

GCE

Physical Education

Advanced GCE

Unit G453: Principles and concepts across different areas of Physical Education

Mark Scheme for January 2012

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, OCR Nationals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

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

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

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

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

© OCR 2012

Any enquiries about publications should be addressed to:

OCR Publications PO Box 5050 Annesley NOTTINGHAM NG15 0DL

Telephone: 0870 770 6622 Facsimile: 01223 552610

E-mail: publications@ocr.org.uk

Annotations used in the detailed Mark Scheme (to include abbreviations and subject-specific conventions)

Annotation	Meaning
✓	= Correct response
NAQ	= Not answering the question
BOD	= Benefit of the doubt
R	= Repeat
Vg	= Too Vague
DEV	= Development (levels scheme)
IRRL	= Significant amount of material which does not answer the question
SEEN	= Noted but no credit given
L1	= Level 1 (levels of response scheme)
L2	= Level 2 (levels of response scheme)
L3	= Level 3 (levels of response scheme)
L4	= Level 4 (levels of response scheme)
Р	= Practical example (levels of response scheme)
E	= Evaluative point (levels of response scheme)
i	= Independent opinion (levels of response scheme)

Section A Historical Studies (Option A1)

Q	uestion		Answer	Marks	Guidance
1	(a)	5 marks for 5 of: Description of stag	ge one (sub max 4)	5	Sub max 4 for description Sub max 1 for reasons for transition
		1. (pop rec/ uncivilised)	Like (institutionalised) popular recreation/activities cruel or violent/ranged from simple to barbaric/games of force rather than skill/Barbarian or uncivilised games or behaviour		Do not accept for Pt 6 No rules
		2. (reflection) 3. (bullying)	schools reflected society (which was 'uncivilised') Bullying/brutality/ fagging / severe punishments/poor relationships/hooligan behaviour/rebellion		
		4. (boy culture)	'Boy culture'/activities organised by boys themselves/games ignored by teachers		
		5. (facilities)	facilities simple or natural		
		6. (rules)	limited or simple rules to games		
		7. (Melting Pot)	Melting pot / each school developed its own sporting culture/schools' sporting culture dependent on natural facilities		
		8. (adopt/adapt)	Activities adopted or adapted (from home)		
		9. (Spartan)	Spartan or severe living conditions		
		Reasons for transi	tion to stage two (sub max 1)		
		10.(civilising process)	Civilising process/Britain becoming more civilised or ordered/increased law and order/need for social control/social development linked to increased responsibility given to boys/police force established so behaviour more civilised/RSPCA established so cruelty against animals reduced		
		11. (Arnold)	Impact or arrival of Dr Arnold/ Arnold a clergyman keen to instil Christian values/Arnold keen to reform/ moral development/increased health awareness/intellectual development linked to educational change		

Question			Answer	Marks	Guidance
(b)	_	ks for 5 of: nce of university	'melting pot' (sub max 4)	5	Sub max 4 for influence of university 'melting pot'
	1.	(rules)	Common set of rules / codification established/NGB's		Sub max 4 for influence of Oxbridge
	2.	(fixtures)	Teams could play each other/more or regular fixtures		graduates
	3.	(compromise)	Ex public school boys had to compromise or sacrifice their school rules		
	4.	(retention)	Some schools' rules retained as internal or festival games (still played today)		
	Influence of Oxbridge graduates (sub max 4)				
	5.	(NGBs)	They established (many) NGBs / admin skills		
	6.	(assistant masters)	They returned to (to their own) schools as (assistant) masters to help with games		
	7.	(other schools)	They went on to teach at preparatory or middle class or other schools and spread passion for team games or the cult of athleticism		
	8.	(role models)	They were role models/boys looked up to them/'blues' highly admired		
	9.	(spread abroad)	They took games abroad as army officers or missionaries or as part of colonial service		
	10.	(old boys clubs)	They established old boys' clubs		
	11.	(priests)	They spread games at home as: Priests or vicars through parish teams/ community members who set up clubs		
	12.	(industrialists)	As industrialists providing for factory teams		
	13.	community/	As politicians or community leaders who provided funding or facilities or support		

