



GCE

# Physical Education

Advanced Subsidiary GCE

Unit **G451**: An Introduction to Physical Education

## Mark Scheme for June 2013

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

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

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

OCR will not enter into any discussion or correspondence in connection with this mark scheme.

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## 1. Annotations

Annotation	Meaning
✓	Correct response
x	Incorrect response
<b>BOD</b>	Benefit of the doubt
<b>REP</b>	Repeat of key point in question or point already awarded
?	Unclear
<b>L1</b>	Level 1
<b>L2</b>	Level 2
<b>L3</b>	Level 3
<b>KU</b>	Knowledge and Understanding
<b>EG</b>	Example/Reference
<b>TV</b>	Too Vague
<b>DEV</b>	Development
<b>SEEN</b>	Noted but no credit given
<b>IRRL</b>	Significant amount of material which does not answer the question

## 2. Subject-specific Marking Instructions

**Marking responses ‘a – d’; points marked questions**

An element of professional judgement is required in the marking of G451. Correct answers should always be rewarded irrespective of whether or not they appear on the mark scheme. If you are in doubt about the validity of any answer then consult your Team Leader (Supervisor) by phone, scoris messaging or e-mail.

**Marking response ‘e’; levels of response marked question**

It is quite possible for an excellent and valid answer to contain knowledge and arguments which do not appear in the indicative content on the mark scheme. Each answer must be assessed on its own merits according to the generic descriptors and discriminators.

The levels of response descriptors are cumulative, ie a description at one level builds on or improves the descriptions at lower levels. Not all qualities listed in a level must be demonstrated in an answer for it to fall in that level.

**Marking response 'e'; levels of response marked question - continued**

Candidates will take different approaches to achieve within the same level. Some will adopt a less focused approach but demonstrate a wide range of knowledge others may adopt a more focused approach using a narrower range of well-developed knowledge.

Approach to marking levels of response questions:

- read the candidate response in full;
- working from the top down and using a *best-fit* approach, refer to the generic descriptors and discriminators to determine the level;
- re-read the answer, annotating credit worthy aspects of the response in relation to knowledge, understanding, development, examples, etc;
- confirm or revise initial decision re level;
- determine the mark within the level as per the guidance in 10 (above and below), with reference to the discriminators, and, again, using a *best-fit* approach.

Descriptor	Award mark
Consistently meets the criteria for this level	At top of level
Meets the criteria but with some slight inconsistency	Above middle and either below top of level or at middle of level (depending on number of marks available)
Just enough achievement on balance for this level	Above bottom and either below middle or at middle of level (depending on number of marks available)
On the borderline of this level and the one below	At bottom of level

G451

Mark Scheme

June 2013

## Section A – Anatomy and Physiology

Question		Answer	Marks	Guidance										
1	(a)	<p><b>4 marks for 4 from:</b></p> <ol style="list-style-type: none"> <li>1. Hinge</li> <li>2. Extension</li> <li>3. Rectus Femoris / Vastus Lateralis/ Vastus Medialis / Vastus Intermedius</li> <li>4. Biceps Femoris/Semimembranosus/ Semitendinosus</li> </ol>	4	<p>Use professional judgement in spellings of muscles in pt 3 and 4</p> <table border="1"> <thead> <tr> <th>Accept</th> <th>Do not accept</th> </tr> </thead> <tbody> <tr> <td>1 Synovial hinge</td> <td>Synovial on own</td> </tr> <tr> <td>2</td> <td></td> </tr> <tr> <td>3 Quads <b>with correctly</b> named muscle (must be first if list)</td> <td>Quadriceps on own</td> </tr> <tr> <td>4 Hamstrings <b>with correctly</b> named muscle (must be first if list)</td> <td>Hamstrings on own</td> </tr> </tbody> </table>	Accept	Do not accept	1 Synovial hinge	Synovial on own	2		3 Quads <b>with correctly</b> named muscle (must be first if list)	Quadriceps on own	4 Hamstrings <b>with correctly</b> named muscle (must be first if list)	Hamstrings on own
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	<b>(b)</b>	<p><b>(i)</b> <b>3 marks for 3 from:</b> <b>Mark first three attempts only</b></p> <ol style="list-style-type: none"> <li>1. Skeletal or muscle or muscular pump</li> <li>2. (Pocket) valves</li> <li>3. Respiratory (muscle) pump</li> <li>4. Smooth muscle</li> </ol>	3	<p><b>Mark first 3 attempts only</b></p> <table border="1" data-bbox="1267 272 2069 675"> <thead> <tr> <th data-bbox="1267 272 1711 308">Accept</th> <th data-bbox="1711 272 2069 308">Do not accept</th> </tr> </thead> <tbody> <tr> <td data-bbox="1267 308 1711 376">1 Muscular contractions <b>around veins</b></td> <td data-bbox="1711 308 2069 376">Muscular contractions or muscles on own</td> </tr> <tr> <td data-bbox="1267 376 1711 445">2</td> <td data-bbox="1711 376 2069 445"></td> </tr> <tr> <td data-bbox="1267 445 1711 539">3</td> <td data-bbox="1711 445 2069 539">Pulmonary pump / Respiratory muscles on own</td> </tr> <tr> <td data-bbox="1267 539 1711 675">4 Veno-constriction / increased venous tone / increased sympathetic stimulation (of veins)</td> <td data-bbox="1711 539 2069 675"></td> </tr> </tbody> </table>	Accept	Do not accept	1 Muscular contractions <b>around veins</b>	Muscular contractions or muscles on own	2		3	Pulmonary pump / Respiratory muscles on own	4 Veno-constriction / increased venous tone / increased sympathetic stimulation (of veins)							
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		<p><b>(ii)</b> <b>3 marks for 3 from: Submax 2 for points 1–5</b> <b>Must hit pt 6 and/or pt 7 for max</b></p> <p>(Increased volume of blood entering the heart ...)</p> <ol style="list-style-type: none"> <li>1. ... causes the (walls of the) <b>atria</b> to stretch</li> <li>2. (which) stimulates the <b>SA node</b> to increase heart rate or firing rate or rate of impulses</li> <li>3. ... causes the (walls of the) ventricles to stretch / causes increased EDV or end diastolic volume</li> <li>4. (which) causes a stronger force of contraction or increased contractility (of ventricle walls) / causes decreased ESV or end systolic volume</li> <li>5. increase in stroke volume or SV or cardiac output or Q</li> <li>6. increase blood or oxygen supply <b>to muscles</b></li> <li>7. increases endurance / delays fatigue or OBLA or lactate threshold / increases intensity of performance / increases removal or decreases levels of lactic acid or carbon dioxide or CO<sub>2</sub></li> </ol>	3	<table border="1" data-bbox="1267 743 2069 1331"> <thead> <tr> <th data-bbox="1267 743 1671 778">Accept</th> <th data-bbox="1671 743 2069 778">Do not accept</th> </tr> </thead> <tbody> <tr> <td data-bbox="1267 778 1671 847">1</td> <td data-bbox="1671 778 2069 847"></td> </tr> <tr> <td data-bbox="1267 847 1671 916">2</td> <td data-bbox="1671 847 2069 916">Increased heart rate on own</td> </tr> <tr> <td data-bbox="1267 916 1671 984">3 ... causes walls of the heart to stretch</td> <td data-bbox="1671 916 2069 984"></td> </tr> <tr> <td data-bbox="1267 984 1671 1053">4</td> <td data-bbox="1671 984 2069 1053"></td> </tr> <tr> <td data-bbox="1267 1053 1671 1158">5 more blood pumped out of the heart per beat = BOD</td> <td data-bbox="1671 1053 2069 1158">Increase in CO</td> </tr> <tr> <td data-bbox="1267 1158 1671 1227">6</td> <td data-bbox="1671 1158 2069 1227">More blood or oxygen around body</td> </tr> <tr> <td data-bbox="1267 1227 1671 1331">7</td> <td data-bbox="1671 1227 2069 1331">Better or improved quality of performance</td> </tr> </tbody> </table>	Accept	Do not accept	1		2	Increased heart rate on own	3 ... causes walls of the heart to stretch		4		5 more blood pumped out of the heart per beat = BOD	Increase in CO	6	More blood or oxygen around body	7	Better or improved quality of performance
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Question	Answer	Marks	Guidance									
(c) (i)	<p><b>2 marks for 2 from:</b> <b>Mark first two attempts only</b></p> <p>1. <b>Linear motion</b> (created when ...) a <b>body</b> moves with all parts moving at the same velocity or same speed in the same direction / the cyclist's <b>head</b> or <b>torso</b> or arms or helmet or <b>bike frame</b> moves in a straight or curved line</p> <p>2. <b>Angular motion</b> (created when ...) a <b>body</b> or part of a <b>body</b> moves in a circle or part of a circle <b>around a (fixed) point</b> / the cyclist's leg moves <b>around the (hip) joint or axis</b> / the pedals or wheels or spokes on the bike move <b>around a (fixed) point</b></p> <p>3. <b>General motion</b> (created when ...) there is a combination of linear and angular motion / the body of the cyclist moves in a straight line and the legs move around a pivot or eq. / the frame of the bike moves in a straight line and the wheels move around a fixed point or eq.</p>	2	<p><b>Mark first two attempts only</b></p> <table border="1" data-bbox="1272 280 2072 1233"> <thead> <tr> <th data-bbox="1272 280 1585 520"><b>Accept</b> Theoretical description ONLY if linked to "<b>body</b>" or "<b>object</b>" or eq't.</th> <th data-bbox="1585 280 2072 520"><b>Do not accept</b> Names of motion on own / EG of type of motion from cycling without description e.g. linear motion – bike frame / Theoretical description if linked to "<b>cyclist</b>" or "<b>bike</b>" on own</th> </tr> </thead> <tbody> <tr> <td data-bbox="1272 520 1585 624">1</td> <td data-bbox="1585 520 2072 624">Cyclist or bike on own</td> </tr> <tr> <td data-bbox="1272 624 1585 999">2 when a body turns <b>about an axis</b></td> <td data-bbox="1585 624 2072 999">Moves at an angle / Moves in a circular motion / Cyclist or bike on own</td> </tr> <tr> <td data-bbox="1272 999 1585 1233">3</td> <td data-bbox="1585 999 2072 1233">Cyclist or bike on own</td> </tr> </tbody> </table>		<b>Accept</b> Theoretical description ONLY if linked to " <b>body</b> " or " <b>object</b> " or eq't.	<b>Do not accept</b> Names of motion on own / EG of type of motion from cycling without description e.g. linear motion – bike frame / Theoretical description if linked to " <b>cyclist</b> " or " <b>bike</b> " on own	1	Cyclist or bike on own	2 when a body turns <b>about an axis</b>	Moves at an angle / Moves in a circular motion / Cyclist or bike on own	3	Cyclist or bike on own
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G451

