

GCE

# **Physical Education**

Advanced Subsidiary GCE

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

# Mark Scheme for January 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.

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#### **Annotations**

Annotation	Meaning
✓	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

#### 1. 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.

G451 Mark Scheme January 2013

### Section A – Anatomy and Physiology

Q	uesti	on	Answer	Marks	G	uidance
1	(a)	(i)	4 marks for 4 from:  1. ball and socket  2. (medial) deltoid  3. latissimus dorsi / pectoralis major	4	Accept 1. 2. trapezius = BOD 3.	Do not accept Synovial Pectorals or pecs = TV
		(ii)	4. concentric  1 mark for 1 from:	1	4.	Isotonic = TV
		(11)	fast twitch/ Type 2 / fast glycolytic /FG / Type 2b / fast oxidative glycolytic/ FOG / Type 2a	-	Accept type 2c	Do not accept

Qı	uestic	n		Answer	Marks		Guid	dance	<u> </u>
	(b)	(i)	2 m	arks for 2 from:	2	Mar	k first 2 attempts only		
			1.	(number or strength of) ligaments		1.	Accept		Do not accept
			2.	depth or shape or type of joint / area of articulating surface / presence of meniscus or semi-lunar cartilage or discs of (white fibrous) cartilage		2.			Discs of articular cartilage
			3.	size or number or strength or tone of muscles (crossing joint)		3.	muscle mass		
			4.	strength or tension of tendons		4.			tendons on own
			5.	injury to connective tissue / amount of weight supported by joint (shoulder compared to hip)		5.	example of any relevan injury to connective tis eg muscle or tendon or ligament or cartilage or meniscus tears / tendor cartilage wear and tear (leading to OA)	ssue	injury or joint trauma on own / age or temperature or gender on own / body weight or obesity / flexibility / physical activity / OA on own
		(ii)	3 m	arks for 3 from:	3	Mar	k first 3 attempts only		
		` ,					Accept		Do not accept
			1.	ligaments become stronger or longer or more elastic		1.			
			2.	muscle size or strength or tone increases / muscle hypertrophy		2.	muscle mass increases / more muscle		e muscle elasticity / e muscles
			3.	increase in number of muscle fibres		3.			
			4.	tendons become stronger		4.			
			5.	increased thickness of (articular) cartilage		5.	increased cartilage	less on o	risk of or prevents OA wn

Question	Answer	Marks	Gui	dance	
(c)	5 marks for 5 from: Sub max 4 for contraction phase Must hit point 7, 8 or 9 for max.	5	Points 1, 4 & 5 must be in correct order		
	(Contraction phase)		Accept	Do not accept	
	<ol> <li>(SA node) sinoatrial or SA node or SAN receives or initiates or sends an impulse</li> <li>(and only if point 1 awarded or SA node identified)</li> </ol>		1.	Pace maker for SA node / SA nerve / heart is myogenic = TV	
	2. (atria contract) (impulse spreads across atria) causing atrial systole or contraction of atria / atrial depolarisation		2.	Systole on own / heart contraction = TV	
	<ol> <li>(blood to ventricles) this causes the remaining blood (in the atria) to be pushed (actively) into the ventricles (during ventricular diastole)</li> </ol>		3.		
	4. <b>(AV node)</b> impulse reaches atrio ventricular or AV node or		AV node <b>sends</b> a message or information	AV nerve / AV node on own	
	5. (Purkinje)impulse distributed or continues down the bundle(s) of His / impulse distributed throughout or to the Pukinje or Pukyne fibres		5.		
	(and only if point 4 or 5 awarded or BofH or Purkinje fibres identified)				
	6. (ventricles contract) causing ventricular systole or contraction of ventricles / ventricular depolarisation / blood pushed or ejected from ventricles		6.	Systole on own / heart contraction = TV	
	(Relaxation phase)		7.		
	<ul><li>7. (no impulse) repolarisation occurs / there is no impulse</li><li>8. (atria fill) atria fill with blood (during atrial diastole)</li></ul>		8. blood enters atria	Diastole on own / Resting stage	
	9. <b>(atria pressure)</b> (pressure builds in atria) blood travels (passively) into the ventricles		9.	Diastole on own	

Q	Question		Answer		Guidance		
	(d)	(i)	<ul> <li>2 marks for 2 from:</li> <li>1. (combines) with or in haemoglobin / as oxyhaemoglobin or HbO<sub>2</sub></li> </ul>	2		Do not accept Carried in red blood ells = TV	
		<b>/···</b> \	2. (dissolved) in plasma	•			
		(ii)	<ol> <li>oxygen diffuses or moves from the alveoli to the blood / oxygen diffuses down the diffusion or pressure or concentration gradient / oxygen travels from high partial pressure or concentration to low partial pressure or concentration</li> <li>there is a high partial pressure or concentration of oxygen or ppO<sub>2</sub> in the alveoli</li> </ol>	3	Accept  1. lungs for alveoli / (pulmonary) capillaries for blood / pressure for partial pressure  2. lungs for alveoli / pressure for partial pressure	'higher partial pressure in alveoli during exercise compared to rest'	
			<ol> <li>(during exercise) muscles use more oxygen</li> <li>(so) there is a low(er) partial pressure or concentration of oxygen or ppO<sub>2</sub> in the blood</li> <li>there is a large(r)or steep(er) or increased diffusion or pressure or concentration gradient of oxygen</li> <li>more oxygen diffuses or moves (from the alveoli) to the blood / increased or faster rate of diffusion of oxygen (from the alveoli) to the blood</li> </ol>		<ul> <li>3. more oxygen needed = BOD</li> <li>4. (pulmonary) capillaries for blood / pressure for partial pressure</li> <li>5. greater ppO<sub>2</sub> difference</li> <li>6. (pulmonary) capillaries for blood</li> </ul>		