estion		Answer	Marks	Guidance
	5 marks for 5 of:		5	Sub max 4 for 'yes'
	Yes – lawn tennis was a s	successful vehicle for the emancipation of women because (sub		lawn tennis was a
	max 4):			successful vehicle
	1. (athleticism)	women able to be athletic/energetic/get involved in a suitable/unviolent game		for emancipation
	2. (freedom)	women free from constraints of Victorianism		Sub max 4 for 'but'
	3. (MC)	It was acceptable to middle class		•••
	4. (stereotypes weakened)	It helped to remove some of the stereotypes (of earlier Victorian times)		Sub max 1 for
	5. (clubs)	Clubs formed which women (eventually) joined		contemporary tenn as inclusive game
	6. (schools)	It was adopted by (exclusive girls) schools		as inclusive gaine
	7. (participation)	Whole families could play together/girls able to join in / men and women being able to play together		Note Accept under pt1
	But – (sub max 4):			being able to be involved/active etc.
	8. (restrained)	Women weren't expected to be vigorous/too athletic		
	9. (doubles)	Women (usually) only played doubles		Do not accept - if
	10. (covered)	Women had to stay well covered/clothed		candidate gives pt
	11. (privacy)	Women played in private/privacy of walled or hedged gardens		8 – 11 as positive
	12. (social)	Tennis was predominantly a social rather than sporting occasion		aspects of
	13. (clubs exclusive)	Clubs were exclusive/middle class did not 'mix' below themselves (so not in fact emancipated)		emancipation but look for pt 1 for
	Contemporary tennis as	inclusive game (sub max 1):		involvement.
	14. (age)	Court surfaces/Astroturf courts/indoor courts / racket technology		
		allow play into older middle and older age		
	15. (schemes)	Schemes/campaigns to increase participation in inner cities		
	16. (free)	Free or subsidised provision and so easier for those on low income		
		or unemployed to play/'tennis for free' campaign which makes it		
		easier to those on low income or unemployed to play		
	17. (wheelchair)	Increased coverage of or participation in wheelchair tennis		
	18. (other)	Accept other relevant example of inclusion		

(d)*	
Levels Descriptors	Levels Discriminators
Level 4 (18 – 20 marks)	Discriminators at Level 4 are likely to include:
A comprehensive answer:	detailed knowledge and excellent understanding of reasons for
detailed knowledge & excellent understanding	replacement (rather than just points of knowledge about each
 detailed analysis and excellent critical evaluation 	approach); consistently and accurately applied
 well-argued, independent opinion and judgements which are well 	excellent evaluation to include both positive and negative aspects of
supported by relevant practical examples	both the national curriculum and the 1950s approach together with a
 very accurate use of technical and specialist vocabulary 	conclusion.
high standard of written communication throughout.	all aspects of question addressed with balance (why 1933 was replaced/evaluation of NC v 1950s)
Level 3 (13 - 17 marks)	Discriminators at Level 3 are likely to include:
A competent answer:	good knowledge and clear understanding of reasons for replacement
good knowledge and clear understanding	(rather than just points of knowledge about each approach)
good analysis and critical evaluation	good evaluation of both the national curriculum and the 1950s
 independent opinions and judgements will be present but may not 	approach together with a conclusion.
always be supported by relevant practical examples	all aspects of question addressed but not necessarily with balance
generally accurate use of technical and specialist vocabulary	(why 1933 was replaced/evaluation of NC v 1950s)
written communication is generally fluent with few errors.	
Level 2 (8 - 12 marks)	Discriminators at Level 2 are likely to include:
A limited answer:	limited knowledge and understanding of reasons for replacement ie
limited knowledge and understanding	some attempt at explaining reasons for replacement rather than just
some evidence of analysis and critical evaluation	points of knowledge about each approach
opinion and judgement given but often unsupported by relevant	some evidence of evaluation although likely to be more descriptive
practical examples	than evaluative
technical and specialist vocabulary used with limited success	an unbalanced approach but at the top end of this level all parts of the
written communication lacks fluency and contains errors.	question are likely to be addressed
Level 1 (0 - 7 marks)	At Level 1 candidates <u>are likely</u> to:
A basic answer:	show basic knowledge and understanding of the reasons for
basic knowledge and little understanding	replacement
little relevant analysis or critical evaluation	be descriptive rather than explanatory or evaluative
little or no attempt to give opinion or judgement	be unbalanced and not address all aspects
little or no attempt to use technical and specialist vocabulary	
errors in written communication will be intrusive.	
[0 marks] No response or no response worthy of credit.	

