipment / coaches / competitions / courses / transport or other accurate example of what might be provided in context of sport / centres of excellence	<b>provision</b> of or <b>providing</b> plus suitable answer e.g. 'providing facilities' / UKSI / devolved national institutes (e.g. EIS)	funding
3 (administration)	the structure or management or organisation or running of sport	examples of organisations that administer sport such as NGBs or Sport England or UK Sport	paperwork / funding

2 (a) (ii)	<b>Give possible reasons why National Lottery funding is allocated on the basis of performers' world ranking / performances at major competitions. Identify potential disadvantages of allocating National Lottery funding in this way. 4 marks in total: sub max 2 from one section</b>		
<b>Possible reasons for allocating NL funding on basis of ranking: (not the positive effects of having funding)</b>		<b>Accept</b>	<b>Do not accept</b>
1 (limited)	limited funding available / not enough money for all		
2 (best option)	best option available (for allocating the funding) / some selection method needed		best option for gaining success or international success
3 (professionalism)	professional or competitive methods suit professional or highly competitive sport / method suits nature of contemporary sport		
4 (drugs)	potential opportunity to reduce doping / the need to peak more than once may reduce opportunity to take drugs for big competitions		
5 (incentive)	gives incentive / motivates performers		encourages / tests who copes with pressure
<b>Disadvantages of allocating NL funding in this way: (not the negative effects of being without funding)</b>			
6 (injury / unavailable)	if injured can lose chance to be in main event / if unavailable for selection events the best may lose out		
7 (peak)	need to peak at different times may contradict sport science or training theory		
8 (pressure)	too much pressure / top performers need support not extra pressure		
9 (lack of improvement)	need to be in the big competitions <u>to improve</u> / lower ranked don't get funding <u>so don't improve</u> / minority sports miss out <u>so don't improve</u>		will prevent many from competing in top events / 'money not given to minority sports' on own / lower ranked performers miss out
10 (medal value )	quality v quantity debate i.e. gold, silver, bronze medals / is one gold better than 3 bronze medals?		
11 (2012)	not good lead up to 2012 where performers need disproportionate or generous funding.		funding unequally distributed limited numbers get funding
12 (poor performance)	if they perform badly they lose funding and then <u>can't improve</u>		if the performers don't perform well at major competitions money will go elsewhere (RQ – outcome needed) / what if performer has a bad day ?
13 (demotivate)	demotivates	may give up	number involved may go down

2 (a) (iii)	<b>How do National Governing Bodies such as the Hockey Association (HA) attempt to increase levels of excellence in their individual sports? 4 marks in total:</b>		
Note focus on increasing <b>excellence</b> not mass participation			
		<b>Accept</b>	<b>Do not accept</b>
1 (selection)	select or manage national team / talent ID	identify players with potential / scouting for talent	scout for <u>players</u> / scouting systems / appoint officials / building base of pyramid
2 (science)	provide sport science support or analysis/ medical support	accept examples of sport science support	
3 (coaching / training)	provide <u>high level</u> coaching or training / appoint or provide performance director(s) or national coach / train <u>high performance</u> coaches or officials / improve quality of coaching	<b>best</b> or top or specialist	'coaching awards' on own/ provide better or good or qualified or 'quality' coaching /
4 (sponsorship / media)	seek sponsorship / develop commercial links / obtain media coverage / negotiate with media /		advertise or raise awareness of hockey (or equiv) / 'increase exposure' or 'promote' on own / any ref to role models
5 (facilities / equipment)	provide <u>high level</u> facilities or equipment	<b>best</b> or top or specialist	'provide better or good facilities or equipment ' on own
6 (liaison)	work with UK SPORT or UKSI or HCSCs eg Sport England or sports colleges or <u>high level</u> clubs	devolved national institutes e.g. EIS	school club links / more clubs/ SSCOs
7 (competitions)	organise or provide or inform about <u>high level</u> competitions / attract major events	county / regional / national / international	
8 (education)	provide lifestyle advice / drug education e.g. 100% ME / AASE (Advanced Apprenticeships in Sporting Excellence)		drug testing / doping control / ACE
9 (funding)	select for or distribute TASS or Sport Aid or lottery or World Class Programme funding (podium/development talent)		provide funding / give or award scholarships

2 (b)(i)		Describe sport and commercialism with reference to the American Dream. 4 marks in total:	
		Accept	Do not accept
1 (American Dream)	anyone can achieve success or wealth or status or upward social mobility / rags to riches / opportunity for wealth / happiness gained through wealth / everyone equal / land of opportunity / land of the free	a way out of poverty	anyone can achieve whatever they want or <b>anything</b> or everything / anyone can achieve success <b>in sport</b> / anyone can become a pro. sport star or superstar / everyone given opportunity to participate
2 (work)	hard work needed (to achieve the 'Dream') / hard work rewarded		must try hard / try your best
3 (business / capitalism/focus on corporate wealth)	sport is (big) business / links with capitalism / sport makes money	sport all about money / profit from ticket sales / sport is a brand	
4 (control)	commercialism or media (can) <b>control</b> sport		
5 (golden triangle / media / sponsorship)	golden triangle / relationship between sport sponsorship and media / sport linked with sponsorship <b>or</b> media / performers heavily sponsored or endorsed / performer as commodity or billboard	sport or performers used to advertise / money from TV	'there is advertising'
6 (win ethic)	win at all costs / Lombardian ethic / win ethic		
7 (spectatorism)	USA a nation of spectators rather than performers		
		Accept	Do not accept
1 (American Dream)	anyone can achieve success or wealth or status or upward social mobility / rags to riches / opportunity for wealth / happiness gained through wealth / everyone equal / land of opportunity / land of the free	a way out of poverty	anyone can achieve whatever they want or <b>anything</b> or everything / anyone can achieve success <b>in sport</b> / anyone can become a pro. sport star or superstar / everyone given opportunity to participate

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6 (win ethic)	win at all costs / Lombardian ethic / win ethic		
7 (spectatorism)	USA a nation of spectators rather than performers		

2 (b) (ii)		Give reasons why Kenya wants its runners to achieve international sporting success. Explanation needed – do not credit key word on own 3 marks in total:	
		Accept	Do not accept
1 (nation building)	it can: <b>promote</b> nation building / <b>to use....</b> the shop window effect / increase national pride or status or respect of country / boost image or reputation of country or government or politics / sporting success reflects political success / recognition for country / put country on world stage / increase tourism or wealth or trade / mask negative aspects of country	promote country /  to reflect that country is well run /  brings money to country	Kenya gets publicity = vague / 'nation building' or 'shop window' on own / 'sport is a political tool'
2 (stability / appeasement)	it can appease or stabilise the people or country / it can promote a 'feel good factor' or encourage social control / reduce crime / calm tensions		
3 (health)	to promote health/ to develop health conscious society/ sport as alternative to crime or drugs		
4 (integration)	it can integrate the people or tribes / it can bring the nation or tribes together		
5 (defence)	it can improve defence / to build strong or efficient army or police force		

2 (b) (iii)		Explain the strategies used by Kenya to achieve success in sport. 3 marks in total:	
		Accept	Do not accept
1 (role models)	use role models (to inspire others)		references to altitude and or diet on own role models on own
2 (unequal funding)	unequal or disproportionate funding / funding limited to one or two sports or small number of performers		
3 (high profile)	<b>choose</b> high profile sports	high profile sports to get maximum exposure	'use' high profile sports
4 (low tech / cheap)	<b>choose</b> low tech or cheap or simple or natural sports / sport(s) chosen that suit physique or lifestyle or environment	running chosen if linked to its simplicity	'use' low tech sports / running chosen on own
5 (selection / focus)	<b>select</b> or <b>focus</b> on limited range of sports / elitism / focus on elite performers / talent ID	pick one sport to focus on	

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

## Section A Historical Studies in Physical Education

- 1 (a) With reference to objectives, content and methodology, describe the *Model Course of 1902* and *Moving and Growing/Planning the Programme of the 1950s*.