(e)*Levels of Response Question parts: Part 1-Newton's Laws (pg 11), Part 2-Types of Motion (pg 12), Part 3-Application of Force (pg 13)					
Generic Descriptors	Discriminators				
Level 3 (8–10 marks) A comprehensive answer:  detailed knowledge and 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.	<ul> <li>At Level 3 responses are likely to include:         <ul> <li>accurate definitions of three of Newton's Laws</li> <li> with detailed explanation linked to tennis serve</li> </ul> </li> <li>understanding of both:         <ul> <li>the three types of motion and the application of force</li> <li> with effective application to tennis serve</li> </ul> </li> <li>at the bottom of this level: comprehensive answer covering 2 of 3 question parts</li> </ul>				
Level 2 (5–7 marks) A competent answer:  satisfactory knowledge and 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 are likely to include:         <ul> <li>satisfactory definitions of Newton's Laws</li> <li> with satisfactory application to tennis serve</li> </ul> </li> <li>satisfactory understanding of one other part of question either the three types of motion or the application of force         <ul> <li> with satisfactory application to tennis serve</li> </ul> </li> <li>at the bottom of this level: comprehensive answer covering 1 of 3 question parts</li> </ul>				
Level 1 (1–4 marks) A limited answer:      basic knowledge and 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.	Newton's Laws defined with limited success             with limited application to tennis serve             understanding of types of motion and/or application of force attempted with limited success            with limited application to tennis serve				

Question	Answer	Marks	Guidance
(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  Newton's Laws of Motion - Definitions	10	Newton's Laws - Definitions
	<ol> <li>Newton 1/ Law of Inertia</li> <li>a body will remain in a state of rest or uniform motion unless an (external) force acts upon it / a body doesn't move unless a force is applied to it / a moving body continues to move with</li> </ol>		Can get credit for description of law without name or number  If name or number of law
	the same velocity or in the same direction at the same speed unless a force is applied to it  e.g accept any suitable example Newton 1 other than tennis serve  Newton 2 /Law of Acceleration		identified, it must be linked with correct description
	4. the acceleration or rate of <b>change</b> of momentum or velocity of a body is proportional to the (size of) the force / the larger the force the greater the acceleration of the body		N2 - Rate of change of speed = BOD N2 - Speed or velocity of ball
	<ul> <li> and takes place in the direction in which the force acts</li> <li>e.g accept any suitable example Newton 2 other than tennis serve</li> <li>Newton 3 /Law of Reaction</li> </ul>		(without mentioning change or increase) = TV  N3 – 'action reaction 'on own =
	<ol> <li>for every action or force there is an equal and opposite reaction</li> <li>e.g accept any suitable example Newton 3 other than tennis serve</li> <li>Newton's Laws of Motion – Explanation applied to tennis serve</li> </ol>		BOD pt 5  Newton's Laws -
	(Newton 1 to tennis serve)		Explanation applied to
	7. (ball) the tennis ball remains in the server's hand until s/he applies a force to the ball to toss it		tennis serve
	8. (ball) the tennis ball will continue to travel vertically up or down (from the toss) until the force of the racket head changes its direction		Less detailed explanations can be credited (i.e. N3 – bouncing ball before serve) but answer
	<ol> <li>(player) the player needs to apply a force to the ground to allow them to stretch up or jump to hit the ball</li> </ol>		may warrant lower final mark according to discriminators
	(Newton 2 to tennis serve)		
	<ul> <li>(ball) the harder the player hits the ball the faster it will travel</li> <li>in the direction it has been hit</li> </ul>		
	11. (player) the greater the force applied to the ground the faster or further the player will jump into the air		
	(Newton 3 to tennis serve)		
	12. (ball) the racket strings apply a force to the ball and the ball applies an equal and opposite force to the strings or vice versa		
	13. (ball) when bouncing the ball before the serve ball exerts a downwards force on the ground and ground exerts an equal and opposite force on the ball		
	14. (player) to jump to hit the ball, the player applies a (downward or action) force on the ground		