Mark Scheme

June 2013

Question		Answer	Marks	Guidance									
	(c)	(ii)	2 marks for 2 from:	2									
			1. <b>Newton 2:</b> The <b>acceleration</b> or rate of <b>change of</b> momentum or velocity of an object is proportional to the (size of) force (and takes place in the direction in which the force acts)		<table border="1"> <thead> <tr> <th>Accept</th> <th>Do not accept</th> </tr> </thead> <tbody> <tr> <td>Correct description of law without name if in the correct order</td> <td></td> </tr> <tr> <td>1 <b>change of</b> speed = BOD</td> <td>Law of Acceleration on own / F = ma on own / Momentum or velocity or speed on own (without reference to change) / The larger the force applied the greater the acceleration of a body = TV</td> </tr> <tr> <td>2 every force has an equal and opposite force</td> <td>Law of Reaction on own</td> </tr> </tbody> </table>	Accept	Do not accept	Correct description of law without name if in the correct order		1 <b>change of</b> speed = BOD	Law of Acceleration on own / F = ma on own / Momentum or velocity or speed on own (without reference to change) / The larger the force applied the greater the acceleration of a body = TV	2 every force has an equal and opposite force	Law of Reaction on own
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			2. <b>Newton 3:</b> For every action there is an equal and opposite reaction										



G451

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Question		Answer	Marks	Guidance				
	(c) (iii)	<p><b>1 mark for 1 from:</b></p> <ul style="list-style-type: none"> <li>1. racket strings apply a force to the ball, the ball applies an equal and opposite force to the strings or vice versa /</li> <li>• a games player jumps and applies a (downward or action) force on the ground that applies an equal or upward or opposite or reaction force on the player /</li> <li>• a ball applies a force on the crossbar that applies an equal and opposite force on the ball /</li> <li>• an athlete/swimmer pushes against the blocks, the same force will be applied back to the athlete/swimmer in the opposite direction /</li> <li>• when a footballer strikes the ball, the same force will be applied on the player's foot in the opposite direction /</li> <li>• when a trampolinist lands, the same force will be applied on the person, propelling them upwards</li> </ul>	1	<p><b>Newton 3 must be an impact situation with equal and opposite forces coming from both bodies <u>at the same time.</u></b></p> <table border="1"> <thead> <tr> <th>Accept</th> <th>Do not accept</th> </tr> </thead> <tbody> <tr> <td>1. any other suitable example.</td> <td>Brief example without attempt at explanation e.g. bouncing a ball on own / ball hitting a crossbar on own</td> </tr> </tbody> </table>	Accept	Do not accept	1. any other suitable example.	Brief example without attempt at explanation e.g. bouncing a ball on own / ball hitting a crossbar on own
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<b>(d)</b>	<b>5 marks for 5 from:</b>	<ol style="list-style-type: none"> <li>1. (cardiac) hypertrophy / bradycardia or decreased (resting) heart rate / increased efficiency or strength of heart or stroke volume or SV / athlete's heart / improved heart or vascular function</li> <li>2. helps prevent cholesterol or plaque or fatty deposits forming in arteries / helps prevent atherosclerosis or narrowing of arteries</li> <li>3. helps prevent arteriosclerosis or hardening of arteries / maintains elasticity of arteries or artery walls</li> <li>4. helps prevent heart attack or myocardial infarction or angina</li> <li>5. increase in HDLs or High Density Lipoproteins</li> <li>6. decrease in LDLs or Low Density Lipoproteins</li> <li>7. helps prevent blood clots forming / reduce blood viscosity</li> <li>8. reduce body weight or obesity or body fat / maintains healthy body weight</li> <li>9. reduce blood pressure or hypertension</li> </ol>	<b>5</b>	<b>Accept</b>	<b>Do not accept</b> Prevents heart disease or CHD / Opposites, i.e. a lack of exercise causes ...
				1 more blood leaving heart <b>per beat</b>	Increased cardiac output or Q
				2 reduced cholesterol on own = BOD / helps prevent blockages or clogging up of arteries = BOD	
				3	Keeps arteries flexible
				4	
				5	
				6	
				7	
				8	
				9	

<b>(e)* Levels of Response</b>	
<p><b>Level 3 (8–10 marks)</b> A comprehensive answer:</p> <ul style="list-style-type: none"> <li>• detailed knowledge and understanding</li> <li>• effective analysis/critical evaluation and/or discussion/explanation/development</li> <li>• clear and consistent practical application of knowledge</li> <li>• accurate use of technical and specialist vocabulary</li> <li>• high standard of written communication.</li> </ul>	<p><b>At Level 3 responses <u>are likely</u> to include:</b></p> <ul style="list-style-type: none"> <li>• detailed knowledge of the effect of <b>being at</b> altitude on the respiratory system</li> <li>• knowledge of partial pressure and diffusion gradient</li> <li>• effective discussion of the influence of <b>being at</b> altitude on endurance performance or sub-max intensity</li> </ul> <p><b>at the top of level:</b></p> <ul style="list-style-type: none"> <li>• discussion of the influence of altitude on <b>other</b> exercise intensities</li> </ul>
<p><b>Level 2 (5–7 marks)</b> A competent answer:</p> <ul style="list-style-type: none"> <li>• satisfactory knowledge and understanding</li> <li>• analysis/critical evaluation and/or discussion/explanation/development attempted with some success</li> <li>• some success in practical application of knowledge</li> <li>• technical and specialist vocabulary used with some accuracy</li> <li>• written communication generally fluent with few errors.</li> </ul>	<p><b>At Level 2 responses <u>are likely</u> to include:</b></p> <ul style="list-style-type: none"> <li>• satisfactory knowledge of the effect of <b>being at</b> altitude on the respiratory system</li> <li>• satisfactory discussion of the influence of <b>being at</b> altitude on physical activity</li> <li>• ...<b>and/or</b> satisfactory discussion of long term training effects</li> </ul>
<p><b>Level 1 (1–4 marks)</b> A limited answer:</p> <ul style="list-style-type: none"> <li>• basic knowledge and understanding</li> <li>• little or no attempt to analyse/critically evaluate and/or discuss/explain/develop</li> <li>• little or no attempt at practical application of knowledge;</li> <li>• technical and specialist vocabulary used with limited success</li> <li>• written communication lacks fluency and there will be errors, some of which may be intrusive.</li> </ul>	<p><b>At Level 1 responses <u>are likely</u> to include:</b></p> <ul style="list-style-type: none"> <li>• basic knowledge of the effect of <b>being at</b> altitude on the respiratory system</li> <li>• the influence of <b>being at</b> altitude on physical activity discussed with limited success</li> <li>• ...<b>and/or</b> long term training effects discussed with some success</li> </ul>
<p><b>(0 marks)</b> No response or no response worthy of credit.</p>	