Question		Answer	Marks	Guidance
(d)*	Indicative Content:		20	
	1933 course replaced by	1950s approach because:		
	1. (idealism)	Post war ideals / renewal		
		1950s more idealistic times		
	2. (philosophy)	Changes in educational philosophy		
		More holistic or child centred approach thought necessary		
		Eg children to develop - cognitive/social skills/problem		
		solving/thinking/creativity/discovery / enjoyment aspect		
	3. (variety)	More variety needed		
		Eg Movement to music/swimming/educational		
		Gymnastics		
	4. (war)	Blitz or war time bombings created need for re-building programme		
		New schools built (with new gymnasia)		
	5. (creativity - teaching)	A more creative approach needed		
		a desire for fewer prescriptive 'tables'		
		 more autonomy for teachers wanted 		
	6. (women)	By 1950 women PE teachers demanded a different approach		
		More child centred approach		
		Eg 'graduates' of Dartford college or other example		
	7. (equipment)	Better provision		
		 Additions to playgrounds available/full apparatus 		
		Eg purpose build gymnasia/apparatus like army assault courses		
	8. (welfare state)	1950s welfare state system/improved standard of living/		
		government keen to provide for/encourage health		
	9. (social change)	Social change		
		from strict class system to (alleged) equality of opportunity for all		
	10.(training)	By 1950s better teaching		
		PE a profession		
		PE colleges training specialist teachers		
		EG Chester College or other		

uestion		Answer	Marks	Guidance
	Yes - today's NC being	better than 1950s approach because:		
	11.(time)	Specific amount of time available		
		protected time		
		eg government targets/5 hour offer		
	12.(teachers)	More specialist PE teachers		
	13.(balance/variety)	A balanced PE experience/wider variety or broader range of skills developed		
		thinking or analytical or social skills or creativity developed		
		eg fair play/integrity/independence/problem solving		
		Variety leads to great likelihood of lifelong participation / healthy lifestyles		
	14.(consistency)	Consistent experience wherever child goes to school/same in all schools		
		easy transfer between schools		
	15.(support)	Support provided		
		especially to non-specialist teachers		
		eg by partnerships/by SSCOs		
	16.(adapt)	Schools can adapt it		
		to suit themselves or their strengths or the strengths of teachers		
	17.(standards)	(Arguably) higher standards/clear national standards		
	18.(rights)	Learners gain the right to learn certain content		
		Eg dance		
	But – today's NC perha	ps not better than 1950s approach because:		
	19.(admin)	Burden of admin/record keeping	1	
		Restricts time for creative planning		
	20.(inadequate	Inadequate support		
	support)	Especially for non-specialist teachers		
		Eg in primary schools		
	21.(lack of experience)	Lack of experience of assessment		
		Can lead to confusion or skewed results		
	22.(unbalanced)	Schools still able to offer unbalanced programme		
		Eg no dance if teachers not keen		
	23.(constraints)	It can constrain or reduce creativity of teachers]	
	24.(pressure)	It can put pressure on schools		
	Z+.(pressure)	Eg to provide certain activities or facilities		