Question	Answer	Marks	Guidance
	that applies an opposite or upward or reaction force on the player		Three types of motion -
	Three types of motion - Description		<u>Description</u>
	15. Linear Motion		
	16. motion in a (straight or curved) line		Can get credit for
	17. all parts move the same distance at the same time in the same direction / all parts move at		description or example of
	the same speed in the same direction / all parts move at the same velocity		type of motion without
	eg accept any suitable example of linear motion other than tennis serve /		name
	downhill skier / diver during flight / gliding under water / shot putt during flight		Look out for candidate who
	10 Angular Mation		combines types of motion
	<ul><li>18. Angular Motion</li><li>19. when a body or part of a body moves in a circle or part of a circle about a point or pivot or</li></ul>		with application of force:
	axis of rotation		Linear motion with pt22
	eg accept any suitable example of angular motion other than tennis serve /		Angular motion with pt23
	arm action in swimming / leg action in running / lower arm in biceps curl /		
	giant circle on high bar		
	20. General Motion		
	21. (combination of) linear and angular motion		
	eg accept any suitable example of general motion other than tennis serve /		
	swimming / running / long jump / bowling in cricket		Three types of motion
	(Three types of motion complied to tennic corps)		– applied to tennis
	(Three types of motion – applied to tennis serve) (Linear motion to tennis serve)		<u>serve</u>
	ball when tossed in the air <b>if no spin</b>		
	ball after being hit by racket if no spin		Application of types of
	<ul> <li>racket during certain movements of the serve</li> </ul>		motion to tennis serve-
	Table daming contain movements of the serve		not necessarily required by question – hence
	(Angular motion to tennis serve)		bullets
	action of the arm in the ball toss (about the shoulder joint)		
	action of the arm in whole service action (about the shoulder joint)		
	action of the lower arm in extending to hit the ball (about the elbow joint)		
	(General motion to tennis serve)		
	<ul> <li>complete action of tennis serve / follow through of tennis serve</li> </ul>		
	ball when tossed in the air		

Question	Answer	Marks	Guidance
	ball after being hit by racket with top spin or slice applied		
	Explanation of application of force applied to tennis serve		
	<ul> <li>22. if force applied through ball's centre of mass linear motion produced</li> <li>(called a) direct force</li> <li>ball will travel further</li> <li>ball will go lower over net / the trajectory will be lower</li> </ul>		
	<ul> <li>if force applied outside ball's centre of mass angular motion produced</li> <li>(called an) eccentric or off centre force <ul> <li>e.g. top spin or slice applied</li> <li>to clear net or to get ball in service court or to ensure ball stays in or causes ball to dip</li> </ul> </li> </ul>		
	<ul> <li>force applied by racket will cause a change of shape</li> <li>(compression of) ball when hit by racket</li> <li>(indentation of) strings of racket when hitting ball</li> </ul>		
	<ul> <li>25. force applied by hand will cause ball to move in ball toss</li> <li>26. force applied by racket will cause ball to change direction <ul> <li>from upward or downward motion in ball toss towards the opponent or net</li> </ul> </li> <li>27. force applied by racket will cause ball to accelerate</li> </ul>		ONLY award pts 25, 26, 27 if NOT covered in Newton's 1 <sup>st</sup> Law pts 7-9
	Total	30	

### **Section B – Acquiring Movement Skills**

Q	uestion	Answer	Marks	Guid	dance
2	(a)	Sub max 3 for theory/description	4	Accept	Do not accept
		<ol> <li>(feedback) feedback not used / no time for feedback / no reference to feedback</li> <li>(ballistic) for rapid or ballistic or dynamic actions</li> </ol>		There is no feedback /     doesn't need or     receive fback = BOD	gets feedback at end
		<ol> <li>(change) action cannot be changed during performance</li> <li>(conscious control) little or no conscious thought or control / movement performed subconsciously or automatically / few attention demands</li> <li>(Level 1) (open loop control sometimes referred to as) Level 1 control</li> <li>(Memory) motor programme or plan or movement stored in or triggered from LTM / motor programmes or subroutines are learned well or overlearned / memory trace formed / memory trace starts action or transfers information to muscles</li> <li>(decision) whole movement can be carried out by</li> </ol>		2. quick = BOD 3. must wait for next attempt to make adjustments 4. 5. 6. involves LTM = BOD	
		<ul> <li>making one decision</li> <li>1 mark for suitable practical example such as</li> <li>Golf drive / discus throw / shot putt /</li> <li>when performing a volley at net in tennis there is not enough time to act on feedback /</li> <li>when blocking at net in volleyball the movement is done immediately and at speed /</li> <li>a goalkeeper might save a ball without actively thinking about it /</li> <li>when skipping movements that are learned seem to be automatic /</li> <li>fielder in cricket stores the movement of catching in the LTM /</li> <li>slip fielder in cricket may catch the ball having made only one decision</li> </ul>		<ul> <li>8. the following if understanding of OLC shown in description:</li> <li>volley in tennis</li> <li>block in volleyball</li> <li>football/hockey goal keeper making save</li> <li>tennis serve</li> <li>slip catch in cricket</li> <li>kicking or catching or throwing a ball</li> </ul>	gymnast on beam or skier (making adjustments)