[6]

6 marks total:

Sub max of 1 from each section

<b>The Model Course of 1902</b>		
<b>Objectives: sub max 1</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 – skill)	weapons training/proficiency with guns
<b>Content: sub max 1</b>		
4	(drill)	military drill/
5	(exercises)	static exercises/eg press ups or other suitable example
6	(weapons – drill)	dummy weapons drill/weapons handling/stave work
<b>Methodology: sub max 1</b>		
7	(command)	command style/didactic/instruction
8	(centralized)	centralised/everyone doing same thing at same time/no groups work or individuality
9	(ranks)	in ranks or rows
10	(NCOs)	by low ranking army personnel/NCOs
11	(where?)	playground or classroom or road/no specialist facility

<b>Moving and Growing/Planning the Programme of the 1950s</b>		
<b>Objectives: sub max 1</b>		
12	(enjoyment)	enjoyment/having fun
13	(participation)	participation/the experience
14	(education)	education/learning skills/holistic development/development of whole child/not just physical benefits/
<b>Content: sub max 1</b>		
15	(ed. gym)	education gymnastics
16	(m to m)	movement to music
17	(swimming)	swimming
<b>Methodology: sub max 1</b>		
18	(decentralized)	decentralised/different people doing different things/not all doing the thing at the same time
19	(problem solving)	problem solving/thinking/cognitive work
20	(child-centred)	child centred
21	(facility/apparatus)	in gymnasia/purpose built facility/full apparatus/apparatus resembling army assault course
22	(teachers)	with specialist PE teachers



- (b) Give reasons for the growth and development of association football after 1850. [6]

6 marks total:

1	(provision)	provision for spectator/grandstands/terraces/ grounds/specialist facilities provided
2	(time)	more (free) time/reduced working hours/ Saturday half day/early closing movement/ time to watch.
3	(cost)	entrance fees or gate money affordable/people could afford it
4	(fixtures)	Fixtures/ leagues set up
5	(transport)	improved transport/able to get to away matches
6	(professionalism)	opportunities for professionalism/ pro. football a good job/ pro. football a chance to escape factory or urban deprivation
7	(broken time payments)	'broken time' payments/working class unable to afford to miss work and were paid to play
8	(class)	middle class influenced the game/game became more respectable/football became 'the people's game' or the working class game
9	(media & literacy)	increased media interest meant football was publicised /improved literacy meant people could read about their team/s
10	(rules/organisation)	game became standardised or more controlled or less violent than the mob game/ex-public schoolboys set up NGB
11	(law and order)	increased law and order lead to reduction of gambling (on football)/game became socially acceptable

- (c) Describe each of the three stages with reference to the development of team games in each stage. [9]

9 marks total: Levels mark scheme.

Level 3: 7 – 9 marks

- a comprehensive/well developed answer
- shows good knowledge and understanding of the stages of development and of the development of team games.
- team games referred to in each stage.

Level 2: 4 – 6 marks

- a developed answer
- satisfactory knowledge and understanding of the stages of development and the development of team games
- team games referred to in each stage.

Level 1: 1 – 3 marks

- an answer that lacks development
- limited/superficial knowledge and understanding of the stages
- lack of reference to team games in **each** stage.

**Indicative Content:**

<b>Stage one development</b>	
1	bullying/brutality/hooligans/rebellion/harsh discipline/Spartan/poor relationships
2	like popular recreation/institutionalised popular recreation
3	expansion
4	'boy culture'
<b>Stage one team games</b>	
5	mob games/violent games/force not skill
6	some games simple and child like/eg skipping or marbles
7	games from home/games adopted or adapted/melting pot
8	simple or natural facilities/eg wall at Eton or cloister at Charterhouse
9	organised by and for boys/informal/not endorsed by staff
10	in free time/for 'fun' or recreation/to relieve boredom
<b>Stage two development</b>	
11	social control/reform/impact of Dr Arnold Head of Rugby School
12	reflection of changing society/transition stage
13	Muscular Christianity/Christian gentlemen
14	sixth form given responsibility
<b>Stage two team games</b>	
15	inter-house games/inter schools games/games against local clubs
16	more regular/more rules/more structured/standardisation of rules
17	sixth form organised games/organised by boys/masters more involved
18	rugby (or football) in winter and cricket in summer
<b>Stage three development</b>	
19	('cult' of) athleticism/obsession for games
20	character development/values from participation/ eg leadership/co-operation/preparation for careers
21	Corinthians/high Quality performance or skill/emphasis on skill not force
22	Clarendon report/games more important than academic work in many schools
23	melting pot
24	inter school (& inter-house) games/ master support or involvement/boys still did most of organising
25	standardised or NGB or strict rules
26	compulsory
27	high quality or purpose built facilities
28	professional coaching/high quality coaching eg cricket or racquets
<b>Total 21 Marks</b>	

**Comparative Studies in Physical Education**

2 (a) (i) **Why do sports fixtures in American High Schools often attract large crowds? (3)**

**3 marks in total:**

1	(Standard/status)	School sport is of a high standard /status
2	(Proximity)	School sport is local/ professional games are often a distance away/ school games are accessible
3	(Community)	Community is involved in sport/ community tends to support the High School/ the community is involved
4	(professional reflection)	School sport reflects the professional sports scene/ professional look to the games.
5	(Stadium)	School games often played in the school stadium/ school stadium helps to attract crowds
6	(Entertainment)	Crowds find School sport entertaining/ cheerleading/side attractions contribute to entertainment.
7	(Media)	The media promote School games/ high media presence.
8	(Incentives)	The incentive of the College scholarship/ the coach & hire and tire policy increases the interest of crowds.
9	(Lombardianism)	The crowds are attracted by Lombardianism/ strong evidence of Lombardianism attracts the crowds/win at all cost ethic

(ii) **Outline potential benefits and drawbacks to the performer of a sports scholarship at an American College (University). (4)**

**4 marks in total:**

**Benefits sub max 3**

1	(Free education)	Free education/access to a degree course/ 'Free Lunch'
2	(Pro draft)	Possibility of the pro-draft/ opportunity to gain access to professional sport.
3	(Coaching)	High quality/specialist coaching.
4	(Competition)	High standard of competition/ next standard to professional sport/ competition reflects professional sport.
5	(Attention)	Considerable media attention/ chance to perform in front of large crowds
6	(Status)	Student athletes enjoy high status.

**Drawbacks sub max 3**

7	(Commitment)	Long hours of commitment to sport! long hours of training.
8	(Finance)	Athletes are not paid to play/ no financial gain.
9	(Commercial exploitation)	Students may be exploited in the interest of the business making money/ student athletes make money for the college/ athletes are seen as the labourers.
10	(Contract)	contract is a binding document/ contract can not be broken.
11	(Injury)	Injury can mean the withdrawal of the scholarship

- (b) (i) Describe initiatives used in Australian schools to deliver sport and Physical Education. (4)

4 marks in total:

1	(SEPEP)	SEPEP/Sport Education & Physical Education Programme/Project is a flexible programme/ a loose curriculum framework
2	(SEPEP)	SEPEP allows 100 mins sport and 100 mins PE per week
3	(PASE)	PASE/ Physical & Sport Education is a teacher training programme that improves teacher expertise.
4	(Exemplary Schools)	Exemplary schools share good practice.
5	(Sport Leaders)	Sport Leaders are older pupils who help to teach children/Sp011 Leadership is part of the syllabus
6	(Sports Linkage)	Sport Linkage links the club with the school/clubs work with schools/good school players join the clubs.
7	(Sports Person in Schools Project)	Sports Person in Schools Project involves sports stars teaching children/sporting roles models teach in schools.
8	(Incentive Awards)	State/Blue Awards for outstanding sporting achievements/ de Coubertin Awards for non playing achievement help the delivery of sport and PE 10.
9	(Fundamental Skills Programme)	Fundamental Skill Programme is a Primary PE programme/ a programme of basic skills for Primary Schools.