Section A Comparative Studies (Option A2)

Q	uestion		Answer	Marks	Guidance
2	(a)	5 marks for 5 of: Australia (sub max 4):		5	Sub max 4 for Australia
		1. (Australian)	adapted from Aboriginal game/links to indigenous population/links to heritage / distinctly Australian game		Sub max 1 for UK
		2. (cricket)	Links with cricket helped development / started as winter training game for cricketers		UK
		3. (People's game/egalitarian)	The People's Game (Populo Ludus Populi)/appeals to all/inclusive game/opportunity for minority or ethnic groups/game for players and spectators from all social backgrounds/suits or links with egalitarian culture/Aboriginals well represented/disproportionate number of Aboriginals at top level/supports notion of Australia as 'land of the fair go'		
		4. (frontierism)	Reflection of: bush culture/Australian culture/frontier or pioneering spirit/reflects need to work together in 'hostile environment'/manly image		
		5. (space)	Plenty of space/large open spaces throughout country		
		6. (National)	spread beyond roots in Victoria/played in all States/national competitions have helped spread game		
		7. (media/commercial)	Wide media appeal/good product for media/commercial breaks during games opportunity for commercialism/highly commercialised (at top level)/opportunities for commercialism or business or sponsorship / exciting to watch		
		8. (Draft)	Draft system helps clubs the following season/gives low finishing clubs first opportunity to select best players		
		9. (fame/fortune)	Opportunity for fame/fortune for best players / influence of role models		
		10. (women)	Promotion of female participation/governing bodies promote female participation/can be played by all body types		
		11.(schools)	Played extensively in schools/played by boys and girls in schools/focus on fair play in schools		
		12.(pathway to top)	Extensive pathway programmes/opportunities for progression		
		13. (season)	Long season/8 month season/always at forefront of people's minds		

Question		Answer	Marks	Guidance
	UK (sub max 1):			
	14. (lack of)	Other sports dominant/no space for another major game/other sports dominate school curricula/tradition of other sports/lack of knowledge of it/ lack of media coverage / lack of teaching or coaching expertise/lack of role models		

Question		Answer		Marks	Guidance
(b)	5 marks for 5 of:			5	
		Provision for elite sport in Australia	Comparison with UK		
	(decentralised)	•	•		
	2. (institutes)	Both have institutes/UK copied Australia	a/UK has UK Sport or		
		home country institutes			
	3. (examples)	Eg Australian Institute of Sport /	Eg English Institute of		
		Victorian Institute of Sport	Sport (EIS) at Bisham		
		(VIS)/Melbourne/SASI/NSWIS/NTIS	or		
			Sheffield/SINI/SIS/WIS		
	4. (state v	Each state has at least one	Each home country		
	country)	institute/all institutes of equal status	has its own institute/all		
			institutes of equal		
	F (Court)	Covernment (ACC) directly involved in	status Government not		
	5. (Govt)	Government (ASC) directly involved in sporting decisions	(directly) involved with		
		sporting decisions	sporting policy		
	6. (funding)	Funded by government &	Funded by National		
	o. (landing)	business/private enterprise	Lottery & business		
		Submiced/private criterprice	sponsorship		
	7. (facilities)	Institutes in both countries have world of	Institutes in both countries have world class / excellent / top		
		facilities/equipment/technology			
	8. (support)	Institutes in both countries provide an e	nvironment that		
		maximises potential/supports high perfo	ormance sport/institutes		
		in both countries provide world class su	pport eg		
		coaching/medical/scientific			
	9. (financial help)	•	ncial aid/sponsorship to		
		performers			
	10. (ACE)	Institutes in both countries provide educ			
		vocational opportunities eg ACE eg ad	vice about media and		
		finance			