Question	Answer	Marks	Gui	dance
(b)	Description and SUITABLE practical example needed for each mark 4 marks for 4 from:  (part) 1. Practise by splitting or breaking down skill into subroutines or sections eg practice the tennis serve by doing the toss up	4	might be acceptable: However, <b>DNA</b> 'part is pract	
	first / triple jump or other suitable eg		Accept	Do not accept
	<ul><li>(whole)</li><li>1. Practise by doing the total or complete or entire movement / not breaking skill into subroutines or</li></ul>		splitting or breaking skill down into parts	'Part' as only description
	parts / eg tennis serve / penalty kick in football or other suitable eg		2. do the whole skill <b>in one</b>	'Whole' as only description
	<ul> <li>(progressive part)</li> <li>2. Practise in stages that are linked or chained / eg gymnastics or trampoline routine / triple jump / gymnast learning a roll then a jump, then roll and jump together / athlete practises the hop, then step, then hop and step etc / or other suitable eg</li> </ul>		3. practise A then B then AB then C then ABC	'Progress through parts' as only description
	<ul> <li>(whole-part-whole)</li> <li>3. Practise the complete skill, then split it into subroutines and then practice complete skill again / eg Practice the tennis serve completely to start then concentrate on the toss up of the ball and then integrate this back into a practice of the complete skill / for teaching front crawl / or other suitable eq</li> </ul>		4. do the whole skill, then concentrate on the part that needs work, then practise the whole skill again	'Whole part whole' as only description / combination of whole and part method = TV

Question	Answer	Marks	Gui	idance
(c)	Description must include the identification of phase	6	Accept	Do not accept
	(cognitive, associative, autonomous)			Demonstration
	Sub max 2 from cognitive phase:		1.	
	Leads to a mental picture (being formed)/mental			
	rehearsal/understanding what needs to be done		2.	
	2. Needs (conscious) thought or concentration on			
	technique or subroutines / 'thinking' stage		Positive feedback or	
	3. Unable to use intrinsic feedback/only extrinsic		positive reinforcement	
	feedback effective/reliant on verbal or visual		important	
	cues/feedback needed / relies on guidance or FB		4.	
	4. Movement (often) lacks fluency or rhythm or		_	
	co-ordination / movement jerky		5.	
	5. trial and error a feature/ (many) mistakes			
	Sub max 2 from <u>associative</u> phase:		6.	
	<ol><li>Matching or associating mental model with actual performance</li></ol>		C.	
	7. Motor programmes begin to be formed /		7.	
	fundamentals or basics of skills learned			
	8. Practice or rehearsal occurs		8.	
	9. Following can be used: more detailed feedback / knowledge of results (KR) or knowledge of performance (KP)/kinaesthesis or kinaesthetic or intrinsic feedback		9. feedback still required	
	More trial & error / learn from or fewer or eliminate mistakes/more consistent or effective / correct errors		10.	
	11. Increased fluency or rhythm or efficiency /movement less jerky/better timing / more co-		11.	Start to groove skills
	ordinated 12. Some never leave or move beyond this stage /		12.	Longest phase
	(usually) longer than cognitive			

Question	Answer	Marks	Guid	lance
	<ul> <li>Sub max 2 from <u>autonomous</u> phase:</li> <li>13. Accurate or well grooved or consistent or habitual or over learned /motor programmes formed (stored in LTM)</li> <li>14. Fluent or rhythmic or efficient</li> <li>15. Little thought or conscious control (needed)/ automatic / spare attentional capacity /can focus on tactics or strategy/skills can be adapted</li> </ul>		<ul> <li>13. Few errors / almost perfect =BOD</li> <li>14.</li> <li>15. Don't have to think about it = BOD</li> </ul>	
	16. Able to use <b>intrinsic</b> or <b>kinaesthetic</b> feedback (effectively)/less need for external feedback		16. Can correct themselves	Little or no FB 'able to use FB' on own = TV
	17. May return to associative phase / need to keep practising (to stay in this phase)		17.	

(e)* Levels of Response	
Generic Descriptors	Discriminators
<ul> <li>Level 3 (8–10 marks)</li> <li>A comprehensive answer:</li> <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>	<ul> <li>At Level 3 responses are likely to include:</li> <li>effective discussion on operant conditioning</li> <li>effective discussion of at least one type of reinforcement</li> <li>good knowledge and understanding of the S-R bond</li> <li>discussion on both skill learning and adopting BAHLs</li> <li>at top of level, reference to at least one of Thorndike's Laws</li> </ul>
Level 2 (5–7 marks) A competent answer:      satisfactory knowledge and 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.  Level 1 (1–4 marks) A limited answer:     basic knowledge and 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 2 responses are likely to include:  satisfactory discussion on operant conditioning  at least one type of reinforcement discussed with some success satisfactory knowledge and understanding of the S-R bond  at top of this level, satisfactory discussion on both skill learning and adopting BAHLs / or comprehensive discussion of learning movement skills OR BAHLs  At Level 1 responses are likely to include:  basic discussion on operant conditioning  little or no reference to different types of reinforcement  basic knowledge and understanding of the S-R bond  reference to just movement skills or just BAHLs
(0 marks) No response or no response worthy of credit.	