Question	Answer	Marks	Guidance
(e)*	<p><b>Indicative content:</b> Candidate responses are likely to include: (relevant responses not listed should be acknowledged) <b>Numbered points</b> = knowledge/understanding <b>Bullet points</b> = likely to be development</p> <p><b>PRE-ACCLIMATISATION</b> (= <i>negative</i>)  <b>The effect of altitude on the <u>respiratory</u> system</b></p> <ol style="list-style-type: none"> <li>1. Decrease in atmospheric pressure / air thinner <ul style="list-style-type: none"> <li>• causes increase in breath frequency or ventilation rate or minute ventilation or pulmonary ventilation</li> <li>• hyperventilation</li> <li>• causes an increase in water loss</li> </ul> </li> <li>2. Decrease in pressure of oxygen (in atmospheric air compared to sea level) / less oxygen (in the air compared to sea level)</li> <li>3. Decrease in efficiency of (external) respiration or the respiratory system <ul style="list-style-type: none"> <li>• decrease in ppO<sub>2</sub> in the alveoli</li> <li>• shallower or reduced or smaller O<sub>2</sub> diffusion or concentration gradient (at the alveoli or between the alveoli and blood)</li> <li>• less O<sub>2</sub> diffuses into the blood or capillaries / decreased gaseous exchange (between alveoli and blood)</li> <li>• less O<sub>2</sub> combines or associates with haemoglobin / haemoglobin is less saturated at lungs / decrease in ppO<sub>2</sub> in the blood</li> </ul> </li> <li>4. Less oxygen is transported in the blood / less oxygen is transported or delivered to the working muscles</li> <li>5. Decrease in efficiency of <b>internal</b> respiration <ul style="list-style-type: none"> <li>• shallower or reduced or smaller O<sub>2</sub> diffusion or concentration gradient <b>at the muscle or between the blood and muscle</b></li> <li>• decrease in O<sub>2</sub> dissociation (from haemoglobin to myoglobin)</li> <li>• less O<sub>2</sub> <b>diffuses into</b> the muscle cell / decreased gaseous exchange <b>between the blood and muscle</b></li> </ul> </li> <li>6. Increase in chemoreceptor stimulation <ul style="list-style-type: none"> <li>• chemoreceptors detect lower O<sub>2</sub> level or lower ppO<sub>2</sub></li> <li>• information sent to RCC or respiratory control centre (in medulla oblongata)</li> <li>• inspiratory centre and expiratory centre stimulated</li> <li>• (leading to...) increased depth and rate of breathing</li> </ul> </li> <li>7. Can lead to hypoxia / working under hypoxic conditions <ul style="list-style-type: none"> <li>• increased risk of altitude sickness or dizziness or nausea or vomiting</li> </ul> </li> <li>8. Air is dryer or colder <ul style="list-style-type: none"> <li>• increased risk of dehydration</li> </ul> </li> </ol>	10	Pt 2 – accept decrease in partial pressure or decreased concentration of oxygen

Question	Answer	Marks	Guidance
	<p><b>PRE-ACCLIMATISATION (PERFORMANCE WHILE AT ALTITUDE ...)</b>  <b>The influence of altitude on the performance of different intensities of physical activity.</b></p> <p><b>(Sub-max exercise intensity = negative)</b></p> <p>9. Aerobic or endurance or sub-max intensity performance <b>deteriorates</b></p> <ul style="list-style-type: none"> <li>• can not train at the intensity possible at sea level</li> <li>• can not train for as long as possible at sea level</li> <li>• detraining or reversibility will occur</li> </ul> <p>10. VO<sub>2</sub> max or aerobic capacity is reduced</p> <ul style="list-style-type: none"> <li>• increase in lactic acid or anaerobic work / slower removal of lactic acid</li> <li>• early fatigue or OBLA or lactate or anaerobic threshold</li> </ul> <p><b>e.g.</b> cyclists in the Tour de France</p> <p>11. Low intensity exercise less affected</p> <p><b>e.g.</b> mountain walking</p> <p><b>(Max exercise intensity = mixed)</b></p> <p>12. (Some) Anaerobic or power-based or high intensity performances are <b>unaffected</b></p> <p>13. (Some) Anaerobic or power-based or high intensity performances <b>benefit</b> from lower air resistance or lower atmospheric pressure or thinner air</p> <p><b>e.g.</b> throwing events : discus or javelin will travel further</p> <p><b>e.g.</b> jumping events : triple jump or long jump will travel further</p> <p><b>e.g.</b> sprinting events : sprinters can run faster</p> <p>14. (Some) In anaerobic or high intensity or speed endurance activities - performance <b>deteriorates</b></p> <ul style="list-style-type: none"> <li>• decreased tolerance to or buffering of lactic acid</li> <li>• increased levels of lactic acid inhibits or denatures enzyme action</li> </ul> <p><b>e.g.</b> 200m or 400m or 800m</p>		

Question	Answer	Marks	Guidance
	<p><b>POST-ACCLIMATISATION</b> (= <i>positive</i>) : The effect of altitude on the <u>respiratory</u> system</p> <p>15. (after 4-6 weeks) altitude training increases efficiency of respiratory system / respiratory adaptations or acclimatisation occurs</p> <ul style="list-style-type: none"> <li>• increased number or surface area of alveoli</li> <li>• capillarisation or increased capillary density at alveoli or muscles</li> <li>• increased capacity for gaseous exchange or diffusion at alveoli or muscles</li> <li>• increased release of EPO or erythropoietin</li> <li>• increased haemoglobin or red blood cell or erythrocyte content</li> <li>• increased oxygen carrying capacity of blood /increased oxygen to muscles</li> <li>• increased strength of respiratory muscles <b>e.g.</b> diaphragm or intercostals or SCM or scalenes or ...(etc)</li> <li>• increased lung volumes or capacity or depth of breathing or tidal volume</li> </ul> <p><b>The influence of altitude on the performance of different intensities of physical activity.</b>  <b>(PERFORMANCE ON RETURNING TO SEA LEVEL)</b>  <b>(Sub-max exercise intensity = <i>positive</i>)</b></p> <p>16. Aerobic or endurance or sub-max intensity performance <b>improves</b></p> <p>17. VO<sub>2</sub> max or aerobic capacity is increased</p> <ul style="list-style-type: none"> <li>• increase in aerobic work / decrease in anaerobic work</li> <li>• delayed fatigue or OBLA or lactate or anaerobic threshold / can work for longer</li> </ul> <p><b>e.g.</b> distance runners performing at sea level after a period at altitude</p> <p><b>(Max exercise intensity= <i>mixed</i>)</b></p> <p>18. (Some) Anaerobic or power-based or high intensity performances are <b>unaffected</b></p> <p>19. Anaerobic or max intensity performance <b>improves</b></p> <ul style="list-style-type: none"> <li>• muscles have increased buffering capacity or increased tolerance to lactic acid or increased capacity to remove lactic acid / can work at a higher intensity for longer</li> </ul> <p><b>Other possible discussion may include:</b></p> <ul style="list-style-type: none"> <li>• altitude considered over 1500m above sea level</li> <li>• 2000-2500m is optimal altitude for acclimatisation</li> <li>• minimum of 28 days needed for acclimatisation</li> <li>• LHTL or Live High Train Low more beneficial (than training at altitude)</li> <li>• sea level training intensities can be maintained</li> <li>• use of altitude or hypoxic tents</li> <li>• disadvantages of being at altitude on recovery times / benefits of adaptations on recovery times</li> <li>• reference to asthma or smoking</li> </ul>		
	<b>Total</b>	<b>30</b>	