- (ii) Explain why outdoor education has a high priority in Australian schools. (3)

3 marks in total:

1	(Survival)	Survival skills are necessary in a hostile environment
2	(Terrain)	Terrain can be inhospitable/hostile genuine wilderness/desert/ tropical rain forest/ beach and tides dangerous this promotes adventure activity
3	(Climate)	Favourable climate/ climate encourages outdoor activities.
4	(Tradition)	Outdoor life is a traditional Australian lifestyle.
5	(Colonialism)	Outdoor adventure is a legacy of Colonial settlement/ outdoor adventure part of the pioneering spirit.
6	(Nationalism)	Outdoor education promotes national pride/shows off Australia's natural beauty

- (c) (i) **Explain why the Tour de France is considered by the French to be an important sporting event.(2)**

**2 marks in total:**

1	(Reputation)	The worlds best known cycle race
2	(Tradition)	Long tradition/history/ first organised in 1903/ the first professional cycle race.
3	(Status)	Cycling has high status in France
4	(Scenery)	Scenic route attracts tourists
5	(Economy)	The event brings money/revenue into France/event is heavily sponsored/ high financial reward for winner.
6	(Nationalism)	The event promotes national pride.
7	(International status)	The Tour de France has world wide interest/international appeal.

- (ii) **Explain how sporting excellence is developed in France. (5)**

**5 marks in total:**

**Levels marks.**

**Level 3 5 marks**

At the top of this level the answer will display a clear and detailed explanation as to how sporting excellence is developed in France. The answer will display well developed knowledge and understanding

**Level 2 3 – 4 marks**

At the top of this level an attempt will have been made to explain how sporting excellence is developed but lack depth and development. The answer will display sound knowledge and understanding.

**Level 1 1 – 2 marks**

At this level the candidate will outline how sporting excellence is developed. The answer will display limited knowledge and understanding.

1	(Government funding)	Government funding/investment by government into facilities/ Economic Plan.
2	(INSEP 1)	INSEP is the major Centre of Excellence for elite athletes
3	(INSEP 2)	INSEP is a multi sport Centre of Excellence/ INSEP caters for 25 different sports
4	(INSEP 3)	INSEP is responsible for sports development in France
5	(Centre of Excellence)	Specialist Centres of Excellence/ specialist centres eg skiing at Chamonix/specialist Centres of Excellence exist to provide facilities that are not available at INSEP
6	(Altitude training)	France has high mountains to provide altitude training.
7	(Centre for altitude training)	Font Romeu is the multi-sport centre for altitude training.
8	(CREPS 1)	Regional Centres of Excellence
9	(CREPS 2)	Regional Centres of Excellence develop young athletes/performers
10	(School Physical Education)	Increased status/improved quality of PE has helped to develop excellence.
11	(School provision/initiatives)	Union Nationale du Sport Scolaire (UNSS)/ Sport Study Sections/Sport Study Programmes/ Primary Sport Schools
12	(General provision)	Joint provision/ facilities are shared between school and community to increase provision
		<b>Total 21 marks</b>

**Section B**  
**Biomechanical Analysis of Human Movement**

- 3 (a) **What is meant by the term 'centre of mass' and how does a performer use it to maintain balance? Using a practical example explain how the performer can improve stability.**

[4]

**4 marks total:**

- 1 (Centre of mass) is the point at which an object is balanced in all directions/is the point at which weight appears to act.
- 2 (To maintain balance) the CM needs to lie within/over the base of support.

**Submax of 2 marks from;**

**(Submax of 1 if no practical example)**

- 3 (Improve stability by) lowering CM by bending knees.
- 4 (Improve stability by) increasing base of support by widening stance.
- 5 (Improve stability by) increasing the number of points of contact on the floor.
- 6 (Improve stability by) In contact situations, moving CM outside base of support towards opposing player by leaning forwards.

- (b) **Fig1 represents the foot of a rugby player when lifting a team member in a lineout.**

- (i) **State the principle of moments and calculate the force F needed by the gastrocnemius and soleus for this system to remain balanced.**

[4]

**4 marks total:**

**Submax of 3 marks for;**

- 1 (For a balanced system) the principle of moments states the clockwise moments = anticlockwise moments.

**Submax of 3 marks from;**

- 2 Moment of force/torque = force x (perpendicular) distance from fulcrum.
- 3 (Clockwise moments) = 2000(N) x 0.2(m)
- 4 (Anticlockwise moments) = 0.4(m) x F
- 5 (Force)  $F = (2000 \times 0.2 / 0.4) = 1000\text{N}$  (Units must be correct)

- (ii) **Explain why this lever system is more efficient than that of the elbow during a bicep curl.**

[2]

**2 marks total:**

- 1 It is a class 2 lever system whereas the elbow is a class 3 lever system.
- 2 Load/weight is closer to the fulcrum than effort/force of muscle contraction.
- 3 Therefore, less effort is required to move equivalent load.

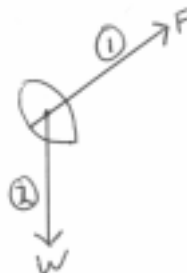
(c) Fig 2 shows a rugby player kicking a ball.

(i) Sketch and label a free body diagram showing the forces acting on the ball at the moment of contact.

[2]

2 marks in total;

- 1 (Action) force/ $F$  (from edge of ball)
- 2 Weight/ $W/mg$  (from CM)



(ii) Show how you could work out the resultant force acting on the ball at the moment of contact.

[3]

3 marks in total;

- 1 Force and weight from same point (single arrow line).
- 2 Parallelogram Law (dotted lines).
- 3 Resultant/Net force (double arrow line).

(d) Explain the factors, other than the force applied, that determine the horizontal distance the ball is kicked.

[6]

**Level 3 5 – 6 marks**

Responses will contain a full and coherent explanation of the factors that determine the distance a rugby ball is kicked although at the bottom of this level technical language may not always be used.

**Level 2 3 – 4 marks**

Responses will identify many of the factors but will not give coherent explanations for all. Candidates should cover the first three factors to enter this level.

**Level 1 1 – 2 marks**

Responses will be limited to a number of factors identified but without the relevant explanations.



**Indicative content.**

- 1 (Ident) Speed of release/take off.
- 2 (Expl) Faster = Further
- 3 (Ident) Height of release.
- 4 (Expl) Higher = Further
- 5 (Ident) Angle of release.
- 6 (Expl)  $45^\circ$  is optimum if kicked off floor/release height=landing height.
- 7 (Expl) Less than  $45^\circ$  if kicked out of hand/release height greater than landing height/kicking downhill.
- 8 (Expl) More than  $45^\circ$  if release height lower than landing height/kicking uphill.
- 9 (Ident) Air Resistance/wind
- 10 (Expl) reduces distance achieved (unless following wind)
- 11 (Ident) Streamlining
- 12 (Expl) Reduces air resistance to increase distance achieved.
- 13 (Expl) Less frontal X-sectional area/shape of ball/torpedo kick.
- 14 (Expl) Smoother surface of rugby ball.
- 15 (Ident) Altitude.
- 16 (Expl) Less air resistance/effect of gravity.
- 17 (Ident) Spin on rugby ball.
- 18 (Expl) More stability in flight/backspin increase distance.