Question	Answer	Marks	Guidance
(e)*	Indicative content: Candidate responses are likely to include:	10	relevant responses not
	Numbered points = knowledge/understanding Bullet points = likely development of KU Operant conditioning applied to learning movement skills and adopting BAHLs:		listed should be acknowledged
	1. operant conditioning is a method of learning by association or connection /		acknowledged
	operant conditioning is an associationist or connectionist theory		
	Reference work of psychologist Skinner / Skinner's rats		
	development of experiment		
	3. Stimulus-Response (S-R) bonds are formed or strengthened		
	4 by shaping or guiding or modifying behaviour or the response		
	5. (shaping occurs during) <b>Trial and Error</b> (learning)		
	having a go / experimenting.		
	eg try out activities or trying out different techniques for serving in tennis		
	eg school offers varied activity programme or varied menu		
	give easy targets / allow success		
	6. Manipulate or change the environment		
	eg limit unhealthy choices from school menu		
	eg play a passing game in football within the confines of grids/		
	3-touch hockey or football / move player nearer target		
	7. (use) <b>Positive</b> reinforcement		
	give a stimulus or satisfier		
	after successful or desired response		
	<ul> <li>to strengthen SR bond / to reinforce or ensure repetition of (desired) behaviour/ develop schema</li> </ul>		
	eg badge for eating healthily or exercising or swimming a width or having fun following		
	a healthy diet		
	8(use) praise or reward or positive feedback (when good skill or healthy behaviour		
	shown)		
	(rewards can be) tangible		
	eg reaching target weight may attract money reward or badge or certificate		
	(rewards can be) tangible		
	eg accept suitable examples		

Question	Answer	Marks	Guidance
9.	<ul> <li>(use) Negative reinforcement</li> <li>give disapproval or negative feedback when skill or behaviour is undesired or wrong</li> <li>(then) take away negative feedback when correct response occurs</li> <li>to strengthen desired SR bond / to condition correct behaviour or response eg parent stops criticising child once they start doing exercise eg take away negative feedback when badminton serve finally performed correctly eg stop feeling tired after eating healthily and so recognise benefits of a balanced diet</li> </ul>		Accept -annoyer or negative or unpleasant or noxious stimulus Look for key point of 'annoyer being withdrawn'
10	<ul> <li>(use) Punishment</li> <li>give an unpleasant stimulus or negative feedback</li> <li>to eliminate undesired behaviour / to break an (undesired) S-R bond</li> <li>eg stop pocket money for child who does no exercise</li> <li>eg tell youngster off or withdraw privileges for not following a BAHL</li> <li>eg drop from team for performing poor skills</li> </ul>		
	<ol> <li>(behaviour can be modified by) education or medical advice eg doctor tells you to exercise eg teaching the importance of close ball skills in football</li> </ol>		
12	<ol> <li>(behaviour more likely to change) if reinforced or encouraged by 'significant other' or role model or parent eg watching your parents follow an active lifestyle and wanting to copy them egwatching an expert hockey player may improve your hitting technique</li> </ol>		
13	3. (reinforcement more likely) when <b>benefits felt</b> or seen <b>eg</b> an exercise programme makes you fitter or more energised or improves your body shape <b>eg</b> a new serving technique in volleyball leads to better outcomes		

Question	Answer	Marks	Guidance
Question	Application of Thorndike's Laws (relating to reinforcement)	Maiks	Guidance
	14. Thorndike's laws		
	ensure that the right responses learned or bonds strengthened		Only credit Thorndike
	indicate factors that affect how well operant conditioning or learning takes place		DEVS / EGs once
			Thorndike OR Law
	15. Law of Effect		identified
	the outcome or effect of your behaviour influences what you do next		
	<ul> <li>desired or correct behaviour that is reinforced (with satisfier) strengthens the S-R bond / reinforcement strengthens the SR bond</li> </ul>		
	<ul> <li>undesired or incorrect behaviour that receives annoyer weakens the S-R bond</li> </ul>		
	eg you get stronger after weight training so you continue weight training		
	eg you feel better after exercising or eating healthily so you continue		
	16. Law of Exercise		
	<ul> <li>practice strengthens the SR bond / practising the correct responses helps</li> </ul>		
	response to be learned or brings about correct behaviour or response		
	eg you keep practising weight training technique you will learn it more effectively		
	eg you keep trying exercising you are more likely to continue		
	17. Law of Readiness		
	<ul> <li>the learner has to be physically and mentally mature enough to be able to make the appropriate response or perform the skill / learner must be physically and mentally mature enough for the S-R bond to be strengthened</li> </ul>		
	eg If you are old enough you are able to participate in pyramid weight training		
	eg you must be mature enough to be able to use Swiss exercise balls effectively		
	Evaluation of effectiveness of operant conditioning Positive		
	Reasonably quick and effective		
	<ul> <li>Good for simple movement tasks or responses that require quick thinking</li> </ul>		
	Good for the young who respond well to positive reinforcement		
	Negative		
	<ul> <li>Leads to prescriptive or automatic responses / can't adapt to different situations</li> </ul>		
	Too much positive reinforcement can lead to complacency or arrogance		
	Little understanding needed so may not be real learning / learning may lack depth		