## Section B – Acquiring Movement Skills

Question		Answer	Marks	Guidance	
2	(a)	<p><b>4 marks for 4 from:</b></p> <p>Award mark when an <b>explanation</b> omits reference to slower/quicker</p> <ol style="list-style-type: none"> <li><b>(number of stimuli)</b> more stimuli or choices or alternative responses or decisions – then RT slower/longer</li> <li><b>(type of skill)</b> if skill open or complex or externally-paced - then RT slower/longer</li> <li><b>(PRP)</b> If ‘sold dummy’ or given ‘fake pass’ / if psychological refractory period (PRP) or single channel hypothesis active - then RT slower/longer</li> <li><b>(distractions/selective attention)</b> if there are distractions or noise / if performer unable to selectively attend / when social inhibition impedes decision making - then RT slower/longer</li> <li><b>(age)if too old or too young – then</b> RT slower/longer / at optimum age – then RT quicker/shorter</li> <li><b>(gender)</b> if female - slower/longer RT than males (generally)</li> <li><b>(height/hands-feet)</b> the longer the neural pathways or taller the person – then RT slower/longer / RT of hands shorter or quicker than of feet / using dominant limb – then RT quicker/shorter</li> </ol>	4	<p><b>Accept</b> ref to <b>reaction time=BOD</b> (as it affects response time) /</p> <p><b>Opposites</b></p>	<p><b>Do not accept</b> Lists of factors with no attempt at explanation</p>
				1.	
				2.	
				3.	
				4.	
				5.	
				6.	
				7.	

G451

Mark Scheme

June 2013

Question	Answer	Marks	Guidance	
	8. <b>(warm up/temperature)</b> if warm up completed – then RT quicker/shorter / If muscle or body temperature <b>too</b> high or <b>too</b> low - then RT slower/longer		8.	
	9. <b>(environment)</b> environmental conditions with explanation / (e.g.) windy conditions can impede perception or confuse - RT slower/longer		9.	
	10. <b>(intensity/warning)</b> if stimulus intense or if S-R bond very compatible or predictable / if warning given (e.g. 'on your marks') – then RT quicker/shorter		10. brightness/loudness for intensity	
	11. <b>(arousal)</b> if arousal or alertness or motivation or anxiety <b>too</b> high or <b>too</b> low - then RT slower/longer / at optimal arousal – then RT quicker/shorter		11.	
	12. <b>(experience/anticipation)</b> the more experienced the performer – then RT quicker/shorter if negative past experience - then RT slower/longer / if positive past experiences - then RT quicker/shorter / with (good) anticipation or expectation – then RT quicker / shorter		12. Stage of learning if accurately linked with RT longer or shorter	
	13. <b>(drugs/tiredness)</b> alcohol or drugs or tiredness - then RT slower/longer (or quicker/shorter depending on type of drug)		13.	
	14. <b>(personality)</b> (some argue that) extroverts have quicker/shorter RT than introverts (BOD)		14.	
	15. <b>(fitness/skill)</b> the fitter or healthier or more skilful the person is / if in autonomous phase or if motor programmes established - then RT quicker/shorter		15. reference to disability if explained	



Question	Answer	Marks	Guidance	
(b)	<p><b>4 marks for 4 from: Mark first four <u>definite attempts</u></b></p> <p><b>Need strategy + brief description for each mark</b></p> <p>1. <b>Give reward</b> / give award or certificate or fruit <b>(description)</b> e.g. award or certificate or fruit / to make them want to continue or work harder / to increase confidence / when they show healthy behaviour</p> <p>2. <b>Positive reinforcement</b> / give praise or positive feedback or a satisfier <b>(description)</b> e.g. praise /positive feedback / a satisfier/ when healthy behaviour shown / to strengthen SR bond / to raise confidence or raise self-esteem or make them want to continue</p> <p>3. <b>Negative reinforcement</b> / withdraw negative or unpleasant stimulus or annoyer or negative feedback <b>(description)</b> withdraw negative stimulus or annoyer or negative feedback / when healthy behaviour shown / to strengthen (correct) SR bond / to raise confidence or self- esteem</p> <p>4. <b>Punishment</b> / tell them off / withdraw privileges <b>(description)</b> to break undesired SR bond / when unhealthy lifestyle shown / to stop dysfunctional or unhealthy behaviour / so they try again</p>	4	<p><b>Accept</b></p> <p>...alternative suitable attempts at description.</p> <p>Reference to sport or skills (which can lead to BAHs)</p>	<p><b>Do not accept</b></p> <p>“so they are motivated” – as description / Same factor as both strategy AND description / Extrinsic/intrinsic motivation</p>
			<p>1. egs of rewards as either strategy or description e.g. certificate to increase confidence (✓) OR reward such as give a certificate (✓)</p>	<p>Same factor as both strategy AND description</p>
			<p>2. Praise etc as either strategy or description/s e.g. positive reinforcement to raise confidence (✓) OR positive reinforcement such as praise (✓)</p>	<p>Same factor as both strategy AND description</p> <p>Reinforcement on own</p>
			<p>3. Annoyer etc as either strategy or description e.g. negative reinforcement when healthy behaviour shown (✓) OR negative reinforcement by withdrawing unpleasant stimulus(✓)</p>	<p>Same factor as both strategy AND description</p> <p>Reinforcement on own</p>
			<p>4. tell them off / withdraw privileges etc as either strategy or description e.g. punish when unhealthy behaviour shown (✓) OR punish such as withdraw privileges (✓)</p>	<p>Same factor as both strategy AND description</p> <p>‘red card’ as description of punishment for BAHs</p>

		<p>5. <b>Educate /inform / tell them</b> <b>(description-)</b> ...about healthy lifestyles or health benefits / about dangers of smoking etc / information must be relevant to young peoples' needs / young people must be able to relate to info</p> <p>6. <b>Goal or target setting</b> <b>(description)</b> that is SMART or achievable / can raise confidence / can give aim or direction or success or incentive or something to work towards</p> <p>7. (make participation) <b>fun / enjoyable</b> / engaging / interesting / put on taster sessions / use variety of activities <b>(description)</b> enjoyment / to achieve or feel confident or want to continue / don't get bored / to avoid drive reduction / put on taster sessions / use variety of activities / different to what they've done before / social interaction / with friends</p> <p>8. <b>Peers (pressure) / friends / make social</b> <b>(description)</b> to conform or be part of group / want to continue / social interaction / be with friends</p> <p>9. <b>significant others / role models</b> <b>(description)</b> someone to look up to or copy or be inspired by or aim to be like / to gain or maintain interest / participation more likely if young people can identify with role model</p>		<p>5.</p> <p>6.</p> <p>7. Fun / enjoyment etc as either strategy or description e.g. make activities fun so young people enjoy them</p> <p>8.</p> <p>9.</p>	<p>Same factor as both strategy AND description</p> <p>Same factor as both strategy AND description</p> <p>Peers or friends or family on own</p>
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G451