Question		Answer		Marks	Guidance
(c)	5 marks for 5 of:	PE in USA	Comparison with UK	5	
	1. (focus on)	direct skill learning/fitness/training	participation/skill learning/holistic development/educational emphasis / BAHL		
	2. (content)	credit accurate response on content	credit accurate response on content		
	3. (assessment)	(focus on) testing or measurement	(less formal) teacher assessment		
	4. (exams)	Limited/none at school level	Widespread examinations in PE		
	5. (prof dev)	provided by superintendent or state	provided via public or private routes		
	6. (good practice)	Blue Ribband Schools/Beacon Schools	Specialist sports colleges/Beacon Schools/independent school that focus on sport		
	7. (admin)	Decentralised admin	Decentralised admin/becoming more centralised		
	8. (funding)	State funded	State funded/schools need or seek additional funding		
	9. (control)	Controlled by school board	Schools (increasingly) autonomous/government determines curriculum		
	10. (inspection)	Inspected by superintendent (of school board)	Inspection by Ofsted		
	11. (NC)	No National curriculum/optional	National curriculum/ PE secure as subject/compulsory to 16 yrs		
	12. (status)	PE lower status thought less valuable than in UK	PE higher status		

(d)*	
Levels Descriptors	Levels Discriminators
Level 4 (18 – 20 marks) A comprehensive answer: detailed knowledge & excellent understanding detailed analysis and excellent critical evaluation well-argued, independent opinion and judgements which are well supported by relevant practical examples very accurate use of technical and specialist vocabulary high standard of written communication throughout. Level 3 (13 - 17 marks) A competent answer: good knowledge and clear understanding good analysis and critical evaluation independent opinions and judgements will be present but may not always be supported by relevant practical examples generally accurate use of technical and specialist vocabulary written communication is generally fluent with few errors. Level 2 (8 - 12 marks)	 Discriminators at Level 4 are likely to include: detailed knowledge and excellent understanding of cultural factors that influence sporting excellence in the UK and the USA direct comparisons of cultural factors throughout high quality independent opinion/judgement re the similarities and differences a well-structured, balanced answer Discriminators at Level 3 are likely to include: good knowledge and clear understanding of cultural factors that influence sporting excellence in the UK and the USA some direct comparisons which show good knowledge of the cultural factors that influence sporting excellence. high quality independent opinion/judgement re the similarities and differences a competently structured, balanced answer Discriminators at Level 2 are likely to include:
 A limited answer: limited knowledge and understanding some evidence of analysis and critical evaluation opinion and judgement given but often unsupported by relevant practical examples technical and specialist vocabulary used with limited success written communication lacks fluency and contains errors. 	 limited knowledge and understanding of cultural factors that influence sporting excellence in the UK and the USA some attempt at a comparison of the cultural factors a description of cultural factors rather than a focus on their influence
Level 1 (0 - 7 marks) A basic answer: • basic knowledge and little understanding • little relevant analysis or critical evaluation • little or no attempt to give opinion or judgement • little or no attempt to use technical and specialist vocabulary • errors in written communication will be intrusive. [0 marks] No response or no response worthy of credit.	At Level 1 candidates are likely to: show basic knowledge of the factors make little or no attempt to compare describe factors rather than focus on their influence on sporting excellence

Question	Answer				Guidance
(d)*		: between two systems between two systems		20	
		In USA:	In UK:		
	Historical:				
	1.(pro/am)	DIFF: No tradition of amateurism and professionalism	Tradition of amateurism and professionalism		
	2. (frontier)	Pioneering spirit/ frontierism linked to sport/fuels competitive edge/players as gladiators • Legacy in team names Eg forty niners (gold rush)	DIFF: not so		
	3. (invented)	DIFF: isolation policy UK sports marginalised USA sports promoted big four sports dominant competitive sports enhance image of 'new' or 'young' society	Most or many sports or games invented in Britain content with former glories		
	4. (schools)	DIFF: no or limited tradition of public school influence • Mimic the pro game	Influence of C19th Public Schools importance of fair play		
	Geographical:	·			
	5. (population)	Population approx 300 millionconcept of large country aiming high	DIFF: Population approx 60 million Concept of small country aiming low		

