

# **GCE**

# **Physical Education**

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

Advanced Subsidiary GCE

Mark Scheme for June 2015

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

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

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

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These are the annotations, (including abbreviations), including those used in scoris, which are used when marking

Annotation	Meaning
BP	Blank Page – this annotation <b>must</b> be used on all blank pages within an answer booklet (structured or unstructured) and on each page of an additional object where there is no candidate response.
✓	Correct response
×	Incorrect response
BOD	Benefit of the doubt
REP	Repeat of key point in question or point already awarded
?	Unclear
L1	Level 1
L2	Level 2
L3	Level 3
KU	Knowledge and Understanding
EG	Example/Reference
TV	Too Vague
DEV	Development
SEEN	Noted but no credit given
IRRL	Significant amount of material which does not answer the question

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.

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, highlighting 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), with reference to the discriminators, and, again, using a *best-fit* approach.

# **Section A - Anatomy and Physiology**

Answer	Marks	Guidance		
<ul> <li>(i) 3 marks for 3 from:</li> <li>1. Abduction</li> <li>2. Adductor brevis or adductor magnus or adductor longus</li> <li>3. Concentric</li> </ul>		Accept 1. 2. adductor group adductors on own 3. isotonic concentric	Do not accept  brevis or magnus or longus on own  isotonic on own	
<ol> <li>increased temperature</li> <li>decreased viscosity or viscous resistance</li> <li>increased elasticity or flexibility</li> <li>decreased risk of injury</li> <li>increased efficiency of muscular contractions / greater economy of movement / improved coordination between antagonistic pairs</li> <li>increased speed of nerve transmission or impulses</li> <li>increased speed of relaxation</li> <li>increased force or speed of muscular contraction / increased contractility</li> <li>increased motor unit recruitment / improved motor unit coordination</li> </ol>	2	Accept increased speed of musc co of musc cont'n – count as 1. 2. 3. increased range of movement 4. 5. 6. 7. 8. faster / more powerful muscular contraction 9. 10.		
	<ol> <li>3 marks for 3 from:         <ol> <li>Abduction</li> <li>Adductor brevis or adductor magnus or adductor longus</li> <li>Concentric</li> </ol> </li> <li>2 marks for 2 from: Mark first two only</li> <li>increased temperature</li> <li>decreased viscosity or viscous resistance</li> <li>increased elasticity or flexibility</li> <li>decreased risk of injury</li> <li>increased efficiency of muscular contractions / greater economy of movement / improved coordination between antagonistic pairs</li> <li>increased speed of nerve transmission or impulses</li> <li>increased speed of relaxation</li> </ol> <li>increased force or speed of muscular contraction / increased contractility</li>	3 marks for 3 from:  1. Abduction 2. Adductor brevis or adductor magnus or adductor longus 3. Concentric  2 marks for 2 from: Mark first two only  1. increased temperature 2. decreased viscosity or viscous resistance 3. increased elasticity or flexibility  4. decreased risk of injury 5. increased efficiency of muscular contractions / greater economy of movement / improved coordination between antagonistic pairs 6. increased speed of nerve transmission or impulses 7. increased speed of relaxation  8. increased force or speed of muscular contraction / increased contractility  9. increased motor unit recruitment / improved motor unit coordination	3 marks for 3 from:  1. Abduction 2. Adductor brevis or adductor magnus or adductor longus 3. Concentric  2 marks for 2 from: Mark first two only  1. increased temperature 2. decreased viscosity or viscous resistance 3. increased elasticity or flexibility  4. decreased risk of injury 5. increased efficiency of muscular contractions / greater economy of movement / improved coordination between antagonistic pairs 6. increased speed of nerve transmission or impulses 7. increased speed of muscular contraction / increased contractility  9. increased motor unit recruitment / improved motor unit coordination  1. Accept 1. 2. adductor group adductors on own 1. 2. increased speed of musc of movement and paid increased speed of musc of movement  4. 5. 6. 7. 8. faster / more powerful muscular contraction / increased speed of muscular contraction / increased motor unit recruitment / improved motor unit coordination	

Q	uesti	on	Answer	Marks	Guidance			
1	(b)	(i)	the force or pressure exerted by blood against the walls or endothelium of a blood vessel / blood flow x resistance / cardiac output or Q x resistance	1	Accept  1. any named blood vessel / flow x resistance / endothelium for walls	Do not accept		
	(b)	(ii)	4 marks for 4 from: Sub max 3 from either section		Candidates must identify which component of bloopressure they are describing before marks can be awarded.			
			Systolic Blood Pressure		Accept	Do not accept		
			increases (as exercise intensity increases)		1. both increase = BOD for systolic	blood pressure increases		
			increases from 120mmHg (at rest) <b>up to</b> 240 mmHg (at maximal levels)		2. Any value in this range	resting value or exercise value on own.		
			plateaus at submaximal levels	4	3.			
			<ul><li>4. can decrease (slightly) during <b>prolonged</b> exercise</li><li>5. large increase in activities involving isometric</li></ul>		4.			
			large increase in activities involving isometric muscular contractions		5.			
			Diastolic Blood Pressure					
			6. little or no change (during submaximal exercise)		6.	blood pressure stays the same		
			<ul><li>7. decreases during gross muscle activities (eg rowing)</li><li>8. decreases in <b>trained</b> performers</li></ul>		7.any suitable examples of a gross motor activity	blood pressure decreases		
			9. increases during maximal intensity exercise or in		8.			
			activities involving isometric muscular contractions		9.			
	1							

Question	Answer	Marks	Guidance		
1 (c)	<ol> <li>4 marks for 4 from:         <ol> <li>controlled by the autonomic nervous system or ANS</li> <li>sympathetic nervous system or sympathetic nerves stimulated</li> <li>adrenalin or nor-adrenalin (secreted from adrenal glands) -</li> <li>stimulates or increases the firing rate of the SA node / increases heart rate or HR</li> <li>increases force of contraction / increases stroke volume or SV</li> <li>increases cardiac output or Q</li> </ol> </li> </ol>	4	Accept 1. 2. 3. epinephrine or norepinephrine 4. 5.	pts 4,5,6 without pt 3. i.e. increase in HR, SV and Q must be linked to hormonal control i.e. release of adrenalin.	