Mark Scheme

June 2013

Question	Answer	Marks	Guidance																	
(c)	<p><b>6 marks for 6 from</b></p> <p>1. (Law of) Effect 2. (Law of) Exercise 3. (Law of) Readiness</p> <p><b>(Law of Effect – effect on SR bond/learning)</b> 4. Reinforcement or praise or satisfaction or pleasure or enjoyment or success or positive feedback - strengthens (S-R bond) or helps learning /causes behaviour to be repeated</p> <p>Annoyance or lack of enjoyment or failure - weakens (S-R bond) or hinders learning</p> <p><b>(Law of Exercise – effect on SR bond/learning)</b> 5. Repeating or rehearsing or practising movement or skill – strengthens (S-R bond) or helps learning /</p> <p>Tiredness or information overload or incorrect practice or lack of practise – weakens (S-R bond) or hinders learning</p> <p><b>(Law of Readiness – effect on SR bond/learning)</b> 6. Need appropriate physical or mental capability or maturity -to strengthen (S-R bond) or help learning/</p> <p>If too young or immature or perceptually inadequate - (SR bond) weakened or learning hindered</p>	6	<table border="1"> <thead> <tr> <th data-bbox="1261 272 1666 308">Accept</th> <th data-bbox="1666 272 2076 308">Do not accept</th> </tr> </thead> <tbody> <tr> <td data-bbox="1261 308 1666 343">1.</td> <td data-bbox="1666 308 2076 343"></td> </tr> <tr> <td data-bbox="1261 343 1666 378">2.</td> <td data-bbox="1666 343 2076 378"></td> </tr> <tr> <td data-bbox="1261 378 1666 413">3.</td> <td data-bbox="1666 378 2076 413"></td> </tr> <tr> <td data-bbox="1261 413 1666 518">Only accept description when linked with correctly named law</td> <td data-bbox="1666 413 2076 518">DNA description of effect on SR bond without correctly named law</td> </tr> <tr> <td data-bbox="1261 518 1666 754">4.</td> <td data-bbox="1666 518 2076 754"></td> </tr> <tr> <td data-bbox="1261 754 1666 1029">5.</td> <td data-bbox="1666 754 2076 1029"></td> </tr> <tr> <td data-bbox="1261 1029 1666 1303">6.</td> <td data-bbox="1666 1029 2076 1303"></td> </tr> </tbody> </table>		Accept	Do not accept	1.		2.		3.		Only accept description when linked with correctly named law	DNA description of effect on SR bond without correctly named law	4.		5.		6.	
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(d)	<p><b>6 marks for 6 from:</b>  <b>3 max for explanation/s without egs or egs without explanation/s</b></p> <p>1. <b>(Input from display)</b> environment or information  <b>e.g.</b> players / ball</p> <p>2. <b>(Sense organs)</b> receive or detect take in stimuli or information / vision or eyes / audition or ears / proprioception or kinaesthesia / info from muscles, tendons &amp; joints  <b>e.g.</b> eyes see ball coming</p> <p>3. <b>(Perceptual mechanism)</b> interpretation / judgement /selective attention / making sense of sensory information or the situation /  <b>e.g.</b> recognise object as a ball /focus on ball / interpretation of the spin etc /</p> <p>decision making / selecting or forming motor plan or programme / involves memory or DCR process  <b>e.g.</b> decision (to move hands) to catch ball</p> <p>4. <b>(Effector mechanism)</b> transfers or transmits decision or information or motor programme or impulse (from brain) to muscles  <b>e.g.</b> sent (via nervous system) to limb/s</p> <p>5. <b>(Muscular system)</b> muscle movement (to catch ball)  <b>e.g.</b> arm muscles move arm into position</p> <p>6. <b>(Response)</b> end product or movement or outcome  <b>e.g.</b> ball is caught</p>	6	<p>It must be clear/obvious which element of model is being explained</p> <table border="1" data-bbox="1261 272 2076 1289"> <thead> <tr> <th data-bbox="1261 272 1666 331">Accept</th> <th data-bbox="1666 272 2076 331">Do not accept</th> </tr> </thead> <tbody> <tr> <td data-bbox="1261 331 1666 403">Same or different eg/s throughout</td> <td data-bbox="1666 331 2076 403"></td> </tr> <tr> <td data-bbox="1261 403 1666 571">1. surroundings</td> <td data-bbox="1666 403 2076 571"></td> </tr> <tr> <td data-bbox="1261 571 1666 948">2.</td> <td data-bbox="1666 571 2076 948">information from the senses</td> </tr> <tr> <td data-bbox="1261 948 1666 1086">3. work out what you want or need to do</td> <td data-bbox="1666 948 2076 1086">perceive situation on own</td> </tr> <tr> <td data-bbox="1261 1086 1666 1190">considers past experience/s / Looks at options available (BOD)</td> <td data-bbox="1666 1086 2076 1190"></td> </tr> <tr> <td data-bbox="1261 1190 1666 1289">elements of memory process</td> <td data-bbox="1666 1190 2076 1289"></td> </tr> <tr> <td data-bbox="1261 1086 1666 1190">4.</td> <td data-bbox="1666 1086 2076 1190">'muscles told what to do'=TV</td> </tr> <tr> <td data-bbox="1261 1190 1666 1289">5. carries out movement</td> <td data-bbox="1666 1190 2076 1289"></td> </tr> <tr> <td data-bbox="1261 1289 1666 1289">6.</td> <td data-bbox="1666 1289 2076 1289"></td> </tr> </tbody> </table>		Accept	Do not accept	Same or different eg/s throughout		1. surroundings		2.	information from the senses	3. work out what you want or need to do	perceive situation on own	considers past experience/s / Looks at options available (BOD)		elements of memory process		4.	'muscles told what to do'=TV	5. carries out movement		6.	
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<b>(e)* Levels of Response</b>	
<p><b>Level 3 (8–10 marks)</b> A comprehensive answer:</p> <ul style="list-style-type: none"> <li>• detailed knowledge and understanding</li> <li>• effective analysis/critical evaluation and/or discussion/explanation/development</li> <li>• clear and consistent practical application of knowledge</li> <li>• accurate use of technical and specialist vocabulary</li> <li>• high standard of written communication.</li> </ul>	<p><b>At Level 3 <u>are likely</u> to include:</b></p> <ul style="list-style-type: none"> <li>• all types of guidance</li> <li>• effective evaluation of most types of guidance</li> <li>• use of guidance in relation to skills <b>and</b> lifestyle successfully attempted</li> </ul> <p><b>at the top of level:</b></p> <ul style="list-style-type: none"> <li>• effective evaluation of all types of guidance</li> </ul>
<p><b>Level 2 (5–7 marks)</b> A competent answer:</p> <ul style="list-style-type: none"> <li>• satisfactory knowledge and understanding</li> <li>• analysis/critical evaluation and/or discussion/explanation/development attempted with some success</li> <li>• some success in practical application of knowledge</li> <li>• technical and specialist vocabulary used with some accuracy</li> <li>• written communication generally fluent with few errors.</li> </ul>	<p><b>At Level 2 <u>are likely</u> to include:</b></p> <ul style="list-style-type: none"> <li>• satisfactory evaluation of most types of guidance</li> <li>• use of guidance in relation to lifestyle attempted</li> <li>• use of guidance in relation to skills attempted</li> </ul>
<p><b>Level 1 (1–4 marks)</b> A limited answer:</p> <ul style="list-style-type: none"> <li>• basic knowledge and understanding</li> <li>• little or no attempt to analyse/critically evaluate and/or discuss/explain/develop</li> <li>• little or no attempt at practical application of knowledge</li> <li>• technical and specialist vocabulary used with limited success</li> <li>• written communication lacks fluency and there will be errors, some of which may be intrusive.</li> </ul>	<p><b>At Level 1 responses <u>are likely</u> to include:</b></p> <ul style="list-style-type: none"> <li>• limited evaluation of types of guidance</li> <li>• use of guidance in relation to skills only or lifestyle only attempted</li> </ul>
<p><b>(0 marks)</b> No response or no response worthy of credit.</p>	

Question	Answer	Marks	Guidance
(e)*	<p><b>Indicative content:</b> Candidate responses are likely to include: (relevant responses not listed should be acknowledged) <b>Numbered points</b> = KU                      <b>Bullet points</b> = likely devt of knowledge</p> <p><b>1. Visual guidance</b></p> <ul style="list-style-type: none"> <li>• (description) demonstration / learner watches model / pictures / charts / video / DVD / court or pitch markings / markers / guidance lines / boxes</li> </ul> <p><b>e.g.</b> (skill) accept any suitable skill example  <b>e.g.</b> (BAHL) accept any suitable BAHL example</p> <ul style="list-style-type: none"> <li>• Bandura's model</li> </ul> <p><b>+ve Evaluation</b> - visual</p> <p>2. builds mental picture / gives visual representation / lets learner know what 'skill' or 'behaviour' looks like</p> <p>3. increases understanding of movement requirements or healthy living</p> <ul style="list-style-type: none"> <li>• corrects errors / motivates</li> </ul> <p><b>e.g.</b> (skill) accept any suitable skill example  <b>e.g.</b> (BAHL) accept any suitable BAHL example</p> <p>4. effective in early or cognitive phase of learning</p> <p>5. effective if relevant aspects of skill emphasised</p> <p>6. effective if copying role model or significant other</p> <p>7. effective if copying someone of similar ability or same gender</p> <p><b>-ve Evaluation</b> - visual</p> <p>8. not effective if wrong model or poor demo or poor practice or poor lifestyle shown (which may be copied) / demo must be correct for desired performance or behaviour (to be copied)</p> <ul style="list-style-type: none"> <li>• static displays lose impact</li> </ul> <p><b>e.g.</b> (skill) accept any suitable skill example  <b>e.g.</b> (BAHL) accept any suitable BAHL example</p> <p>9. demo mustn't be too complex or detailed / not effective if overload occurs</p> <p>10. no feedback – so less effective for autonomous learners</p> <ul style="list-style-type: none"> <li>• so correct SR bonds not reinforced</li> <li>• so incorrect SR bonds not weakened</li> </ul> <p>11. should be followed by or linked with verbal guidance</p>	10	