Question		Answer		Marks	Guidance
	Political:				
	6. (Policy/ pathway)	Clear structure of governing body control helps university pathway helps	DIFF/BUT: improving organisation and administration of high performance sport • Academies		
	7. (system)	Decentralised system	SIM/BUT: decentralised system		
	8. (funding)	Limited direct government funding of high level sport Private funding	SIM: + national lottery some government, lottery and private funding		
	9. (economy)	 Capitalism drives sport capitalism driven by competition which is mirrored in sport 	DIFF: mixed economynot exclusively driven by competition		
	10. (golden triangle)	USA drove link between sport and commercialism	TRAD DIFF – BUT: Increased commercialisation of sport • sport linked with multinational companies • impact of 'golden triangle' • UK followed American lead		
	11. (fame/fortune)	Fame or fortune for more/in all professional sports/in many university sports Eg basketball	SIM/BUT: Fame or fortune for few/opportunities not widespread • Mainly for men Eg Association Football		

act on opportunity, vision, esteem act on minority group ticipation and formance asking/centrality and of opportunity/land of celtical opportunities all/claim of cultural ralism/ Williams/Jordan SIM: opportunity not equal • lack of opportunity, provision, esteem • impact of class • limited participation by minority groups/ Some sports attract minorities/ Eg Rugby Women's World Cup Tradition of mass participation
Williams/Jordan
ion (which feeds excellence)
Dream DIFF: Limited incentive for majority
an or win ethic ce Lombardi as 1960s tball coach any of Big Four sports ited outlet for culture nter culture or radical c activities DIFF: tradition of taking part rather than winning • winning important but ruthless pursuit has traditionally not been considered to be sporting • Sportsmanship or fair play
tbal any ited ntei

Question		Answer		Marks	Guidance
		 Counter culture – taking part more important than winning Eg lifetime sports/keeping fit/backpacking/outdoor recreation Radical – equal importance of taking part and winning Eg amateur sport – golf/running Zero-sum mentality – no draws 	BUT: increasing Lombardianism at top level Impact of 2012 Olympics for winning medals		
	17. (elitism)	Elitist system/elitism dominant	DIFF: Elitism not a traditional value/ reluctant to adopt elitist policy		
	18. (young people)	Sport for young people driven mainly by Lombardianism	DIFF/BUT: Sport for young people driven by participation as well as performance		

Section B Sports Psychology (Option B1)

Question		Answer	Marks	Guidance
Question 3 (a)		Confident in the presence of others') Unstable/unpredictable/(tends towards) mood swings/(highly) emotional/tendency to	Marks 4	Guidance 2 marks for characteristic of extrovert and neurotic 2 marks for practical examples of Type A and Type B
	3. (Type A)	worry/exhibit anxiety Practical example showing high personal stress levels/anxious/high arousal/apprehensive/ intolerant/impatient/works fast / ambitious / aggressive / highly competitive Eg Football player being very anxious and wound-up about playing		
	4. (Type B)	Practical example showing low personal stress/low arousal/cool under pressure/confident/tolerant/relaxed / passive / less competitive (than Type A). Eg Athlete being very confident or calm when preparing for a race		