Question	Answer	Marks	Guidance		
1 (d)	6 marks for 6 from:      1. Gas or oxygen or carbon dioxide moves from a high (partial) pressure or pp or concentration to low (partial) pressure or pp or concentration		Accept 1.	Do not accept	
	<ol> <li>Oxygen Submax of 4 marks</li> <li>there is a high partial pressure or concentration of oxygen or ppO<sub>2</sub> in the blood or capillary</li> <li>there is a low partial pressure or concentration of oxygen or ppO<sub>2</sub> in the muscle</li> <li>there is a concentration or diffusion gradient (of oxygen between the blood or capillary and the muscle)</li> <li>oxygen diffuses or moves from the blood or capillary into the muscle</li> <li>there is a high partial pressure or concentration of carbon dioxide or ppCO<sub>2</sub> in the muscle</li> <li>there is a low partial pressure or concentration of carbon dioxide ppCO<sub>2</sub> in the blood or capillary</li> <li>there is a concentration or diffusion gradient (of carbon dioxide between the blood or capillary and the muscle)</li> <li>carbon dioxide diffuses or moves from the muscle into the blood or capillary</li> </ol>	6	<ol> <li>Accept pts 2 and 3 for:         <ul> <li>"there is a higher ppO<sub>2</sub> in the blood than the muscle" or vice versa.</li> </ul> </li> <li>pressure gradient</li> <li>Accept pts 6 and 7 for:         <ul> <li>"there is a higher ppCO<sub>2</sub> in the muscle than the blood" or vice versa.</li> </ul> </li> <li>pressure gradient</li> <li>pressure gradient</li> </ol>	pressure on own high amount or level of O <sub>2</sub> pressure on own low amount or level of O <sub>2</sub> gradient on own  pressure on own high amount or level of CO <sub>2</sub> pressure on own low amount or level of O <sub>2</sub> gradient on own	

(e)* Levels of Response	
<ul> <li>Level 3 (8 – 10 marks)</li> <li>A comprehensive answer:</li> <li>detailed knowledge &amp; 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>	<ul> <li>At level 3 responses are likely to include:</li> <li>Detailed explanation of VCC, VSM and VR</li> <li>Balance of knowledge between VSM and VR  o explanation of Starling's Law</li> <li>Knowledge of the changes in Q and distribution of Q from rest to max exercise.</li> </ul>
Level 2 (5 - 7 marks) A competent answer:  satisfactory knowledge & understanding analysis/critical evaluation and/or discussion/explanation/development attempted with some success some success in practical application of knowledge technical and specialist vocabulary used with some accuracy written communication generally fluent with few errors	<ul> <li>At level 2 responses <u>are likely</u> to include:</li> <li>Satisfactory explanation of VCC, VSM and or VR although one may be covered in more detail than the other.</li> <li>Reference to the changes in Q and distribution of Q from rest to max exercise.</li> </ul>
Level 1 (1 - 4 marks)  A limited answer:  basic knowledge & understanding  little or no attempt to analyse/critically evaluate and/or discuss/explain/develop  little or no attempt at practical application of knowledge;  technical and specialist vocabulary used with limited success  written communication lacks fluency and there will be errors, some of which may be intrusive	At level 1 responses are likely to include:
[0 marks] No response or no response worthy of credit.	

Question	Answer	Marks	Guidance
Question (e)*	Indicative content: Candidate responses are likely to include: (relevant responses not listed should be acknowledged)  Numbered points = knowledge / understanding Bullet points = likely to be development of knowledge  Changes in cardiac output and distribution of cardiac output  At rest  1. Cardiac output or Q is 5l/min	Marks 10	Be aware of candidates who link: - pt 5 to pts 14-16 - pt 6 to pts 17-19
	<ul> <li>approx 700-750ml</li> <li>Distribution of blood to heart increases</li> <li>from 250ml at rest to 750ml</li> </ul>		