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

Question	Answer	Marks	Guida	ince
3 (a)	<ol> <li>(ability) level of ability or disability / what you are able to do</li> <li>(society/attitudes/discrimination) societal views/ respect or regard from others / discrimination or unfair treatment / stereotyping or typecasting re what you can do / positive or negative attitudes</li> <li>(confidence) self confidence / self belief / self esteem /embarrassment / don't feel welcome / 'social stigma'</li> <li>(facilities/ramps) presence of absence of specialist or adapted facilities or equipment / presence or absence of wheelchair access or ramps or other adapted features</li> <li>(coaches) presence of absence of specialist or suitably qualified coaches</li> <li>(clubs) presence of absence of specialist clubs or teams or classes or competitions / special times / not enough volunteers / limited choices of activities available</li> <li>(transport) whether or not you can drive or have a car or transport or can get to venue</li> <li>(Paralympics/role models/media) limited coverage or advertising / people don't know what is available / few role models / ref positive impact of Paralympic Games re exposure of role models or increased participation</li> <li>(inclusion/encouragement) whether school has inclusion policy / support or encouragement (from school or friends or family) / friends don't, so you don't / not enough others to join in with</li> </ol>	5	Accept  1. 2. 3. Esteem on own if within explanation  4. 'disabled friendly' = BOD  5. 6. 7. 8. Oppositesmore coverage / more role models  9. Oppositeslack of support	Do not accept list of identified words e.g. Opportunity, Provision, Esteem  Facilities or equipment on own  Coaches on own  Clubs on own  Transport on own  Lack of or limited sponsorship

Question	Answer	Marks	Guid	dance
(b)	5 marks for 5 from:	5	Accept	Do not accept
	<ul><li>UK Sport helps by (sub max 3)</li><li>1. (strategy) developing strategy / giving strategic help</li></ul>		1.	
	<ol> <li>(lottery) managing or distributing lottery funding</li> <li>(WCP) (investing in) World Class (pathway) Programme</li> <li>(drugs) promoting ethical behaviour or drugs free sport / running anti-doping programme / 100% ME</li> <li>(major events) attracting major events / 'getting' London 2012</li> <li>(admin.) (helping) increase efficiency of organisation or administration of sport</li> <li>(liaison) supporting or working with NGBs or Home Country Councils (HCCs) or National Institutes or top coaches / world class coaching strategy</li> <li>(TASS)Talented Athlete Scholarship System/TASS</li> <li>(SG)Sporting Giants scheme</li> <li>(PLA) giving Performance Lifestyle Advice (PLA) / helping performers develop an appropriate (high performance) lifestyle</li> </ol>		2. 3. Podium – development – talent (all 3) 4. 5. 6. 7. Named institutes eg EIS 8. 9. 10.	Gives funding on own 'world class' as description eg of coaching  Educates coaches
	BOA helps by (sub max 3) 11. (selection) select Team GB (with NGBs)		11.	
	12. (management) preparing or managing or leading Team GB / arranges Britain's involvement in OGs 13. (liaison) working with other named organisations		12.	Organise the Olympics in the UK/ enter Team GB in Olympics
	eg UK Sport or IOC  14. <b>(bids)</b> attracting Olympics to Britain / working on		13.	
	Olympic bids		14.	
	15. <b>(Team GB)</b> providing workshops (for Team GB) / looking after (welfare of) Team GB /athlete medical scheme / Olympic Passport scheme  16. <b>(camps)</b> providing (pre-Games) training camps		15.	
	<ul><li>16. (camps) providing (pre-Games) training camps</li><li>17. (sponsors) (help) appointing sponsors or</li></ul>		16.	The second state of the se
	partners		17.	They provide sponsorship
	18. (PLA) promoting or supporting Performance Lifestyle Advice (PLA) (given by Institutes)		18.	

Question	Answer	Marks	Guidance	dance
(c)	5 marks for 5 from:	5	Accept	Do not accept Prompt words on own unless
	<ol> <li>(frontier) sports reflect frontier spirit</li> <li>(AAI) sports adopted, adapted invented / new</li> </ol>		1.	also in main MS
	sports for a (relatively) new or young society / dominated by 'big four' sports 3. (Lombardian) Lombardian /		2.  3. Violent/aggressive =	
	win at all costs / linked with win ethic / very competitive 4. (American Dream) vehicle for achieving		BOD	
	American Dream or going from 'Rags to Riches' / individuals can become wealthy or successful or achieve high or celebrity status <b>through sport</b>		4.	theory on 'American Dream' without reference to sport
	5. <b>(golden triangle)</b> sport part of golden triangle / sport linked with sponsorship <b>and</b> media / sport belongs to media / sport a media product / sport dominates media / media influences rules or timings / high levels of media coverage		5.	'media' on own 'sports televised' on own
	6. (capitalism/commercialism) reflects capitalism / high levels of commercialism or advertising or sponsorship / linked with big business / teams run as franchises / performers as 'billboards'/ professional sport dominates		6. Sport in USA is 'money driven'	Sport in USA is commercial = TV
	7. <b>(entertainment/spectatorism)</b> entertaining / exciting / action packed /spectacular/ limited mass participation / limited system of local sports clubs /'watch more than play' / high scoring / no draws		7.	
	8. (school/uni) high status of high school or university sport / large crowds at school or uni 'games' / sports scholarships to universities / university sport feeds pro. sport		9.	
	9. (draft) (significance of) draft system / top uni or college athletes drafted into Pro sport		9.	