Question	Answer	Marks	Guidance
	<p><b>12. Verbal guidance</b></p> <ul style="list-style-type: none"> <li>• (description) instructions / talking it through / telling or advising or explaining to learner what to do / feedback</li> </ul> <p><b>e.g.</b> (skill) accept any suitable skill example  <b>e.g.</b> (BAHL) accept any suitable BAHL example</p> <p><b>+ve Evaluation</b> - verbal</p> <p>13. builds on knowledge gained by visual guidance / good when used with visual guidance</p> <ul style="list-style-type: none"> <li>• corrects errors / motivates / to learn basic body position (cognitive)</li> </ul> <p>14. helps to focus on key aspects or important cues</p> <p>15. effective or best for competent or more advanced or autonomous learners</p> <p>16. helps understanding of tactics or strategies or more complex information or technical detail  give strategies to help understanding  <b>e.g.</b> (skill) accept any suitable skill example  <b>e.g.</b> (BAHL) accept any suitable BAHL example</p> <p><b>-ve Evaluation</b> - verbal</p> <p>17. not effective if too much information given or if information overload occurs</p> <ul style="list-style-type: none"> <li>• can be confusing for cognitive learners / must be kept simple for cognitive learners</li> <li>• learners can become bored</li> </ul> <p>18. not effective if incorrect or unclear information given</p> <p>19. not effective if too much negative feedback or criticism given</p> <p>20. some skills are too complex for verbal guidance alone  <b>e.g.</b> (skill) accept any suitable skill example  <b>e.g.</b> (BAHL) accept any suitable BAHL example</p> <p>21. learner may not have the maturity to understand</p>		

Question	Answer	Marks	Guidance
	<p><b>22. Manual guidance</b></p> <ul style="list-style-type: none"> <li>• (description) physical support or help (by teacher or coach) / moving joints or limbs through movement / physically manipulating body</li> </ul> <p><b>23. Mechanical guidance</b></p> <ul style="list-style-type: none"> <li>• (description) using equipment or apparatus (to help performance and/or participation)  <b>e.g.</b> twisting belts / arm bands or floats / scrum machine / stabilisers / belay ropes or other eg</li> </ul> <p><b>+ve Evaluation</b> – manual and mechanical</p> <p>24. effective in early or cognitive phase of learning</p> <ul style="list-style-type: none"> <li>• corrects errors / learn (basic) body position (cognitive)</li> </ul> <p>25. gives confidence</p> <p>26. may encourage or motivates people to take up or continue exercising</p> <p>27. encourages correct proprioception or kinaesthesia or timing / helps give a feel for the movement  <b>e.g.</b> gives right feeling of movement when beginning exercising on a bike or other suitable e.g.</p> <p>28. increases safety in potentially risky activities / good for practising dangerous skills  <b>e.g.</b> (skill) accept any suitable skill example  <b>e.g.</b> (BAHL) accept any suitable BAHL example</p> <p><b>-ve Evaluation</b> manual and mechanical</p> <p>29. Not effective if: too much help given / used for too long /</p> <ul style="list-style-type: none"> <li>• performer can become over-reliant / remove asap to avoid over-reliance</li> </ul> <p>30. can limit proprioceptive or kinaesthetic experience/s</p> <p>31. learner must trust coach</p> <p>32. difficult to use manual/mechanical guidance for BAHL</p> <p>33. learner may be uncomfortable with proximity of coach (<b>manual</b>)</p>		<p>Points 24-32  can be credited  for both manual  and mechanical</p>



G451

Mark Scheme

June 2013

## Section C – Socio-Cultural Studies relating to participation in physical activity

Question		Answer	Marks	Guidance			
3	(a)	5 marks for 5 from: 1. <b>(Stratford)</b> regeneration or renewal or upgraded amenities for (deprived) area / (increased) sense of community or social integration <b>in local area</b> 2. <b>(facilities)</b> legacy of <b>world class</b> or <b>specialist</b> facilities / upgrading of (existing) facilities 3. <b>(participation)</b> increased participation (in sport and physical activity) / <b>more</b> balanced active and healthy lifestyles / improved health or fitness 4. <b>(infrastructure)</b> new or improved infrastructure / new or better communications or transport network / upgraded stations or airports 5. <b>(economy)</b> good for economy / business or profit (from tourism) / <b>new</b> businesses created 6. <b>(employment)</b> employment opportunities / job creation / skill development (for local people) 7. <b>(disability)</b> greater respect for disability sport / reduced discrimination or stereotyping 8. <b>(SW / NB)</b> shop window effect / showcasing of UK or London / world saw (best of) UK / nation building / increased prestige or status or image or esteem of UK 9. <b>(pride)</b> national pride or patriotism	5	<b>Accept</b>		<b>Do not accept</b>	
				1. 're-urbanisation' of worn-down area=BOD / housing (from Olympic village)			
				2. Named world class facility e.g. Olympic Stadium / velodrome	New or more facilities		
				3. Less sedentary lifestyles	More classes		
				4. better road or rail network	Improved or upgrade health service		
				5. Tourists spent money=BOD	Tourism on own		
				6.			
				7.			
				8. other showcased areas e.g. Weymouth			
				9.			

G451

Mark Scheme

June 2013

Question	Answer	Marks	Guidance	
(b)	4 marks for 4 from:  1. <b>(money)</b> lack of money <b>for</b> club membership or kit or equipment or fares other suitable example 2. <b>(facilities)</b> lack of facilities or clubs or activities 3. <b>(transport)</b> 'can't get there' / no transport / <b>distance from</b> 'activity' / no access 4. <b>(choice/esteem)</b> don't like exercise / not motivated / prefer 'other things' / lack of confidence or esteem / self conscious / don't think any good 5. <b>(friends/family/RMs)</b> friends or family don't participate / peer pressure not to participate / 'no-one to go with' / lack of role models 6. <b>(time)</b> commitment to study or part-time jobs / 'busy doing' other things 7. <b>(risk)</b> risk of or not allowed out at night / don't feel safe walking home 8. <b>(tired)</b> tired after school or college or work 9. <b>(religion)</b> due to religious or cultural beliefs or norms 10. <b>(school)</b> negative or limited <b>school</b> experience 11. <b>(health/disability) poor</b> health / disability 12. <b>(weather)</b> 'typical British' or unfavourable weather	4	<b>Accept</b> Barriers that are <b>outlined rather than identified</b>	<b>Do not accept</b> Lack of opportunity or provision on own
			1.	too expensive /lack of money on own
			2. "lack of local facilities"=Pt 2 (not 2+3)	Lack of coaches
			3. Can't drive	
			4. egs of 'other things' e.g. computer use / feeling of 'not looking good' when exercising / don't like to sweat	Lazy / Esteem or confidence on own / Embarrassment on own Out of 'comfort zone'
			5.	Friends or peer pressure on own
			6.	no time on own
			7.	Risk on own
			8.	Tired on own / too much pressure on own
			9. e.g. of religious or cultural of social barrier	Religion on own
			10. e.g. of negative <b>school</b> experience	School on own
			11. examples of poor health or disability	Health on own
			12.	Weather on own