**Total 21 Marks**

**Psychology of Sport Performance.**

**4 (a) Concentration can sometimes be difficult for performers in sport. Paying attention is crucial to optimise performance.**

**(i) Figure 3 illustrates four attentional styles. Give a characteristic of each style.**

**[4 marks]**

**4 marks for 4 from:**

- 1 Broad Focus - concentrate on a lot of information/peripheral stimuli/cues.
- 2 Narrow Focus - concentrate on very few stimuli /cues/concentrate on small amount of information.
- 3 External Focus - concentrate on outside/ environmental factors/factors outside the body.
- 4 Internal Focus - concentrate on themselves/affective responses/emotions/own thoughts.

**(ii) Using practical examples from sport explain how each of these attentional styles might be used in different situations.**

**[4 marks]**

**4 marks for 4 from:**

- 1 Broad - eg hockey player looks up for pass to a number of possible team-mates (but still has ball under control).
- 2 Narrow - eg cricket batsman watches the ball on to the bat.
- 3 External - eg a footballer taking a penalty focuses on one part of the goal to shoot at.
- 4 Internal - eg a volleyball player realises that she does not feel confident in executing a complex serve/a gymnast focusing on her body shape in a handstand.

**(b) The audience or crowd at a sports event may help or hinder performance.**

**Using psychological theories and practical examples from sport, explain how an audience can affect performance.**

**[6 marks]**

**Levels Marked****Level 3 5 – 6 marks**

**Candidate explains fully the positive and negative influences of an audience on performance. There is very good use of psychological theories and terminology. Many relevant practical examples are used.**

**Level 2 3 – 4 marks**

**Candidate explains, but is at times descriptive. There are few psychological theories and psychological terminology is rarely used. There are few relevant practical examples.**

**Level 1 1 – 2 marks**

**Candidate is mostly descriptive with little or no psychological theories. Very few or no practical examples are used.**

**Indicative content.**

- 1 (drive) Arousal/drive/anxiety increased (drive theory/dominant response/Zajonc's theory)
- 2 (drive) Dominant response/habit more likely to occur/learned responses automatic/motor programmes are run.
- 3 (Zajonc/inverted U) Weaker players/novices performance deteriorates/incorrect dominant response.
- 4 (drive/inverted U) Good performances from well learned/stronger/elite/correct dominant response produced.
- 5 (RAS) Extroverts likely to perform better with an audience/reticular activating system (RAS) favours extroverts when audience present.
- 6 (RAS) Introverts likely to perform worse with an audience/reticular activating system (RAS) does not favour introverts when audience present.
- 7 (Homefield) If audience in familiar setting performance helped/'homefield' advantage/disadvantage if away/unfamiliar/hostile environment.
- 8 (Cottrell/eval apprehension) Anxiety raised by being judged (Cottrell)/perceived judgement of others/evaluation apprehension/the nature of the audience/who is in the audience.
- 9 (Proximity) Proximity of the audience/how close the crowd are to the player.
- 10 (Baron/distraction theory) Distractions/widening of attentional focus/utilisation of too many cues (Baron).
- 11 (Nideffer/attention) Attention narrows for those who are used to audiences/high levels of ability/optimum cue utilisation.

- (c) (i) **Identify the different attributions according to Weiner's attribution model.**

**[2 marks]**

**2 marks for 2 from:**

**(sub max 2)**

(Related to Weiner's model):

- 1 Attributions can be internal/when your reasons are from within/your responsibility/your effort/ability.
- 2 Attributions can be external/when your reasons are environmental/not your responsibility/luck/task difficulty.
- 3 Attributions can be stable/when they are not easily changed.
- 4 Attributions can be unstable/when reasons are changeable.
- 5 Attributions can be controllable/uncontrollable.

- (ii) **Use practical examples from sport to explain how attributions given for success and failure can affect motivation (5 marks)**

**5 marks for 5 from:**

**(sub max 5)**

(Links to motivations)

- 6 Internal when winning can lead to high level of motivation/Mastery orientation/having high self-confidence/positive outlook/need to achieve.
- 7 Internal when losing can lead to low motivation/learned helplessness/the belief that failure is inevitable/failure has been reinforced.
- 8 Unstable reasons given when losing or when behaviour needs to be changed leads to high motivation.
- 9 Stable reasons given to reinforce behaviour/when winning can lead to high motivation.
- 10 Attributions can be biased to enable us to be (highly) motivated/attributional bias/self-serving bias.
- 11 We can blame others to push away responsibility/fundamental attributional error to protect ourselves/our self esteem/keep motivated.
- 12 Put less emphasis on internal stable factors to minimise learned helplessness and maximise mastery to raise motivation.
- 13 Increase motivation through attributional retraining/changing/helping to change the reasons to maximise/raise motivation.

**Total of 21 marks**

**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**

# 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 (a) RhEPO/recombinant erythropoietin is a prohibited ergogenic aid.

Identify the missing information A, B and C.

[3]

Ergogenic Acid	RhEPO/recombinant erythropoietin
One performance enhancement effect	A
One associated health risk	B
One type of athlete that would benefit from its use	C

3 marks in total

**(A) submax 1**

1. increases red blood cell production/volume/number
2. increases the oxygen carrying capacity of the blood/more oxygen delivered to active muscles
3. increases the concentration of haemoglobin/Hb
4. increases V02max/aerobic capacity/endurance.

**(B) submax 1**

5. increase blood viscosity therefore increased risk of blood clotting/heart failure/stroke

**(C) submax 1**

6. aerobic or credit any type of aerobic performer

- (b) Agility is a useful fitness component for games players.

- (i) Give a definition of agility and identify a test to evaluate it.

[2]

2 marks in total

**1 mark for definition**

1. the ability to change direction quickly/to change body position while maintaining body control/without loss of speed/the combination of speed and coordination

**1 mark for identification**

2. Illinois agility run test

- (ii) An average time for the completion of an agility test is 17 seconds for males and 19 seconds for females.

Identify the two predominant energy systems that would be used by an average performer during the completion of this test.

Discuss the advantages and disadvantages of one of the energy systems you have identified.

[6]

6 marks total

2 marks for identification of energy systems

1. ATP/PC/alactic/phosphogen
2. lactic acid/anaerobic glycolysis

4 marks for discussion of advantages and disadvantages  
submax 3 from each

NB: Mark one energy system only

**(ATP/PC)**

**(Advantages)**

3. very quick/immediate resynthesis of ATP
4. PC stores are quickly replenished as soon as activity stops/50% in 30secs
5. anaerobic, so no need to wait for sufficient O<sub>2</sub> to be in body
6. no fatiguing by-products

**(Disadvantages)**

7. only a limited supply of PC in muscles/enough for only 10 seconds of activity
8. PC stores can only be replenished in the presence of O<sub>2</sub>/during recovery periods
9. limited resynthesis of ATP/only 1 ATP

**(Lactic acid system)**

**(Advantages)**

10. relatively quick/few reactions
11. anaerobic, so no need to wait for sufficient O<sub>2</sub> to be in body
12. lactic acid can be converted back to liver glycogen/used as a fuel by conversion back to pyruvic acid
13. can use this system to increase intensity during exercise eg. sprint finish in 1500m

**(Disadvantages)**

14. build up of lactic acid that increases acidity of blood and muscles
15. this inhibits enzyme action (glycogen phosphorylase and PFK), stopping further breakdown of glycogen
16. also affect pain receptors in nerve endings causing discomfort
17. to continue exercise intensity must be lowered or stopped
18. limited amount of energy is released from glycogen in the absence of O<sub>2</sub>/enough to resynthesise 2ATP

- (iii) During an agility test, a performer relies on maximum strength and elastic/explosive strength.