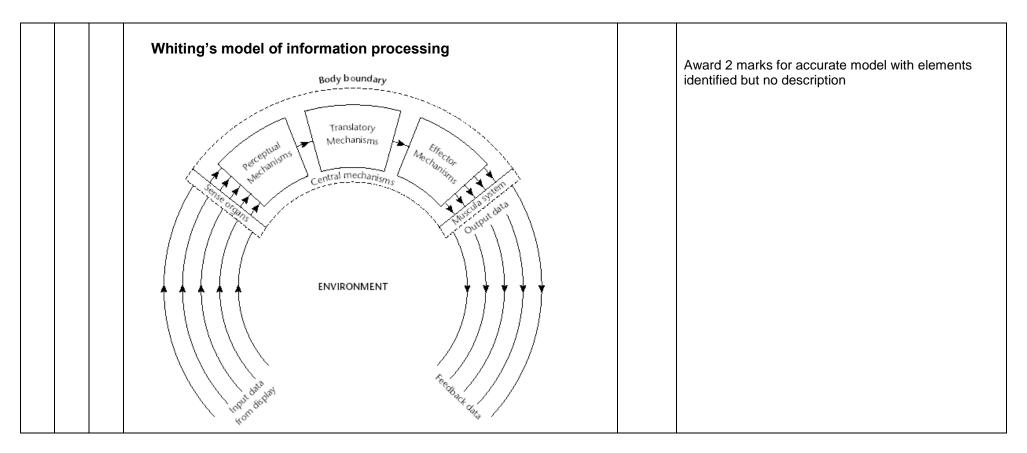
Question	Answer	Marks	Guidance
	Control by the vasomotor centre and Vascular Shunt Mechanism		
	9. Vascular shunt mechanism controlled by vasomotor control centre or VCC		
	located in medulla oblongata		
	<ul> <li>with cardiac control centre or CCC / with respiratory control centre or RCC</li> </ul>		
	10. Chemoreceptors		
	<ul> <li>detect an increase in acidity or CO<sub>2</sub> or carbonic acid or lactic acid</li> </ul>		
	<ul> <li>detect a decease in pH or O<sub>2</sub></li> </ul>		
	11. Proprioceptors		
	<ul> <li>detect movement (of muscle, tendons and joints)</li> </ul>		
	12. Baroreceptors		
	detect an increase in blood pressure		
	13. Information sent to the vasomotor centre or VCC		
	uses the sympathetic nervous system		
	<ul> <li>vasomotor nerves linked to tunica media or muscular layer of arteriole walls or pre-capillary sphincter or PCS</li> </ul>		
	(muscles = increased blood flow)		
	14. Decreased sympathetic stimulation of arterioles or pre-capillary sphincter or PCS leading to muscles		
	15. Vasodilation of arterioles leading to muscles		
	16. Vasodilation or relaxation of pre-capillary sphincter or PCS leading to muscles		
	(organs e.g. liver, digestive system or gut, kidneys = decreased blood flow)		
	17. Increased sympathetic stimulation of arterioles or pre-capillary sphincter or PCS leading to organs		
	18. Vasoconstriction of arterioles leading to organs		
	19. Vasoconstriction or contraction of pre-capillary sphincter or PCS leading to organs		
	Venous Return		
	20. the volume of blood returning to the heart (via the veins per beat)		
	<ul> <li>(problem) most of the blood has to travel against gravity or uphill</li> </ul>		
	(problem) low or zero blood pressure in the veins		
	<ul> <li>(solution) skeletal or muscular pump helps to squeeze blood back up to the heart</li> </ul>		
	<ul> <li>during concentric contraction muscles push against vein walls</li> </ul>		
	<ul> <li>(solution) pocket valves in veins prevent backflow of blood</li> </ul>		

Question	Answer	Marks	Guidance
	<ul> <li>(solution) respiratory pump helps to pull or suck blood back up to heart         <ul> <li>during inspiration</li> <li>due to high pressure below diaphragm or in abdomen</li> <li>and low pressure above diaphragm or in thoracic cavity</li> </ul> </li> <li>(solution) smooth muscle around veins causes them to (veno)constrict         <ul> <li>venomotor tone decreases lumen diameter / increases pressure in veins</li> </ul> </li> <li>(solution) gravity from above the heart         <ul> <li>listing (not describing) venous return mechanisms</li> </ul> </li> <li>(during exercise) venous return or blood flow back to the heart increases</li> <li>(relationship) stroke volume depends on or relates to venous return / if venous return increases then stroke volume or cardiac output increases</li> <li>Starling's law (of the heart)</li> </ul>		[valves = BOD]
	<ul> <li>(stretch of atrial walls)</li> <li>23. (more blood enters atria) causing stretch of atrial walls</li> <li>this stimulates the SA node</li> <li>increasing firing rate of SA node / increasing heart rate or HR</li> </ul>		
	<ul> <li>(stretch of ventricular walls)</li> <li>24. (more blood enters ventricles) causing stretch of ventricular walls</li> <li>increased end diastolic volume or EDV</li> <li>this causes a more forceful contraction of ventricular walls</li> <li>decreased end systolic volume or ESV</li> <li>increasing stroke volume or SV</li> </ul>		
	<ul> <li>(Effect of VSM and increased VR on performance)</li> <li>increase in aerobic exercise / endurance capacity</li> <li>delayed fatigue / delayed OBLA / delayed lactate threshold</li> <li>faster recovery rate</li> <li>[Total: 30 marks]</li> </ul>		

# **Section B - Acquiring Movement Skills**

Q	uestion	Answer	Marks	Gui	dance
2	(a)	4 marks for 4 from:		Accept	Do not accept innate / genetic / a trait / inherited / enduring / stable
		1. (Gross motor - characteristics) underpin skills or underlying (see accept box) / (involve or a potential for): physical movement or exercise / (physical) fitness / muscular or motor movement		underpin skills or     underlying once     only - for Pt 1 or Pt 3 /     physical abilities = BOD	to do with body/ involves muscles
		2. (gross motor - examples) strength / power / stamina / flexibility / (gross body) co-ordination / balance / equilibrium / speed		2. types ofe.g. explosive strength	
		3. (Psychomotor - characteristics) underpin skills or underlying (see accept box) / (involve or a potential for) information processing or decision making or perception or judgement / cognitive processes / initiation of movement (rather than actual movement)		3. underpin skills or underlying once only - for Pt 3 or Pt 1 cognitive abilities	to do with the mind or brain or thinking = TV mental / psychological
		4. (psychomotor - examples) reaction or response time / (multi-limb) co-ordination / control precision / response orientation / rate control / manual dexterity / arm or wrist or finger speed or dexterity / arm-hand steadiness / aiming		4.	speed