Question		Answer	Marks	Guidance																
	(c)	(i)	3 marks for 3 from: 1. <b>(rugby)</b> from England /(adapted) from rugby 2. <b>(grid iron)</b> Originally called 'grid iron' 3. <b>(Ivy league)</b> Developed in 'Ivy League' universities 4. <b>(Frontier)</b> reflected 'frontier or pioneering spirit' / reflected toughness of early (pioneering) settlers 5. <b>(rules)</b> limited or no (common) rules (at first) 6. <b>(dangerous)</b> dangerous / violent / (serious) injury / (some) deaths / banned by some unis <b>due to danger</b>	3	<table border="1"> <thead> <tr> <th>Accept</th> <th>Do not accept</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Mob football /public schools</td> </tr> <tr> <td>2.</td> <td>Grid iron on own</td> </tr> <tr> <td>3.</td> <td>originally played at Yale or Harvard or Princeton or other named Ivy League uni</td> </tr> <tr> <td>4.</td> <td></td> </tr> <tr> <td>5.</td> <td>Rules brought in</td> </tr> <tr> <td>6.</td> <td>Banned on own</td> </tr> </tbody> </table>		Accept	Do not accept	1.	Mob football /public schools	2.	Grid iron on own	3.	originally played at Yale or Harvard or Princeton or other named Ivy League uni	4.		5.	Rules brought in	6.	Banned on own
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		(ii)	3 marks for 3 from: 1. <b>(Golden triangle)</b> (attractive to spectators and so...) attractive to <b>sponsors</b> or <b>advertisers</b> or <b>TV</b> or <b>media</b> / <b>profit</b> for <b>sponsors</b> or <b>advertisers</b> or <b>TV</b> or media /part of 'golden triangle' 2. <b>(TV rights)</b> payment from TV Rights 3. <b>(nature of game)</b> commercial breaks 'part of game' / game designed for or suits TV or advertising 4. <b>(franchises)</b> teams run as franchises or businesses / teams 'bought and sold' / NFL as group or cartel of companies 5. <b>(capitalism)</b> USA is capitalist / game reflects capitalism 6. <b>(SB)</b> Super Bowl has huge commercial <b>opportunities</b> / Super Bowl has worldwide coverage / reference to advertising costs at Super Bowl	3	<table border="1"> <tbody> <tr> <td>1. Huge media or TV coverage / huge amount of sponsorship or advertising</td> <td>Popular or attractive on own / profit on own / golden triangle on own</td> </tr> <tr> <td>2.</td> <td></td> </tr> <tr> <td>3.</td> <td></td> </tr> <tr> <td>4.</td> <td>Teams privately or publicly owned</td> </tr> <tr> <td>5.</td> <td>capitalism on own / game makes profit or money</td> </tr> <tr> <td>6.</td> <td>Super Bowl on own / Super Bowl is highly commercialised</td> </tr> </tbody> </table>		1. Huge media or TV coverage / huge amount of sponsorship or advertising	Popular or attractive on own / profit on own / golden triangle on own	2.		3.		4.	Teams privately or publicly owned	5.	capitalism on own / game makes profit or money	6.	Super Bowl on own / Super Bowl is highly commercialised		
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(d)	<p><b>5 marks for 5 from:</b>  <b>Modern technology can impact on performance in sport as:</b></p> <ol style="list-style-type: none"> <li>1. <b>performance</b> or skill or fitness or speed improved  <b>e.g.</b> body suits (athletics/swimming) / graphite or titanium equipment / modern footballs that allow better swing or curve / streamlined cycling helmets</li> <li>2. <b>training</b> enhanced  <b>e.g.</b> tyre towing / elastic cord / supplements</li> <li>3. <b>recovery</b> improved  <b>e.g.</b> medical products such as artificial ligament or joint replacement / 'illegal' pharmacological aids or drugs / compression wear / ice baths</li> <li>4. <b>fairer outcomes</b> / <b>honesty</b> or <b>accuracy</b> enhanced / helps officials make decisions / avoids arguments  <b>e.g.</b> goal line tech / third or TV umpire / Hawk-Eye / timing devices <b>e.g.</b> starting blocks</li> <li>5. <b>inclusion</b> or <b>participation</b> increased  <b>e.g.</b> carbon fibre blades / artificial legs / wheelchairs / surfaces that allow play all year</li> <li>6. <b>safety</b> increased  <b>e.g.</b> gum shields / cricket head gear / landing mats</li> <li>7. <b>comfort</b> increased  <b>e.g.</b> clothing / equipment design such as footwear</li> <li>8. <b>analysis or understanding increased</b> (for coaches or participants or spectators)  <b>e.g.</b> DVD or other playback equipment / interactive pundits' screens / refs or umpires 'miked up' for all to hear</li> <li>9. <b>entertainment</b> or interest (for crowd) <b>increased</b>  <b>e.g.</b> TMO / Hawk-Eye</li> </ol>	5	<table border="1"> <thead> <tr> <th data-bbox="1249 220 1648 255">Accept</th> <th data-bbox="1648 220 2087 255">Do not accept</th> </tr> </thead> <tbody> <tr> <td data-bbox="1249 255 1648 392">... only when supported by any suitable example / A different example needed for each point</td> <td data-bbox="1648 255 2087 392">the following as examples: massage/ hypnosis/ imagery</td> </tr> <tr> <td data-bbox="1249 392 1648 513">1. ref improved fitness or skill component/s e.g. strength or kinaesthesia</td> <td data-bbox="1648 392 2087 513"></td> </tr> <tr> <td data-bbox="1249 513 1648 587">2.</td> <td data-bbox="1648 513 2087 587"></td> </tr> <tr> <td data-bbox="1249 587 1648 708">3.</td> <td data-bbox="1648 587 2087 708"></td> </tr> <tr> <td data-bbox="1249 708 1648 865">4.</td> <td data-bbox="1648 708 2087 865"></td> </tr> <tr> <td data-bbox="1249 865 1648 986">5.</td> <td data-bbox="1648 865 2087 986"></td> </tr> <tr> <td data-bbox="1249 986 1648 1059">6.</td> <td data-bbox="1648 986 2087 1059"></td> </tr> <tr> <td data-bbox="1249 1059 1648 1133">7.</td> <td data-bbox="1648 1059 2087 1133"></td> </tr> <tr> <td data-bbox="1249 1133 1648 1334">8.</td> <td data-bbox="1648 1133 2087 1334"></td> </tr> <tr> <td data-bbox="1249 1334 1648 1415">9.</td> <td data-bbox="1648 1334 2087 1415"></td> </tr> </tbody> </table>	Accept	Do not accept	... only when supported by any suitable example / A different example needed for each point	the following as examples: massage/ hypnosis/ imagery	1. ref improved fitness or skill component/s e.g. strength or kinaesthesia		2.		3.		4.		5.		6.		7.		8.		9.		
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G451

Mark Scheme

June 2013

	<p><b>BUT – modern technology can:</b></p> <p>10. lead to <b>injury or violence</b>  <b>e.g.</b> from bladed boots / due to use of rugby shoulder pads which may make some players feel invincible</p> <p>11. lead to <b>cheating</b>  <b>e.g.</b> drugs</p> <p>12. <b>disrupt</b> or slow down ‘game’  <b>e.g.</b> time taken for DVD playback</p> <p>13. be an <b>unfair advantage</b> / be expensive / be dependent on sponsor  <b>e.g.</b> F1 technology / technology not equally available to all such as high tech bikes</p> <p>14. <b>reduce traditional ethic</b> or nature of sport / can lead to ‘win at all costs’ ethic  <b>e.g.</b> use of high tech equipment at junior or local level / TV or internet or modern media that has made sport a global ‘product’</p>		10.		
			11.		
			12.		
			13. Some countries can't afford modern technology (with eg)		
			14.		