Define maximum strength and elastic/explosive strength.

Explain when and why each type of strength would be used during the test.

[4]

4 marks total

**2 marks for definitions**

(maximum strength)

1. the maximum amount of force that can be exerted by a muscle in a single contraction

(elastic/explosive strength)

2. the ability of the muscle to overcome resistance with a **high speed** of contraction/a combination of strength and speed

**2 marks for explanation of use of each type of strength**

**NB: Both "when and why" points need to be made to gain mark**

(maximum strength)

3. **(when)** at the start/when performer pushes from a press up position to standing  
**(why)** they need to use a maximal contraction in their muscles to lift their body weight from the floor

(elastic/explosive strength)

4. **(when)** during the test when they are running and changing direction at speed  
**(why)** they need to be able to contract their muscles with a high level of force and quickly.

**Total=15 Marks**



## 2. Section B (Scientific Focus)

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

Fig. 1 shows a performer at two positions during a biceps curl.  
 upward phase = position A to position B  
 downward phase = position B to position A

Identify the type of joint, the joint movement and the bones being used to move the bar from position A to position B. Use this joint movement to explain what is meant by the function of a muscle.

#### MARKSCHEME

#### Movement analysis of biceps curl (upward phase) (submax 5)

- |                   |     |  |
|-------------------|-----|--|
| (type of joint)   | 1.  | hinge  |
| (joint movement)  | 2.  | flexion  |
| (bones)           | 3.  | humerus, radius and ulna   |
| (muscle function) | 4.  | muscles perform a specific role to produce movement  |
|                   | 5.  | they can act as an agonist, antagonist, fixator (or synergist)   |
|                   | 6.  | agonist muscle is biceps brachia   |
|                   | 7.  | it contracts to pull the lower arm upwards/cause flexion at the elbow                                  |
|                   | 8.  | antagonist muscle is triceps brachia   |
|                   | 9.  | it relaxes/lengthens to allow the biceps brachia to shorten/flexion of the elbow                       |
|                   | 10. | fixator muscle is the trapezius/deltoid  |
|                   | 11. | it applies a force/isometric contraction to stabilize the scapula/origin on the agonist/biceps brachia |

Explain the type of muscular contraction occurring in the biceps brachia during the upward phase and the downward phase of the biceps curl.

#### MARKSCHEME

#### Muscular contraction (submax 4)

(upward phase)

12. concentric contraction
13. muscle shortens while developing tension
14. insertion moves towards origin

(downward phase)

15. eccentric contraction
16. muscle lengthens while developing tension
17. acting as a brake to control the lowering movement/acting against gravity
18. biceps brachia is still the working muscle

- 2 (a) Identify the muscle fibre type that would allow the performer to carry out bicep curls using a low weight for a large number of repetitions.  
cont.

Explain how the structure and function of this fibre type is suited to prolonged exercise.

**MARKSCHEME**

**Muscle fibre type (submax 5)**

19. Slow twitch/SO/slow oxidative/type 1

(structure) **(subsubmax 3)**

20. high mitochondrial density **therefore** efficient aerobic respiration  
21. high capillary density **therefore** efficient gaseous exchange  
22. large myoglobin content **therefore** effective transport/store of oxygen  
23. large glycogen stores **therefore** good fuel source for aerobic respiration  
24. large triglyceride store **therefore** good fat stores for efficient aerobic respiration

(function) **(subsubmax 3)**

25. slow speed/low force of contraction **therefore** energy released at lower exercise intensity  
26. high resistance to fatigue **therefore** can contract repeatedly without tiring  
27. high aerobic capacity **therefore** suited to low/medium intensity and long duration work.

**Total Knowledge Marks = 13**

**2 (b) (Acquiring And Performance Movement Skills)**

Acquiring movement skills is a process that involves separate stages or phases and depends on the learner understanding what is required, which is a cognitive process.

Identify and Explain the **three phases** of learning movement skills.

**6 marks sub max**

**(6 marks sub max  
2 marks sub-sub max for each phase)**

**(Cognitive)**

1. Cognitive phase/stage/initial phase.
2. This is when the performer understands what needs to be done.
3. A mental picture is created/mental practice/rehearsal.
4. (Some) trial and error.
5. V little feedback is acted upon/no feedback.

**(Associative)**

6. Associative stage/phase.
7. Practice/training phase.
8. Trial and error takes place.
9. Feedback used/available/errors corrected/correct movements reinforced.
10. Rapid progress takes place.
11. Links (associates) the mental model/image with the practice.

**(Autonomous)**

12. Autonomous phase/stage.
13. Movements (almost) automatic/habitual.
14. Movements carried out with little conscious control.
15. Motor programmes have been formed.
16. Performer must practice/revert to associative phase to remain in this/autonomous phase.

The cognitive theory of learning is one way of explaining the process of learning movement skills.

Explain the cognitive theory of learning.

**3 marks sub max**

17. Skill is treated holistically/wholeness/Gestaltist approach.
18. Learner develops an understanding of skill/skill requirements.
19. Learner draws together intervening variables/aspects of the environment/display.
20. Process of problem-solving/trial and error/finding out.

- 2 (b) Whole practice is often used as a technique in learning movement skills.  
cont.

What are the benefits of whole practice?

**4 marks sub max**

Whole practice

- to give idea/mental picture/holistic view of skill/better for understanding/more realistic
- to give kinaesthesia/(true) feel for the skill
- to retain timing/flow of the movement if continuous/highly organised skills/difficult to separate into sub-routines
- so learner can experience all aspects of the skill/s
- to enable good understanding/no need to overcomplicate/if skill is simple
- more motivating/sets a challenge
- transfer to 'real' situation more realistic/accurate
- not so time-consuming/quicker process.

**Total of 13 knowledge marks**

## 2 (c) (Exercise and Sport Physiology)

Fig. 2 shows the use of a goniometer to measure the range of movement at the hip joint.

Explain another method that could be use to measure the flexibility of the hip joint and identify the factors that affect flexibility.

**MARK SCHEME**

**Method & affecting factors** (submax 4)

(Method) (subsubmax3)

1. sit and reach test
2. sit on floor with legs straight/feet flat against box
3. reach forward as far as possible with both hands
4. record distance achieved in cm/compare to norms

(Factors) (subsubmax 3)

5. type of joint/bony features of joint
6. elasticity/temperature of muscle
7. (resting) length of surrounding connective tissue/ligaments/tendons/ muscles
8. amount of stretch allowed by antagonist muscle
9. gender - females generally more flexible than males
10. age - children generally more flexible than adults

**Proprioceptive neuromuscular facilitation (PNF) is a form of passive flexibility training.**

**Identify what is meant by passive flexibility training and describe the method used in PNF stretching.**

**MARKSCHEME**

**Passive stretching & PNF** (submax 4)

(Passive stretching)

11. use of a partner to move the joint beyond its resistance point
12. and hold position for 6-10 seconds

(PNF)

13. (using a partner) joint is taken to its full range of movement/beyond its resistance point
14. subject performs an isometric contraction for 10 seconds
15. joint then taken to its new range of movement
16. repeat three times in total

- 2 (c) Explain why PNF flexibility training is effective  
cont.

What physiological changes will take place to skeletal muscle and connective tissue after a programme of PNF stretching?