Question		Answer	Marks	Gui	dance
Question (b)	<ol> <li>Max of 5 Marks for 5 fo</li></ol>	input / data or information or cues or stimuli from display / environmental stimuli sense organs or senses or receptors or receptor systems receive stimuli or cues (from display or surroundings or environment) central mechanisms involve cognition or brain function or information processing perceptual mechanisms or perception interpret or make sense of or judge the information / perception includes selective attention / DCR process / detect-compare-recognise / translatory mechanisms used for decision making / selects (correct) motor programme or response effector mechanisms send the decision or information or motor programme or impulses or messages to the muscles muscular system or muscles initiate or carry out the movement or motor programme	Marks 5	There must be an und	lerstanding of the corrected recorder en written on an accurate tified but no
	7. (Muscular system) 8. (Output data /	messages to the muscles muscular system or muscles initiate or carry		7.	
	9. (Environment)	the environment affects information processing (hence broken boundary line) input data, decision making and muscle		9.	
	<b>10.</b> (Body boundary )	movement all occur within body boundary / body boundary includes perceptual mechanisms, translator mechanisms and effector mechanisms		10.	
		·			



Question	Answer	Marks	Guidance			
(c)	Six marks for six from:  Both action and explanation needed for 1, 3 and 5  Positive reinforcement	6	<b>Both</b> action <b>and</b> explanation needed for 1, 3 and 5 Award KU for actions and / or explanations embedded in relevant example			
	1. (action) give praise or satisfier or positive		Accept	Do not accept		
	feedback or rewards or approval / make activity enjoyable / show results or benefits (of healthy behaviour) / (explanation) (it will) encourage or motivate or educate or persuade / make them want to continue or work harder / increase confidence or self-esteem / strengthen stimulus-response (SR) bond		prevents drive reduction			
	2. <b>(example)</b> give praise or rewards for healthy eating or taking up jogging or other suitable eg		2. <b>BAHL</b> examples only			
	Negative reinforcement 3. (action) take away negative or unpleasant stimulus or annoyer or negative feedback (explanation) (it will) replace undesired or dysfunctional behaviour with desired behaviour / increase confidence or self-esteem / strengthen stimulus-response (SR) bond 4. (example) take away criticism when exercise programme starts or other suitable example		3.	Telling off or criticising		
	Punishment		4. <b>BAHL</b> examples only			
	<ul> <li>5. (action) give an unpleasant or noxious stimulus (explanation) (it will) remove or stop unhealthy, undesired or dysfunctional behaviour / break the undesired stimulus-response (SR) bond / motivate them to try again</li> <li>6. (example) tell them off or withdraw privileges when they eat junk food or other suitable example</li> </ul>		5.  6. <b>BAHL</b> examples only	(action) give disapproval = TV  (explanation) weaken undesired SR bond = TV		

Answer	Marks	Guida	nce
5 marks for 5 from:	5		
		Accept	Do not accept
Open Loop / level 1 control Sub max 3 marks		1. no time to compare perceptual and	
when (processing of information) feedback is not used /     no time to act on feedback / no time for feedback /     uses memory trace		memory trace /	
accomens acco			
for fast or dynamic or reflex or ballistic skills or actions or motor programmes /		2.	
for skills that are well-learned or grooved			
(sub routines of) skills performed with little conscious control or thought or subconsciously or automatically		3. requires no conscious thought = BOD	
(therefore) increased capacity to attend to peripheral stimuli		4.	
5. skills cannot be adjusted <b>during</b> movement (in main) / adjustments can only be made at next attempt		5.	
PTO for Closed Loop mark scheme (6-16)			
	<ol> <li>5 marks for 5 from:</li> <li>Open Loop / level 1 control Sub max 3 marks</li> <li>when (processing of information) feedback is not used / no time to act on feedback / no time for feedback / uses memory trace</li> <li>for fast or dynamic or reflex or ballistic skills or actions or motor programmes / for skills that are well-learned or grooved</li> <li>(sub routines of) skills performed with little conscious control or thought or subconsciously or automatically</li> <li>(therefore) increased capacity to attend to peripheral stimuli</li> <li>skills cannot be adjusted during movement (in main) / adjustments can only be made at next attempt</li> </ol>	5 marks for 5 from:  Open Loop / level 1 control Sub max 3 marks  1. when (processing of information) feedback is not used / no time to act on feedback / no time for feedback / uses memory trace  2. for fast or dynamic or reflex or ballistic skills or actions or motor programmes / for skills that are well-learned or grooved  3. (sub routines of) skills performed with little conscious control or thought or subconsciously or automatically  4(therefore) increased capacity to attend to peripheral stimuli  5. skills cannot be adjusted during movement (in main) / adjustments can only be made at next attempt	5 marks for 5 from:  Open Loop / level 1 control Sub max 3 marks  1. when (processing of information) feedback is not used / no time to act on feedback / no time for feedback / uses memory trace  2. for fast or dynamic or reflex or ballistic skills or actions or motor programmes / for skills that are well-learned or grooved  3. (sub routines of) skills performed with little conscious control or thought or subconsciously or automatically  4(therefore) increased capacity to attend to peripheral stimuli  5. skills cannot be adjusted during movement (in main) / adjustments can only be made at next attempt