Question	Answer	Marks	Guidance		
(d)	5 marks for 5 from:	5	Accept	Do not accept	
	<ol> <li>(facilities/space) money for or due to specialist facilities or space for expansion / lot of space for pitches</li> <li>(coaching) due to specialist or professional coaches / coaching by academic staff or by assistant teachers / Oxbridge 'blues' on staff</li> <li>(support/character development) due to support of or encouragement by (head) teachers or housemasters / belief that sports and games were valuable or developed character / to instil values</li> <li>(time) (plenty of) time for play or practice / compulsory or regular or daily participation / games on sports afternoons</li> <li>(inter-house) via house system / via inter house games</li> <li>(inter-school) via inter-school matches or fixtures or competitions / (annual athletics) sports days</li> <li>(rules/NGBs) by codification or developing rules / by structuring games / (helping) foundation of NGBs</li> <li>(role models) via role models or high status performers (who inspired younger boys) / Sixth formers ran teams</li> <li>Spread via ex-pupils who: promoted games back at home or at university / spread games around world or to British Empire or colonies /</li> </ol>				
	Spread via ex-pupils who became: teachers / industrialists / politicians / army officers /parents / vicars / missionaries / influential community members				

(e)* Levels of Response	
Generic Descriptors	Discriminators
Level 3 (8–10 marks) A comprehensive answer:  detailed knowledge and 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.	<ul> <li>At Level 3 responses <u>are likely</u> to include:</li> <li>detailed understanding of impact of the media on sport <ul> <li>with attempt at balance between positive and negative</li> <li>discussion of the impact of the media on BAHLs</li> <li>at top of this level both positive and negative (BAHL)</li> </ul> </li> </ul>
Level 2 (5–7 marks) A competent answer:  satisfactory knowledge and 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 are likely to include:</li> <li>satisfactory understanding of impact of the media on sport</li> <li>both positive and negative aspects</li> <li>attempt at showing impact of the media on BAHLs</li> <li>a detailed and comprehensive answer covering only sport OR only BAHL</li> </ul>
Level 1 (1–4 marks) A limited answer:      basic knowledge and 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:  basic understanding of the impact of the media on sport imbalance between positive and negative limited or no reference to BAHLs
(0 marks) No response or no response worthy of credit.	

uestion	Answer	Marks	Guidance
(e)*	Indicative content: Candidate responses are likely to include: credit other relevant points	10	
	Background		
	Types of media include TV, radio, newspapers, internet (one tick total)		
	Positive impact of media - on sport/sports performers		
	2. Media informs		
	eg accept suitable example/s of information role		
	3. Media educates		
	eg accept suitable example/s of education role		
	in depth analysis  A Madia antonia.		
	Media entertains     eg accept suitable example/s of entertainment role		
	5. Media advertises		
	eg accept suitable example/s of advertising role		
	6. (feel good/NB) can inspire 'feel good factor' or nation building or patriotism		
	eg London 2012 coverage / pictures in newspapers		
	7. (minority sports) media promotes or increases awareness of (minority) sports		
	eg handball or beach volleyball or other suitable examples		
	8. (role models) (positive) role models created / copying (good) behaviour of (positive)		
	role models		
	eg copying sportsmanship		
	eg accept named example/s of positive role models		
	9. (wealth/fame) ealth or fame or celebrity status achieved / sport stars created		
	Opportunities both on and off 'field of play'		
	eg appearances on TV quiz shows or other suitable example/s.		
	Opportunities both on and off 'field of play'		

Question	Answer	Marks	Guidance
	(Positive impact of media - on sport/sports performers - continued)		
	10. (careers) media careers		
	broadcasters / commentators / camera technology etc		
	eg Clare Balding / Tom Daley		
	11. (funding) media brings money to or generates money for sport / attracts	sponsorship	
	eg money to LTA from BBC (Wimbledon) / TV rights		
	money can be used to increase participation or upgrade facilities /		
	accept other ways that money can be spent positively		
	12. (entertainment) media makes or has made sport (more): entertaining / p	opular /	
	exciting / better to watch		
	eg half time at Super Bowl / mascots / Hawk-Eye or other examples or	f	
	entertainment, excitement etc		
	13. (fairness) media makes sport or results fairer		
	<ul> <li>via video playback / TMO / goal line technology</li> </ul>		
	14. (control) media influences or controls or changes (some) aspects of sport	rt (in positive	
	way)		
	to speed up action/make game more 'media friendly'/increase score	es	
	eg rules or scheduling or format or timings or structure / eg Twenty20		
	15. <b>(Sky/cable)</b> reference to (impact or influence of) Sky or cable or digital T	V	
	eg 24 hr coverage / huge variety of sports		
	16. (myths/stereotypes) myths or stereotypes broken		
	eg women can't play rugby / 'white men can't jump' / tackling racism		