**MARKSCHEME**

**Effectiveness of PNF & physiological changes (submax 6)**

**(PNF) (subsubmax 4)**

17. isometric contraction inhibits stretch reflex
18. as muscle is staying the same length no detection of change in length occurs
19. message from muscle spindle to CNS ceases
20. allowing muscle to stretch further when contraction is released
21. Golgi tendon detects increased tension in muscle during isometric contraction
22. message sent to CNS
23. response is to cause relaxation in muscle
24. allowing muscle to stretch further after contraction

**(physiological changes) (subsubmax 4)**

25. increased (resting) length of connective tissue/tendons/ligaments
26. increased (resting) length of muscles
27. increase in elastic properties of muscles
28. reduction in stimulus of stretch reflex
29. muscle spindle adapts to increased length of muscle/reflex mechanism of muscle spindle occurs at greater range of movement

**Total knowledge marks=13**

## APPENDIX

*Suggested links – not intended to be exhaustive*

→		A2
AS	AS	
<b>movement analysis &amp; types of contraction</b> strengthening exercise effects of warm up on speed & force of contraction Newton's laws ↪ angular motion ↪ heart rate ↪ mechanics of breathing	<b>muscle fibre types</b> effects of warm up on speed & force of contraction ↪ heart rate response to exercise ↪ control of blood supply ↪ respiratory response to exercise	<b>Levers</b> <b>angular motion</b> <b>ATP resynthesis</b> <b>types of strength</b> <b>recovery</b> <b>DOMS</b> <b>aerobic capacity</b> <b>physiological adaptations of training</b> <b>ergogenic acids</b>
→		AS
A2	A2	
<b>Flexibility - testing &amp; affecting factors</b> principles of training recovery physiological adaptations to training	<b>PNF &amp; physiological adaptations</b> principles of training other types of flexibility training ↪ other components of fitness ↪ ergogenic aids	<b>joint type</b> <b>range of movement</b> <b>effect of warm up</b> <b>position of centre of mass/stability</b>

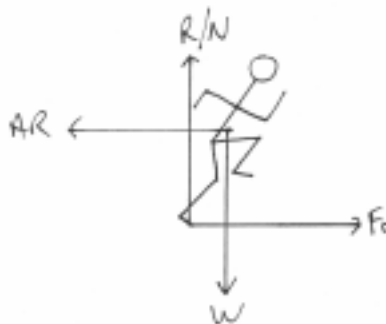
## 2 (d) (Analysis Of Human Movement).

A state of constant velocity is often achieved by a variety of performers. Sketch a free body diagram showing all the forces acting on a performer running with constant velocity and use Newton's Laws of Motion to explain how this state of motion is achieved.

Explain how a performer can manipulate the position of their centre of mass during take off and during flight to enhance their performance.

**(Free Body Diagram) Submax of 4 marks from;**

1. Weight/W/mg acting downwards from CM.
2. Reaction/R/N acting upwards from foot in contact with ground and same length as weight.
3. Friction/F acting forwards from foot in contact with and parallel to ground.
4. Air Resistance/AR/Fluid Friction/FF acting backwards from CM/athlete's body and same length as Friction.



**(Newton's Laws) Submax of 4 marks from;**

5. (Newton 1) An object will move with constant velocity unless acted upon by an unbalanced/external force.
6. Air Resistance = Friction.
7. Resultant/net (horizontal) force = 0.
8. (Newton 2) Acceleration of an object is directly proportional to the (net) force applied to it.
9. (Resultant force) = 0, therefore there is no acceleration. (must relate to N2)
10. (Newton 3) For every action there is an equal and opposite reaction.
11. Athlete presses backwards (and downwards) onto ground.
12. Ground applies forwards (and upwards) force/friction on athlete.

**(CM at take off) Submax of 4 marks from;**

13. Reaction Force through CM means no spin during flight.
14. Reaction Force outside CM causes spin during flight.
15. By creating torque/moment of force/angular momentum about CM.
16. Reaction Force behind CM causes forward rotation.
17. Reaction Force in front of CM causes backward rotation.
18. CM rose at take off.
19. Body parts in higher position.



**(CM during flight) Submax of 4 marks from;**

20. CM is axis of rotation.
21. CM lowered during flight.
22. Body parts in lower position. (eg Basketball Lay up, Goalkeeper in AF)
23. Therefore, athlete can reach higher,
24. Due to CM following predetermined flight path.
25. CM can be repositioned outside body. (eg Fosbury Flop)
26. Whole body can gain height.

**Total 13 marks****Synoptic links AS (A&P)**

CM – Definition  
- Stability

**Synoptic links A2**

Newton's Laws – Fbd of accelerating/decelerating performers.  
- Factors affecting air resistance.  
- Factors affecting friction.  
- Factors affecting reaction forces.

CM – Types of flight paths.  
- Axes of rotation.  
- Conservation of Angular Momentum.

## 2 (e) (Psychology of Sport Performance)

**The effective management of anxiety and aggressive behaviour can optimise performance in sport.**

**Explain what is meant by state and trait anxiety.**

**4 marks sub max**

**(sub-sub max of 2 for each)**

(State)

1. Anxiety arising from a specific situation/incident/temporary situation/person/environment.
2. Often due to fear of falling/competition/competitive state anxiety/pressure of trying to win.
3. Fear of being threatened! or actually threatened! fear of injury/harm.
4. Fear of being embarrassed! self esteem being harmed! fear of pride being hurt.
5. When arousal is high in any given moment then more likely to get anxious.

(Trait)

6. Anxiety that is in-built/genetically determined/born with it/natural anxiety.
7. Expressed/felt in most/many/all situations/circumstances.
8. This type of anxiety is enduring/lasting/more permanent.

(Generic - could be applied to state or trait)

9. Anxiety can be somatic/body response/heart rate raised/blood pressure raised (other somatic stress responses acceptable)
10. Anxiety can be cognitive/of the mind/worry/apprehension/feeling of helplessness.
11. Multi-dimensional anxiety/interaction of both cognitive and somatic/one triggers the other/eg raising heart rate causes worry or worry causes raising heart rate.

What might be the causes of aggressive behaviour in sport?

**6 marks sub max**

12. Innate/genetic determinants/behaviours are traits.
13. Frustration/blocked goals.
14. Social learning/copying (significant) others/role models/tribal/group pressure.
15. Cues/triggers/signals from the environment.
16. Retaliation/getting your own back.
17. Perceived/actual unfairness/refs/officials poor decisions.
18. Event importance/competitiveness/need to/pressure to win/as an instrument to gain success.
19. Pressure from others/obeying orders/tactics/others' expectations.
20. Hostile crowd
21. Cultural determinants/it is expected/it is a normal behaviour of the culture.
22. Game determinants/expected/norms in the game (ice hockey).
23. Alcohol/Drugs

- 2 (e) Explain the use of anxiety management techniques to help a sports performer to control anxiety and aggressive behaviour.  
cont.

**5 marks sub max (Reasons/explanations must be given for techniques)**

24. Use somatic/physical relaxation to lower arousal/calm down.
25. Use cognitive/mental techniques to lower arousal/calm down.
26. Progressive relaxation techniques to relax body and therefore mind.
27. Biofeedback relaxation to lower arousal/calm down.
28. Count to ten/mantra/positive self-talk to lower arousal/calm down.
29. Imagery/visualisation/escaping in your mind/thinking of something else to take mind away from cue/stimuli that creates anxiety.
30. Negative thought-stopping / reasoning with oneself that anxiety/aggression is bad.
31. Mental rehearsal/ imagining actual movement to calm to lower arousal/calm down.
32. Walk away/removing one self from cues physically distancing oneself to escape cues/stimuli.
33. Channel aggression/be assertive rather than aggressive to avoid punishment/keep control of emotions.