Question	Answer	Marks	Guidance		
	Closed Loop		6.		
	Sub max 3 marks:				
	6. skills can be adjusted <b>during</b> performance		7.	uses feedback on own = TV	
	uses intrinsic or internal or proprioceptive or kinaesthetic feedback (to monitor performance)		8.		
	(Level 2 control)		9.		
	8. subconscious				
	9. <b>uses</b> memory trace / feedback loop is short		10.		
	(Level 3 control)		11.	Perceptual trace on own	
	10. conscious			= TV	
	11. <b>compares</b> perceptual and memory trace /				
	compares what you are doing with what you remember		12. only award Pt 12 if Pt 11 made		
	12(if these match) the skill or correct movements are		13. only award Pt 13 if		
	reinforced		Pt 11 made		
	13(if these don't match) incorrect movement can be		14.		
	adjusted or corrected			'uses brain' on own	
	14. feedback loop is longer / information relayed via brain		15.		
	15. improvement or progress or learning occurs (during				
	performance)		16.		
	16. can result in jerky movements (while skill is adjusted)				

(e)* Levels of Response			
Level 3 (8 – 10 marks)  A comprehensive answer:  detailed knowledge & understanding  effective analysis/critical evaluation and/or discussion/explanation/development  clear and consistent practical application of knowledge  accurate use of technical and specialist vocabulary  high standard of written communication	At L3 responses are likely to show:  - accurate description of all types of transfer (positive / negative / proactive / retroactive/ bilateral) - with no REP of key terms (positive / negative) in description - accurate coverage of helpful and harmful impacts - inclusion of other evaluation points		
Level 2 (5 - 7 marks)  A competent answer:  satisfactory knowledge & understanding  analysis/critical evaluation and/or discussion/explanation/development attempted with some success  some success in practical application of knowledge  technical and specialist vocabulary used with some accuracy written communication generally fluent with few errors	At L2 responses are likely to show:  accurate description of most types of transfer (positive / negative / proactive / retroactive/ bilateral)  with few if any REP of key terms (positive / negative) in description  satisfactory coverage of helpful and harmful impacts		
Level 1 (1 - 4 marks)  A limited answer:  basic knowledge & understanding  little or no attempt to analyse/critically evaluate and/or discuss/explain/develop  little or no attempt at practical application of knowledge;  technical and specialist vocabulary used with limited success  written communication lacks fluency and there will be errors, some of which may be intrusive  [0 marks] No response or no response worthy of credit.	At L1 responses are likely to show:  accurate description of positive / negative transfer perhaps with REP of key terms (positive / negative) in description  identification of or attempt at describing other types of transfer - with inaccuracies in descriptions no helpful or harmful impacts		

Question Answer	Marks	Guidance
(e)*  Indicative content: Candidate responses are likely to include: Numbered points = knowledge / understanding Bullet points = dev (Describe the different types of transfer)  1. Transfer is the influence of one skill on another  2. Positive Transfer  • one skill or movement helps the learning (and performance e.g. throwing helps learning of badminton smash or other st  3. Negative Transfer  • one skill or movement hinders the learning (and performance e.g. firm wrist in tennis hinders learning the loose wrist in b • occurs when performer is required to produce a new response effects (thought to be) limited or temporary  4. Proactive Transfer  • previously learned skill affects learning (or performance) of skill learning affects future skill  • g. a tennis player takes up badminton - the previously lear affects the current learning of the overhead clear in bactorial carries affects the current learning of the overhead clear in bactorial carries affects as skill learned in the past  • can be positive or negative  • current learning of a (new) skill affects performance of a prelearning now affects a skill learned in the past  • can be positive or negative  • g.g. the current learning of the badminton overhead clear learned tennis smash (can be +ve -ve) or other suitable e.g. andy Murray's tennis would not be adversely affecting badminton or other suitable eg  6. Bilateral Transfer  • transfer from limb to limb / transfer from side to side  • e.g. arm to arm / leg to leg  • g. GK diving to left and right / footballer kicking with both  (and critically evaluate their impact on the learning of movements)	of another uitable e.g.  se) of another adminton or other e.g. se in a well-known situation  current or later skill / current arned smash in tennis dminton  eviously learned skill /  r affects the previously g. rformers g by playing recreational	relevant responses not listed should b acknowledged  Pts 2+3: annotate BOD DEV if positive or negative us in description e.g. "positive transfer (tick) h a positive (BC – DEV) effect (see discriminators)  Pts 4+5: annotate BOD DEV if candida state that they positively or negatively affect, rather th just affect

Question	Answer	Marks	Guidance
	7. can save time (as new skill not being learned from beginning) / can motivate		
	8. best if previous skill well learned or grooved		
	e.g. overarm throw transferred to tennis serve		
	9. best when performer aware of transfer or knows about the principles of transfer		
	10. likelihood of transfer increased if (processing) requirements similar		
	11. degree of transfer dependent on number of elements that the two tasks share / effective if		
	coach highlight similar elements of each skill or highlights where transfer can occur		
	identical elements theory		
	12. strengthens SR bond / encourages similar S-R bond between two skills / transfers SR bond		
	from one skill to other		
	13. practice conditions should reflect competition conditions e.g. accept any suitable example		
	14. can help develop correct motor programme		
	15. Bilateral transfer valuable in some games e.g. accept any suitable example		
	Harmful impacts of transfer on learning movement skills		
	16. performer can respond incorrectly to similar stimuli (from a different skill)		
	e.g. experienced tennis player learning squash plays forehand with stiff wrist		
	17. can hinder stimulus response compatibility		
	18. performer can confuse subroutines between two skills		
	19. don't teach conflicting skills close together e.g. in same week or term		
	<ul> <li>performer can be confused by different kinaesthetic feedback (between two skills)</li> </ul>		
	20. Negative transfer can occur unless original skill well learned		
	21. Negative transfer can de-motivate		
	22. <b>Negative transfer</b> can 'waste' time (while incorrect movt eliminated/new skill re-learned)		