Question		Answer	Marks	Guidance
	Neg	ative impact of media - on sport/sports performers		
	17.	(overkill) (some would argue there's) Too much sport on TV		
	18.	(winning) too much emphasis on winning / Lombardianism / loss of 'traditional' sport		
		<ul> <li>increased likelihood of corruption / violence / drug abuse</li> </ul>		
		eg match fixing or other suitable example / eg Lance Armstrong		
	19.	(pressure) too much pressure on performers		
		too much wealth when too young		
		eg accept examples		
	20.	(role models) copying or being influenced by bad behaviour of (neg) role models		
		eg bad language / lifestyle choices		
	21.			
		<ul> <li>coverage poorly managed / disproportionately in favour of one sport /</li> </ul>		
		comments out of context		
		<ul> <li>prejudices encouraged / fuelling of hooliganism or negativity towards opponents</li> </ul>		
		eg England v Germany football		
	22.	(intrusion) media intrusion or media demands		
	22.	eg requirement to give press interviews immediately after a match		
		<ul> <li>loss of privacy</li> </ul>		
		performers required to perform more than is safe		
		eg too soon after surgery		
		<ul> <li>focus on trivial/sensational/negative aspects</li> </ul>		
	23.	(pay per view) Pay per view means not everyone can see all events		
	0.4	eg accept suitable example.		
	24.	(control) media influences or controls or changes (some) aspects of sport (in		
		negative way)  media can end up controlling sport.		
		eg rules or scheduling or format or timings or structure		
		events scheduled at bad times for athletes		
		eg marathons in heat of day		
	25.	(minority sports) minority sports (still) get limited coverage		
		<ul> <li>because they have less 'money-making' potential for sport or advertisers</li> </ul>		
	26.	(disruption) intrusive lights or cameras / delays for Television Match Officials (TMOs)		
		may put performers off or disrupt game		

### G451 Mark Scheme

Positive impact of media - on BAHLs	Marks	Guidance
<ul> <li>27. Programmes or documentaries or education or articles (which can lead to)</li> <li>28increased participation / people inspired to 'have a go' or to follow a BAHL / more exercise or physical activity / lifelong involvement</li> </ul>		
lower cost or burden on NHS		
<ul> <li>29improve health / greater awareness of health or health issues <ul> <li>eg Change4Life</li> <li>eg Embarrassing Bodies</li> <li>dangers of smoking / avoiding drugs or alcohol or smoking</li> <li>adverts for exercise DVDs</li> <li>eg Davina McCall</li> </ul> </li> <li>30. improved diet or body weight / awareness of diet plans</li> </ul>		
31. Role Models who are or 'get healthy' or 'lose weight '  eg Gregg Wallace (Masterchef)		
Negative impact of media - on BAHLs		
<ul> <li>32. People watch rather than take part / reduced participation / more 'armchair spectators' or 'couch potatoes'/ more sedentary lifestyles <ul> <li>so less healthy / (potentially) more disease</li> </ul> </li> <li>Increased costs to NHS <ul> <li>eg CHD or obesity or other suitable example</li> </ul> </li> <li>Negative influence of advertising / unhealthy sponsors <ul> <li>eg junk food / eg Coca Cola / Macdonald's in Olympic Park</li> </ul> </li> <li>Negative behaviour in films</li> <li>eg drug taking or alcohol abuse or smoking</li> <li>Negative impact of social networking or social media</li> </ul>		
	<ul> <li>28increased participation / people inspired to 'have a go' or to follow a BAHL / more exercise or physical activity / lifelong involvement <ul> <li>lower cost or burden on NHS</li> </ul> </li> <li>29improve health / greater awareness of health or health issues <ul> <li>eg Change4Life</li> <li>eg Embarrassing Bodies</li> <li>dangers of smoking / avoiding drugs or alcohol or smoking</li> <li>adverts for exercise DVDs</li> <li>eg Davina McCall</li> </ul> </li> <li>30. improved diet or body weight / awareness of diet plans</li> <li>eg Weight Watchers</li> <li>31. Role Models who are or 'get healthy' or 'lose weight 'eg Gregg Wallace (Masterchef)</li> <li>Negative impact of media - on BAHLs</li> <li>32. People watch rather than take part / reduced participation / more 'armchair spectators' or 'couch potatoes'/ more sedentary lifestyles</li> <li>so less healthy / (potentially) more disease</li> <li>Increased costs to NHS</li> <li>eg CHD or obesity or other suitable example</li> <li>Negative influence of advertising / unhealthy sponsors</li> <li>eg junk food / eg Coca Cola / Macdonald's in Olympic Park</li> <li>Negative behaviour in films</li> <li>eg drug taking or alcohol abuse or smoking</li> </ul>	<ul> <li>28increased participation / people inspired to 'have a go' or to follow a BAHL / more exercise or physical activity / lifelong involvement <ul> <li>lower cost or burden on NHS</li> </ul> </li> <li>29improve health / greater awareness of health or health issues <ul> <li>eg Change4Life</li> <li>eg Embarrassing Bodies</li> <li>dangers of smoking / avoiding drugs or alcohol or smoking</li> <li>adverts for exercise DVDs</li> <li>eg Davina McCall</li> </ul> </li> <li>30. improved diet or body weight / awareness of diet plans</li> <li>eg Weight Watchers</li> <li>31. Role Models who are or 'get healthy' or 'lose weight 'eg Gregg Wallace (Masterchef)</li> </ul> <li>Negative impact of media - on BAHLs</li> <li>32. People watch rather than take part / reduced participation / more 'armchair spectators' or 'couch potatoes'/ more sedentary lifestyles</li> <li>so less healthy / (potentially) more disease</li> <li>Increased costs to NHS</li> <li>eg CHD or obesity or other suitable example</li> <li>Negative influence of advertising / unhealthy sponsors</li> <li>eg junk food / eg Coca Cola / Macdonald's in Olympic Park</li> <li>Negative behaviour in films</li> <li>eg drug taking or alcohol abuse or smoking</li> <li>Negative impact of social networking or social media</li>

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