**Total of 13 knowledge marks**

**Possible links between AS and A2**

A/S	<>	A2
Phases of learning >transfer>motivation> <> motor programmes>feedback> practice conditions >arousal.	<>	Anxiety>confidence
Cognitive theory of learning>Whole practice > Operant conditioning>obs learning> motivation>transfer.	<>	Achievement mot.>confidence >personality>anxiety.
Whole practice>cognitive theory >phases of learning>classify >programmes>transfer.	<>	<> Mental prep>anxiety >confidence.

**(3) (Socio-cultural focus)****Part One (Contemporary studies in Physical Education)**

**Explain the various roles of a coach.**

**Sub max 6. Roles must be named and explained**

<b>Name of role/relationship</b>	<b>Explanation of role/relationship Alternative correct explanations should be accepted</b>
1. instructor	One way communication/to do with safety or rules/eg 'do not run on pool side'
2. trainer	One or two way communication depending on level of performer/to do with improving performance eg content of sessions
3. educator/ teacher	Two way communication/to do with holistic (physical, mental, social) development of the performer eg knowing that personal situation will affect performance
4. administrator	Entering performer for competitions or teams for leagues
5. disciplinarian	When a performer arrives late for training or is regularly carded
6. first aider/ medic	Giving initial help when performer injured during game
7. friend	Being a companion to performer eg. when away on tour or competing away from home.
8. learner/student	Being open-minded to open to listening/gaining knowledge of from the performer/suitable example
9. manager	Organising a sports tour/supervising team organisation
10. Scientist/motivator/psychologist Nutritionist/physio etc	Linked to trainer so do with improvement of performance/motivator/giving expert help or advice re improving performance/full explanation needed eg ensuring the best diet is followed to optimize performance
11. publicity agent	Making information available for club 'open/fun' day/informing press about results
12. social worker/councillor	Helping performer with personal problems eg family issues
13. role model	Being a good example/inspiration eg with behaviour or demeanour or commitment or performance.

**Other than by the provision of specialist coaching, explain how the participation of young disabled performers in physical recreation can be increased.**

**Sub max 8**

14. (funding 1)	investment in provision for people with disabilities/increased funding to disability sport or sports associations
15. (facilities)	provide adequate facilities at local and regional levels/more specialist facilities
16. (access)	ensure access/consideration of: toilet and changing facilities/ramps/lifts/wide car-parking bays/suitable lift control buttons etc.
17. (attitudes)	change attitudes/celebrate differences/look at ability rather than disability/applaud achievements/smash myths or break stereotypes/continue to promote positive image of disabled sport/raise awareness of specific challenges facing disabled people
18. (training/coaches)	provide specialist training for coaches NOT <i>'provide specialist coaching'</i>
19. (media)	media to continue to cover or increase coverage of disability sport/promote Paralympics
20. (adaptation)	adapt or modify games or sports or facilities
21. (integrate)	integrate in schools' PE or local community
22. (positive. discrimination)	positive discrimination/disability only sessions eg wheelchair basketball
23. (role models)	promote role models/credit named example
24. (liaison)	liaise between organisations
25. (campaigns)	campaigns or initiatives
26. (awareness)	raise awareness of specific challengers facing disabled performers

**Total knowledge marks=13**

**(b) (Historical Studies in Physical Education)**

**Identify characteristics of popular recreations in pre-industrial Britain and explain the cultural factors which influenced their development. Describe features of community festivals, fairs and wakes in pre-industrial Britain.**

**Sub max 8**

<b>Characteristics Sub sub max 3</b>	<b>Cultural factors Sub sub max 3</b>
1. courtly & popular activities	2. two-class or feudal society
3. cruel and/or violent	4. harsh lifestyle
5. unwritten rules /rules by word on mouth. <b>Do not accept 'no rules.'</b>	6. widespread illiteracy
7. occasional	8. Saints' days and holidays/seasonal time
9. local	10. limited transport
11. rural	12. pop recs were pre-industrial
13. occupational	14. occupation sometimes led to professional status in certain sports/ eg pedestrianism or rowing
15. wagering	16. rags to riches/show status or wealth
17. simple/natural	18. pre-industrial/limited technology for specialist facilities and/or equipment

**Sub max 6**

<b>Community festivals, fairs and wakes</b>	
19. (activities)	cruel or violent activities/eg baiting or blood sports or prize fights or mob football or other suitable example
20. (class)	predominantly lower class/patronised by upper class
21. (green)	village green/cricket – accept any relevant point
22. (feasting)	associated with feasting
23. (recreation)	'fun'/light hearted/an escape from hardship/eg grinning contests or whistling matches or other suitable example/(river) bathing
24. (courtship)	courtship/promiscuity
25. (church)	church against associated excess
26. (making money)	opportunity to make money/prizes/wagering/professionalism/selling things
<b>Other relevant points:</b>	
27. (pub)	importance of pub/pub central to community recreations/Landlord often provided prizes/pedestrianism or smock racing - accept any relevant point/
28. (Puritanism/P.Work Ethic)	Puritans against unruliness & excess of pop. recs/protestant work ethic allowed recreations as recuperation from work

**(c) To what extent did real tennis show the characteristics of popular recreation?****Sub max 4**

29. (courtly & popular)	Yes	restricted to upper class/there were lower class 'copies' eg versions of hand ball
30. (cruel and / or violent)	No	non-violent/respectable/ refined/sophisticated
31. (unwritten rules/by word on mouth)	No	complex rule/written rules (linked with literacy)
32. (occasional)		regular...as those who played had time
33. (local)		...not exclusively local as participants had transport
34. (rural)		... played wherever gentry built a court
35. (occupational)		real tennis did not have 'professionals'
36. (wagering)		to show status wealth
37. (simple/natural)		purpose built or expensive courts or facilities

**Total knowledge marks=13**

## Appendix: Examples of possible links

### AS to AS

- role modelling links eg coaches aren't only role models. also, teachers, professional performers etc.
- role modelling and education away from deviance including drugs and violence and gamesmanship
- at base of performance pyramid each coach likely to take on more roles.
- at top of performance pyramid more 'coaches' who specialise likely to be employed.
- links with/reference to role of the organisation sports coach UK
- high quality coaching at UKSI network centres
- coaching linked to sport, physical education (and Outdoor Ed) and physical recreation (and outdoor rec.) rather than to play.
- coaches in Samoa and Kenya still often brought in from abroad to ensure their calibre / maximise likelihood of being able to take on every role.
- coach in USA more of a 'win at all costs' approach
- coach in countries where sport and politics tightly linked may be more controlled by government.
  
- all minority groups face similar problems/issues
- increased: media coverage / facilities / funding / campaigns will benefit all minority groups
- discrimination is a societal phenomenon - a reflection of society
- discrimination affects all levels of the performance pyramid
- sports colleges -likely improves opportunity and provision
- TOPSPORT -likely improved skills for junior aged children
- dimension of PE in schools: PE / physical recreation / sport

### A2 to A2

- how characteristics of popular recreation changed as result of industrialisation.
- how cultural factors changed in 19th century
- contrasts with rational recreation
- influence of social class and gender through time
- real tennis v lawn tennis

### AS to A2 and A2 to AS

- pre-industrial fairs similar to church and village fetes of today
- no 'coaching' as such - but patrons in early pedestrianism for example
- patrons would have frequently taken on roles of 'publicity agent, administrator, manager' for example
- link popular recreations and survival ethnic sports (today)
- violence of popular recreations and instances of violence in sport today
- popular recreation links with play, physical recreation & sport (as concepts)
- popular recreation and class + lawn tennis today and class.
- popular recreation and disability - in pre-industrial times those with disabilities probably mocked as part of the festival
- opportunity, provision esteem relevant both then and now



**(3) (Comparative studies in Physical Education)**

3 What features of Grid Iron Football limit mass participation in this sport?

**Sub max 6 marks**

1. (Tradition)	USA does not have a tradition of amateur private sports clubs
2. (Elitism)	Grid Iron is regarded as a game for elite players.
3. (Selection)	Selection through the pro-draft system causes rejected players to retire
4. (Opportunity)	Limited opportunity to play Grid Iron at amateur level
5. (Association)	Association is with Colleges and professional clubs
6. (Lombardianism)	Lombardianism/win at all cost ethic restricts participation at amateur level
7. (Violence)	Aggressive/violent/collision nature of the game prevents the game being played for fun/as a amateur
8. (Communication)	The commercial/business approach encourages spectatorism not participation
9. (Expense)	It is expensive to play Grid Iron Football/equipment is expensive
10. (Athletic image)	The standards of athleticism are very high/beyond amateur players

Compare the U.K. with **either** France **or** Australia in terms of how mass participation is promoted. Your answer could include school and sporting organisations' initiatives and government involvement.