Question	Answer	Marks	Guidance
	Other evaluation points:		
	Practice:		
	variable practice helps to encourage transfer / varied practice gives a wide range of		
	experiences (that can be transferred from training to the 'real game')		
	for complex skills practise easier version first		
	for simple skills practices can be more difficult		
	Schema:		
	transfer links with or supports schema theory / transfer helps to build schema or		
	experiences (stored in the LTM) / transfer increased if or when the performer has lots of experience		
	e.g. positional play for an experienced footballer could transfer positively if they took up hockey		
	schema can be used for future performance or modification of motor programmes		
	when first skill is well learned, opportunities for expanding schema are increased		
	e.g. a well grooved top spin forehand in tennis offers more opportunity for transfer to a cross		
	court forehand		
	And:		
	(it could be argued that) all learning is based on transfer		
	transfer involves learning through the influence of skills with similar response		
	requirements		
	judgement or perception (of environment) can be affected by transfer		
	transfer can be used to update or modify motor programmes		

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

Q	Question			Answer	Marks	Guidance		
3	(a)	(i)	2 marks for 2 from	:	2	Accept	Do not accept	
			1. (deskbound)	more desk or office jobs / less manual work / exercise now a choice not necessity		1.	Эс пос цесорг	
			2. (work)	more time at work / long hours at work / work increasingly demanding / concentration on careers		2.	'lack of or no time' on own / work on own / school work increasingly demanding	
			3. (gadgets/ machines)	labour saving gadgets or machines / accept suitable example such as sit-on mowers		3.	gadgets or machines on own	
			4. (cars)	cars / widespread car use / children driven or bus to school / adults don't walk to work or shops		4.	improved transport	
			5. (computers)	(use of) games consoles or computer or video games / shopping on-line		5.	More technology on own = TV	
			6. (parents)	parents or peers don't exercise / limited role modelling		6.		
			7. (concern)	children don't play outside / fear about children 'playing out'		7.		
			8. (TV)	TV / people watch more TV / people watch rather than participate		8.		
			9. (PE)	(possible) lack of (active) PE in schools / less curriculum time for PE		9.		

Question		Answer		Marks	Guidance		
3 (a)	(ii)	2 marks for 2 fr	rom:		Accept	Do not accept	
		1. (adults)	150 minutes (moderate) per week/ 75 minutes (vigorous) per week / 30 mins 5 times per week / equivalent mix of moderate and vigorous (e.g. 2 x 30 min runs + 30 mins fast walking	2	30 mins 6 or 7 times a week / 30 mins a day  Vigorous 20 mins 3 times a week		
		2. (adults)	muscle strengthening on two (or more) days per week		2. without ref to adults		
		3. (children)	for children or young people (at least) 60 minutes a day (moderate to vigorous)		3. for children 5 or 6 or 7 x 60 mins per week	without ref to children	
		4. (children)	for children (at least) three times a week vigorous intensity activities including high(er) impact activities or activities that strengthen muscles or bones		4.	without ref to children	

Question	Answer	Marks	Guidance		
3 (b) (i)	4 marks for 4 from	4			
	2 marks for theory / 2 marks for practical examples  Benefits - accept first two attempts only  1. physical benefits or skills or wellbeing / improved health or fitness or BAHL  2. (physical e.g.) learning camp craft or first aid or		Accept examples when linked to benefit / only ORec examples / name of activity on own if with obvious / convincing link to benefit	Do not accept	
	survival techniques or other suitable skill / fitness from walking or sailing or other suitable physical example		1. 2.	examples of physical benefits	
	3. personal benefits or skills / stress relief / catharsis / self-awareness or development or confidence or esteem or respect or fulfilment or discipline /self-realisation / self-actualisation / knowledge of strengths & weaknesses / learn about themselves /overcome fears / mental strength / emotional control / challenge / character building / sense of achievement or satisfaction / independence / sense of freedom  4. (personal e.g.) (overcoming fears) from abseiling		3. enjoyment / fun = BOD  4.	knowing what they are good at / courage / life skills / /sportsmanship / moral values	
	(sense of achievement) from completing night walk or other suitable personal example		5.		
	5. leadership / responsibility		J.		
	6. (l'ship eg) from leading a group hill walking or other suitable leadership example		6.		
	7. cognitive or thinking skills / decision making / problem solving		7.		
	8. (cognitive e.g.) planning route or other suitable eg		8.		

Question	Answer	Marks		Guidance
	9. commitment / determination		9.	
	10.(commitment e.g.) carrying on in difficult conditions while canoeing or other suitable commitment example		10.	
	11.social benefits or skills / teamwork / bonding / sharing / co-operation / communication / trust / loyalty / make friends / meet new people		11.	Improve social live / socialise = TV
	12.(social e.g.) While on a DofE expedition or other suitable social example		12.	
	13. preparation for lifelong participation / preparation for career / gain awards or qualifications / can achieve Dof E or BELA or 'Kayak 1 star' or other example of qualifications		13.	'preparation skills or benefits' on own / preparation for later life
	14.(preparation e.g.) can achieve Dof E or BELA or 'Kayak 1 star' or other example of qualifications (if not given above) / by becoming an Outdoor Ed or Outdoor Rec instructor or other suitable preparation example		14.	
	15. aesthetic appreciation or awareness / learn about or respect nature or natural environment / improved quality of life or qualitative benefits / spiritual experience / 'buzz' or 'thrill' or 'rush' / 'sense of or feeling of risk' or adventure or excitement		15.	'experience' the great outdoors' = TV learn about surroundings = TV 'risk' on own / (feeling) danger
	16. (aesthetic e.g.) from walking in countryside / (learn about environment) from being part of conservation project / (get feeling of risk) from abseiling or other suitable example		16.	