<b>(e)* Levels of Response</b>	
<p><b>Level 3 (8–10 marks)</b> A comprehensive answer:</p> <ul style="list-style-type: none"> <li>detailed knowledge and understanding</li> <li>effective analysis/critical evaluation and/or discussion/explanation/development</li> <li>clear and consistent practical application of knowledge</li> <li>accurate use of technical and specialist vocabulary</li> <li>high standard of written communication.</li> </ul>	<p><b>At Level 3 responses <u>are likely</u> to include:</b></p> <ul style="list-style-type: none"> <li>detailed description of causes (players &amp; spectators)</li> <li>consistent and effective <b>evaluation</b> of solution/s (P &amp; S)</li> <li>... other solutions effectively described/discussed (P &amp; S)</li> <li>both aspects of question (causes &amp; solutions) addressed with appropriate balance</li> </ul>
<p><b>Level 2 (5–7 marks)</b> A competent answer:</p> <ul style="list-style-type: none"> <li>satisfactory knowledge and understanding</li> <li>analysis/critical evaluation and/or discussion/explanation/development attempted with some success</li> <li>some success in practical application of knowledge</li> <li>technical and specialist vocabulary used with some accuracy</li> <li>written communication generally fluent with few errors.</li> </ul>	<p><b>At Level 2 responses <u>are likely</u> to include:</b></p> <ul style="list-style-type: none"> <li>satisfactory description of causes (P &amp; S)</li> <li>attempt at <b>evaluation</b> of solutions (P &amp; S)</li> <li>...satisfactory discussion/description of other solutions (P &amp; S)</li> <li>both aspects of question (causes &amp; solutions) addressed, though not necessarily with balance</li> </ul> <p><b>OR:</b></p> <ul style="list-style-type: none"> <li>detailed description of causes (players &amp; spectators)</li> <li>solutions effectively described/discussed (P &amp; S)</li> <li>both aspects of question (causes &amp; solutions) addressed with appropriate balance</li> </ul>
<p><b>Level 1 (1–4 marks)</b> A limited answer:</p> <ul style="list-style-type: none"> <li>basic knowledge and understanding</li> <li>little or no attempt to analyse/critically evaluate and/or discuss/explain/develop</li> <li>little or no attempt at practical application of knowledge;</li> <li>technical and specialist vocabulary used with limited success</li> <li>written communication lacks fluency and there will be errors, some of which may be intrusive.</li> </ul>	<p><b>At Level 1 responses <u>are likely</u> to:</b></p> <ul style="list-style-type: none"> <li>basic description of causes (P &amp; S)</li> <li>little or no <b>evaluation</b> of solutions</li> <li>...solutions <b>described</b> in basic / limited way (P &amp; S)</li> <li>unequal balance between question parts,</li> <li>.....or only one part of question (causes &amp; solutions) answered</li> </ul>
<p><b>(0 marks)</b> No response or no response worthy of credit.</p>	

Question	Answer	Marks	Guidance
(e)*	<p><b>Indicative content:</b> Candidate responses are likely to include: (relevant responses not listed should be acknowledged)  <b>Numbered points</b> = knowledge/understanding <b>Bullet points</b> = likely development of knowledge</p> <p><b>Causes of violence: Players and Spectators</b></p> <ol style="list-style-type: none"> <li>1. <b>frustration / anger</b> <ul style="list-style-type: none"> <li>• with match officials <b>e.g.</b> accept suitable example</li> <li>• standard of play or own performance <b>e.g.</b> accept suitable example</li> <li>• score or result <b>e.g.</b> accept suitable example</li> </ul> </li> <li>2. <b>'cheating' or rule breaking or gamesmanship</b>  <b>e.g.</b> 'diving' or 'sledging' or bad tackle other suitable example</li> <li>3. <b>importance of result</b> / pressure to win / passion to win / Lombardianism / so much at stake <ul style="list-style-type: none"> <li>• emotional intensity / adrenalin flowing / high arousal / "pumped"</li> <li>• pre-match psyche-up</li> <li>• position in league or cup or level of competition</li> <li>• monetary reward</li> </ul> <b>e.g.</b> if World Cup match or Cup Final or other suitable example </li> <li>4. <b>provocation or abuse or chanting or retaliation or intimidation</b> <ul style="list-style-type: none"> <li>• by opponents/from team mates/from crowd</li> </ul> <b>e.g.</b> accept suitable example </li> <li>5. <b>lack of or limited punishment or deterrent</b>  <b>e.g.</b> accept suitable example </li> <li>6. <b>rivalry</b> / local derby / team loyalty / tradition <ul style="list-style-type: none"> <li>• racism or religion</li> <li>• pre-match media hype / irresponsible coverage by media in lead up to game</li> </ul> <b>e.g.</b> accept suitable example </li> </ol>		<p>Points 1-6 can be credited for both players and spectators – but bear in mind 'variety' when awarding level and mark</p>

Question	Answer	Marks	Guidance
	<p><b>Causes of violence: Players (continued)</b></p> <p>7. (potential) ‘<b>weapons</b>’</p> <ul style="list-style-type: none"> <li>• sticks or clubs</li> </ul> <p><b>e.g.</b> as in hockey or ice hockey or baseball or other suitable example</p> <p>8. <b>nature of game / tradition</b> of violence</p> <ul style="list-style-type: none"> <li>• rules might allow or encourage (certain levels of) violence / body checking or contact as part of game</li> </ul> <p><b>e.g.</b> ice hockey or rugby or American Football or other suitable example</p> <ul style="list-style-type: none"> <li>• media or crowd might expect or want a ‘hard’ or physical ‘contest’</li> </ul> <p>9. <b>kit or equipment</b></p> <ul style="list-style-type: none"> <li>• that de-humanises or protects</li> </ul> <p><b>eg</b> American Football or other suitable example</p> <p>10. <b>anger</b> management problems / psychology or emotion of certain players</p> <p><b>e.g.</b> Luis Suarez biting Branislav Ivanovic or other suitable example</p> <p>11. drugs / steroids</p> <p><b>Causes of violence: Spectators (continued)</b></p> <p>12. <b>alcohol</b> or <b>drugs</b></p> <ul style="list-style-type: none"> <li>• people lose their ‘inhibitions’ or become more brave</li> </ul> <p>13. <b>overcrowding</b> / poor spectator provision</p> <ul style="list-style-type: none"> <li>• poor policing or stewarding.</li> </ul> <p>14. <b>hooligans</b> (at football) / looking for a fight</p> <ul style="list-style-type: none"> <li>• organised violence or fights</li> <li>• limited alternative outlets for energy</li> </ul> <p><b>eg</b> accept suitable example</p> <p>15. <b>mass culture</b> / tribal nature of event</p> <ul style="list-style-type: none"> <li>• peer pressure</li> <li>• loss of individual identify or diminished responsibility (within crowd) / pack mentality</li> </ul> <p>16. <b>violence on pitch</b></p>		



Question	Answer	Marks	Guidance
	<p><b>Possible solutions: Players</b></p> <p>17. <b>Change or adapt rules</b></p> <p>18. More severe or more 'painful' <b>Punishments</b> or bans  <b>e.g.</b> 10-match ban for Suarez / removal or dropping from teams or leagues or competitions or heavy fines other suitable example</p> <p>19. <b>Education</b></p> <ul style="list-style-type: none"> <li>• emphasis on fair play / emphasis on being a role model</li> <li>• emphasise harm that can be done by violence</li> </ul> <p>20. More or better qualified <b>officials</b> / more authority for officials</p> <p>21. <b>Technology</b>  <b>e.g.</b> TMO / DVD playback</p> <ul style="list-style-type: none"> <li>• for fairer outcomes (and so less frustration or anger)</li> <li>• as used in Rugby Union or goal line technology in Association Football</li> </ul> <p>22. <b>Use of Psychology</b>  <b>e.g.</b> calming down / anger or stress management</p> <p><b>Possible solutions: Spectators</b></p> <p>23. Stricter <b>deterrents or punishments</b>  <b>e.g.</b> remove (season) tickets or passports</p> <p>24. Control of or ban <b>alcohol</b></p> <ul style="list-style-type: none"> <li>• searches at gates</li> <li>• early kick off times (before pubs open long) / later opening time (not directly after game)</li> </ul> <p>25. <b>Improve spectator facilities</b></p> <ul style="list-style-type: none"> <li>• 'all-seater' stadia</li> </ul> <p>26. <b>Separation of fans</b></p> <ul style="list-style-type: none"> <li>• home and away fans to leave ground separately</li> </ul> <p>27. <b>Use of CCTV</b> or other security measures</p> <ul style="list-style-type: none"> <li>• to spot or record incidents / to record events (for potential evidence)</li> </ul> <p>28. (more) <b>Police/stewards/security</b></p> <ul style="list-style-type: none"> <li>• better training / better relationships with spectators</li> <li>• sharing of information between police forces or areas within country or between countries</li> </ul> <p>29. Promotion of event as <b>(family) entertainment</b></p> <ul style="list-style-type: none"> <li>• family sections in stadia</li> <li>• provision of entertainment (for children).</li> </ul> <p><b>e.g.</b> mascots / competitions / festivals / 'fun days'</p> <p>30. responsible media coverage</p>		<p>Accept relevant alternative solutions that candidates suggest</p>

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