**Sub max 10 marks**

<b>MAX 3 MARKS FOR KNOWLEDGE WITH NO COMPARISON.</b>			
<b>School and Sporting Organisations' Initiatives</b>			
	<b>U.K</b>	<b>France</b>	<b>Australia</b>
11. (Specialist sports provision)	All countries offer specialist sports provision in schools		
	Eg Sports Colleges	Eg Sports Study Sections	Eg Exemplary Schools
12. (Club links)	All countries attempt to create links between schools and sports clubs		
	Eg PESSCL scheme	Eg Union Nationale du Sports Scolaire (UNSS) link with clubs and Sports federations	Sports Linkage scheme
13. (Curriculum)	Centralised curriculum Eg National curriculum	Decentralised curriculum Eg School Centred Programmes	Decentralised curriculum Eg Sport Education and Physical Education Project (SEPEP)
14. (Quality of teaching & coaching)	All countries have strategies to increase the quality of teaching & coaching		
	Eg Specialist teaching degree in PE/PGCE schemes /Sports coach initiatives	Eg Improved teacher training STAPS and CAPEPS	Eg PASE a teacher INSET initiative
15. (Extra curricular activities)	Schools in all countries offer programmes of extra-curricular activities		
	Eg Extra Curricular sports are organised in U.K. schools	Eg UNSS organise sports for all children	Eg SEPEP includes intra/inter school games
16. (Primary School initiatives)	Primary Schools in all countries have initiatives to promote mass sports participation		
	Eg Tops programmes/Dragon Sport/Active School Programme/Primary Link Teachers (Sports College framework)	Eg Primary Sports Schools	Eg Fundamental Skills Programme (FSP) for primary children
17. (Examinations)	All countries have examinations in Physical Education & Sport		
	Eg GCSE/A Level/Btec Sports Examinations	Eg The Baccaalaureate examination can include sport	Eg The Australian High school Certificate includes PE as an examined subject
18. (Use of Role Models)	School role models visit schools. Eg Olympic champions	No evidence of organised usage	Sports role models visit/work in schools Eg Sports Person in Schools Project
19. (Sharing facilities)	The sharing facilities between school/club/community occurs in all countries		
	Eg Dual Use/Joint Provision/Community Schools	Eg Joint Provisions part of UNSS operation	Eg sports linkage policy/ sharing facilities with clubs

Government involvement			
20. (Funding)	All countries receive government funding		
21. (Funding agencies)	Sport England distributes Lottery funding	Ministry of Youth and Sport distribute funds	ASC is the government department for sport funding
22. (Projects)	Each country projects helps to protect mass participation		
	Eg Sport for All/Active Communities Project/Sport Action Zones	Eg Sport pour Tous	Eg Active Australia. More Active Australia/Backing Australia's Sports Ability.
23. (Discrimination)	Government policy to minimise discrimination is reflected in the commitment to include minority groups in sport		
	Eg Identification/focus on target groups/inclusion of disabled/ethnic minorities	Eg Multi racial/multicultural society/tradition of assimilation	Eg Multicultural commitment/high ethnic minority profile in some sports/eg Aussie Rules
24. (Health)	All governments encourage sport as a way to promote health		
Initiatives of sporting bodies			
25. (Government Bodies)	All countries have governing bodies or equivalent that work to develop participation		
	Eg Autonomous bodies have their own schemes RFU mini rugby/High Five netball	Eg Each sport has a federation/86 Federations/generates participations	Eg Governing Bodies have initiatives to increase participation such as Aussie Sport
26. (Special Interest Groups)	Each country focuses/targets groups of low participation		
	Eg Women's Sports Foundation (WSF)	Eg FFH Federation for disabled athletes	Eg Strength commitment to para Olympic sports
27. (Coaching)	Coaching has a structure and organisation in all countries		
	Eg Sports Coach UK is responsible for providing coaching infrastructure	Eg Coaching is organised through the federations	Eg Coaching initiatives are from Government Bodies/Sport Development Group has overall responsibility
28. (Motives to broaden participation) (Excellence)	All countries encourage mass participation because sporting excellence can be improved		

**T1 Links**

USA. Mass participation. Mass participation tends to be under developed.  
 USA. Sport funding. No government funding for mass sports participation.  
 USA. Sport funding. Sports clubs/centres are self funding.  
 USA. Recreation opportunities/programmes. Midnight basketball leagues/Little league sport.  
 USA. High School. High School sport is of high status/large drop out of people who do not achieve sports scholarship.

**T1 Links**

France. Mass participation. Mass participation is of high priority/well patronised.  
 France. Sport funding. Lavish government funding.  
 France Sport funding. Funds made available to amateur clubs/distributed through Sports Federations.  
 France. Sports facilities. Sports facilities in every settlement/policy of joint provision.  
 France. School sport. Administered by the UNSS/ develop mass participation and excellence.  
 France Sport for all. Sport pour tous.

**T1 Links**

Australia. Mass participation. Mass participation is of high priority/well patronised.  
 Australia. Sport funding. Lavish funding from the ASC.  
 Australia. Sport funding. Funding made available to amateur clubs.  
 Australia. Sports facilities Good provision of sports facilities.  
 Australia. School provision. High priority on participation/strategies include SEPEP/Sports Linkage/Fundamental Skills Programme/Exemplary Schools initiative  
 Australia Sport for all More Active Australia.

**T2 Links**

UK. mass participation. Mass participation is of high priority.  
 UK. Sport funding. UK Sport distribute funds/lottery contribution to sports funding  
 UK. Sport funding. Funding made available to amateur clubs.  
 UK. Sports facilities. Improving provision of sports facilities/mention of the influence of the 2012 Olympic Games.  
 UK. School provision. Sport Colleges/National Curriculum/Active Schools Project.  
 UK. Special Interest Groups. Sport England have established Special Interest Groups eg The Women's Sports Foundation.

## 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 (Subject) (Aggregation Code(s))  
January 2009 Examination Series

## Unit Threshold Marks

Unit		Maximum Mark	A	B	C	D	E	U
2562	Raw	60	39	34	29	24	20	0
	UMS	120	96	84	72	60	48	0
2563	Raw	45	31	28	25	22	19	0
	UMS	90	72	63	54	45	36	0
2565	Raw	45	33	29	25	22	19	0
	UMS	90	72	63	54	45	36	0
2566	Raw	60	48	44	40	37	34	0
	UMS	120	96	84	72	60	48	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	8.18	26.95	54.19	81.04	97.98	100.0	1080
7875	10.97	28.39	64.52	90.97	99.36	100.0	208

## 1288 candidates aggregated this series

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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