Q	uestic	on		Answer		Marks	Guidance		
3	(b)	(ii)	(ii) Direct comparison needed for each mark Accept first two attempts only Sub max 1 for answers that finish with 'whereas			2	Accept Comparative comments	Do not accept OEd for education = REP	
				ecreation is not'			such as: 'OEd more	ORec for recreation = REP	
				Outdoor Education	Outdoor Recreation		structured or organised than ORec'		
			1. (why)	for learning	for enjoyment or fun		1.		
			2.	in school or college	in own <b>time</b> /		1.		
			(when)	time / school trips / extracurricular /	when you decide / leisure time / hobby / holiday /				
				(may be) compulsory (in school) / part of National Curriculum	not compulsory / not part of National Curriculum		2. set time v own time = BOD		
			3. (who)	school children / specialist staff / instructors	adults / for all / specialists or instructors not required		3.		
			4. (risk and safety)	(strict) health and safety rules or risk assessment / perceived risk	self imposed or no health and safety or risk assessment / (more potential for) real risk		4. OEd 'more' organised		
			5. (org)	formal / organised / led by school or by OEd centre	Informal / less organised / organised or led by self or friends or club		5.		

Question	Answer	Marks	Guia	Guidance		
(c) • 5 marks fo	n and Explanation needed for each mark	5	Accept Other explanations /	Do not accept Reasons on own		
Identification  1. Tradition / traditional / (medieval) customs  2. Local / unique  3. Annual / occasional/ on public hols  4. Isolation /  5. Rural  6. Tourism  7. Social / festival/ community/ carnival  8. Rowdy / violent  9. Religion / pagan / ritual	Explanation  passed from generation to generation/ celebration of past / people want them to continue / part of identity / shows or part of identity or heritage or culture or history / retention of ethnic identity  they increase local pride / because community want them to continue / gives sense of identity so they are 'special' occasions / effort made to watch or take part / people or tourists can go / media interest / people look forward to them  so not affected by 'main' sports / ethnic identity or uniqueness kept  so not affected by 'main' sports / natural facility available so commercial opportunities / money to area / media interest / publicity / people know about them / want to watch or take part  so entertaining or enjoyable or attract tourists / focus on pub / chance to celebrate / 'an escape from reality' or from stress / bring people together / media interest  chance to show manliness / focus on 'pub' or links with drinking  people want them to continue / people committed to them		same explanation for more than one i/d if accurate  1.  2.  3.  4.  5.  6.  7.  8.  9.			

Question	Answer  Advantages of sport-sponsorship relationship  5 marks for 5 from:		Marks	Guidance		
3 (d)			5			
	Sub max 3					
	(sport/sponsor	shin)		Accept	Do not accept	
	1. (image / status)	(can) raise status or give healthy or 'cool' image to the sport or club or performer or sponsor		1.	creates role models	
	(Sport)					
	2. (kit/ equipment/	(with sponsorship money) teams can employ coaches or buy kit or equipment or			many many or family a shake	
	facilities / coaching)	other suitable example / pay entry fees to competitions etc /(some) sponsors provide kit or equipment /(improved) facilities for players or spectators		2.	more money for the club or for the sport	
	3. (prof)	sponsorship allows: professionalism / full- time training / better results or performances				
	4. (security)	sponsorship gives performers or clubs (financial) security or stability		3.		
	(Sponsor)					
	5. (brand awareness	brand awareness or advertising / increased publicity or sales /		4.		
	/ image) 6. (not too expensive)	exposure of sponsors' products sponsorship a relatively inexpensive form of advertising / sponsorship is tax deductable		5.		
	7. (hospitality)	(corporate) hospitality for sponsor		6.		
				7. can get tickets to events etc		

Question	Answer		Marks	Guidance		
3 (d)	Disadvantages Sub max 3	of sport-sponsorship relationship		_		
	(sport/sponsor	ship)		Accept	Do not accept	
	8. (bad image)	some products e.g. tobacco / alcohol / fast food are unhealthy or reflect badly on sport / bad behaviour or corruption can reflect badly on sponsor		8.		
	(sport)					
	9. (pressure)	pressure of sponsors' demands / performers (may be) restricted to using or wearing certain products		9.	Pressure to win on own = TV	
	10. (financial)	uncertain availability or (sudden) withdrawal of sponsorship / (negative) impact of (economic) recession		10.		
	11. (tradition / ethos)	tradition or ethos or nature of sport or club lost / devalues the sport / too much focus on winning / increased links with deviance		11.		
	12. (inequality)	not all sports equally sponsored / only the big sports get sponsorship / minority sports 'miss out'		12.		
	(sponsor)					
	13. (risky)	risky as 'success' not guaranteed (e.g. due to disgrace or injury or relegation) / risky as event may be cancelled		13.		

(e)* Levels of Response	
Level 3 (8 – 10 marks)  A comprehensive answer:  detailed knowledge & understanding  effective analysis/critical evaluation and/or discussion/explanation/development  clear and consistent practical application of knowledge accurate use of technical and specialist vocabulary high standard of written communication	At L3 responses are likely to show:     detailed discussion of commercialisation of Olympic Games     detailed explanation of how Olympic games can be a vehicle for Nation Building     satisfactory balance between both parts of question
Level 2 (5 - 7 marks) A competent answer:      satisfactory knowledge & understanding     analysis/critical evaluation and/or discussion/explanation/development attempted with some success     some success in practical application of knowledge     technical and specialist vocabulary used with some accuracy     written communication generally fluent with few errors	<ul> <li>At L2 responses <u>are likely</u> to show:</li> <li>satisfactory discussion of commercialisation of Olympic Games</li> <li>satisfactory explanation of how Olympic Games can be a vehicle for Nation Building</li> <li>an attempt at balance between both parts of question</li> </ul>
Level 1 (1 - 4 marks)  A limited answer:  basic knowledge & understanding  little or no attempt to analyse/critically evaluate and/or discuss/explain/develop  little or no attempt at practical application of knowledge;  technical and specialist vocabulary used with limited success  written communication lacks fluency and there will be errors, some of which may be intrusive  [0 marks] No response or no response worthy of credit.	At L1 responses are likely to show:     basic discussion of commercialisation of Olympic Games     basic explanation of how Olympic Games can be a vehicle for Nation Building     limited or no success at addressing/balancing both parts of question

Question	Answer	Marks	Guidance
Question (e)*	Indicative content: Candidate responses are likely to include: (relevant responses not listed should be acknowledged)  Numbered points = knowledge / understanding Bullet points = likely to be dev of knowledge  Commercialisation of the Olympic Games (OG) – discussion  1. Los Angeles (1984) the turning point or start of commercialisation / LA the first highly commercialised OG  2. Peter Uberroth  • responsible for commercialisation of the OG  • (private) companies invested in or built the major facilities  • since commercialisation, facilities have been more spectacular or equivalent  3. The Olympic Partner (TOP) programme / OG became attractive to or involved sponsors  • companies as (official) sponsors or suppliers  • they bought the right to display Olympic logo  • g. Coca-Cola / Visa/ McDonald's/ Panasonic/ UPS/ Kodak or other suitable example  • (some) opposition to 'unhealthy' sponsors  4. OG commercialised due to TV / impact of media  • impact of golden triangle  • TV (or radio) companies paid for coverage rights  • commercialism linked to growing (global) TV audience  5. (Many argue that) commercialism has 'saved' or improved the OG  • commercialism now the norm  • 'win ethic' now the norm  • 'win ethic' now the norm  • undermines traditional aims or philosophy of OG  7. Countries or cities now see or acknowledge commercial or economic value in hosting OG  • OG can make profit for or raise companies' profile  • reference to credit crunch or financial issues leading up to an OG	10	BOD slightly inaccurate date+venue links- and consider this when awarding level and mark

Question	Answer	Marks	Guidance
	Background discussion		
	<ul> <li>8. (pre 1970s / 1980s) OG amateur / professionalism frowned upon</li> <li>most athletes had full time jobs and trained in spare time / athletes had no or very limited funding</li> <li>e.g. trust funds for UK athletes</li> </ul>		
	<ol> <li>'Athletes' from some countries were better funded or supported than others / difference or unfairness between some countries and others</li> <li>e.g. USA – scholarship system</li> <li>e.g. Eastern bloc' – state funded / sports schools</li> </ol>		
	10. (to realistically compete) athletes needed to train or commit full time		
	<ul> <li>11. Transition from amateurism to professionalism associated with scandal / was troubled</li> <li>evidence of 'shamateurism' or fake amateurism</li> </ul>		
	<ul> <li>12. The Montreal Games (1976) a financial disaster</li> <li>host countries under great financial pressure before commercialisation / host countries shied away from hosting / hosting needed to be made 'attractive'</li> </ul>		
	<ul> <li>13. IOC against commercialisation of Games at first</li> <li>after Montreal Olympics the IOC allowed more commercial involvement / IOC accepted need for commercialism</li> <li>IOC decisions increasingly linked to funding</li> </ul>		

Question	Answer		Guidance
	The Olympic Games (OG) as a vehicle for Nation Building – explanation		
	14. Countries promoted or showcased or publicised / increased national pride or prestige or status or		
	image or patriotism		
	(especially) for host country e.g. China or other suitable example		
	<ul> <li>(or) for country of (successful visiting) athletes e.g. Ethiopia or other suitable example</li> </ul>		
	15. Shop-window effect		
	the world sees (the best of) a nation		
	16. OG can be used as a 'political tool' / sport and politics linked		
	e.g. Munich OG / Berlin 1936 (Hitler and Jesse Owens) or other examples		
	sporting success can reflect political success or power		
	increased <b>political</b> stability or popularity possible through sport		
	17. Legacy benefits / economic benefits		
	e.g. facilities or housing or infrastructure or other suitable legacy benefits		
	e.g. tourism / more jobs or other suitable economic benefits		
	18. Feel good factor or appeasement or unity for host nation or home supporters		
	e.g. London 2012 or other suitable example		
	19. (In China the) government controls and funds (much of) sport / China has centralised system		
	20. Some countries (can) hide behind OG success / create a false picture		
	21. Beijing Olympics (2008) -'coming out party' for China / opportunity for China to show its (alleged)		
	changing (more open) system or (alleged) political reform / chance to show that Communism works		
	/ to show China's emergence as a world power		
	opportunity for China to show its economic status		
	opportunity for China to conceal human rights issues		
	22. London 2012 - success of organisation		
	success of Team GB		

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