1. (Broad) Focus or concentrate on a lot of information or peripheral stimuli/placements or positions of other players or performers 2. (Narrow) Focus or concentrate on very few stimuli/concentrate on small amount of information 3. (External) Focus or concentrate on outside/environmental factors Focus or concentrate on themselves/affective responses/emotions/own thoughts/strategies or tactics Practical examples of Broad and Internal (sub max 2): Focus or concentrate on themselves/affective responses/emotions/own thoughts/strategies or tactics If combination If c	1. (Broad) Focus or concentrate on a lot of information or peripheral stimuli/placements or positions of other players or performers 2. (Narrow) Focus or concentrate on very few stimuli/concentrate on small amount of information 3. (External) Focus or concentrate on outside/environmental factors 4. (Internal) Focus or concentrate on themselves/affective responses/emotions/own thoughts/strategies or tactics Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick	uestion		Answer	Marks	Guidance
stimuli/placements or positions of other players or performers 2. (Narrow) Focus or concentrate on very few stimuli/concentrate on small amount of information 3. (External) Focus or concentrate on outside/environmental factors 4. (Internal) Focus or concentrate on themselves/affective responses/emotions/own thoughts/strategies or tactics Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when	stimuli/placements or positions of other players or performers 2. (Narrow) Focus or concentrate on very few stimuli/concentrate on small amount of information 3. (External) Focus or concentrate on outside/environmental factors Focus or concentrate on themselves/affective responses/emotions/own thoughts/strategies or tactics Fractical examples of Broad and Internal (sub max 2): Factical examples of Broad and Internal (sub max 2): Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when attempting a serve with slice.	(b)	Description of styles	(sub max 4):	6	Sub max 4 for
2. (Narrow) Focus or concentrate on very few stimuli/concentrate on small amount of information 3. (External) Focus or concentrate on outside/environmental factors 4. (Internal) Focus or concentrate on themselves/affective responses/emotions/own thoughts/strategies or tactics Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when	2. (Narrow) Focus or concentrate on very few stimuli/concentrate on small amount of information 3. (External) Focus or concentrate on outside/environmental factors Focus or concentrate on themselves/affective responses/emotions/own thoughts/strategies or tactics Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when attempting a serve with slice.		1. (Broad)	Focus or concentrate on a lot of information or peripheral		descriptions of
of information 3. (External) Focus or concentrate on outside/environmental factors 4. (Internal) Focus or concentrate on themselves/affective responses/emotions/own thoughts/strategies or tactics Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when	of information 3. (External) Focus or concentrate on outside/environmental factors 4. (Internal) Focus or concentrate on themselves/affective responses/emotions/own thoughts/strategies or tactics Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when attempting a serve with slice.			stimuli/placements or positions of other players or performers		styles
3. (External) Focus or concentrate on outside/environmental factors 4. (Internal) Focus or concentrate on themselves/affective responses/emotions/own thoughts/strategies or tactics Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when	3. (External) Focus or concentrate on outside/environmental factors Focus or concentrate on themselves/affective responses/emotions/own thoughts/strategies or tactics Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when attempting a serve with slice.		2. (Narrow)			
4. (Internal) Focus or concentrate on themselves/affective responses/emotions/own thoughts/strategies or tactics Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when	4. (Internal) Focus or concentrate on themselves/affective responses/emotions/own thoughts/strategies or tactics Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when attempting a serve with slice.					Sub max 2 for
4. (Internal) Focus or concentrate on themselves/affective responses/emotions/own thoughts/strategies or tactics Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when	4. (Internal) Focus or concentrate on themselves/affective responses/emotions/own thoughts/strategies or tactics Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when attempting a serve with slice. Broad and Internal In		3. (External)	Focus or concentrate on outside/environmental factors		
Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when	Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when attempting a serve with slice.		4 (1 1 1)			
Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when	Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when attempting a serve with slice.		4. (Internal)	Focus or concentrate on themselves/affective		Broad and
Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when	Practical examples of Broad and Internal (sub max 2): 5. (Broad Eg) Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick 6. (Internal Eg) Eg a tennis player realises that she does not feel confident when attempting a serve with slice.					Internal
6. (Internal Eg) Eg a tennis player realises that she does not feel confident when	6. (Internal Eg) Eg a tennis player realises that she does not feel confident when attempting a serve with slice.		Practical examples o			Internal If combined then look for
	attempting a serve with slice.			f Broad and Internal (sub max 2): Eg football player looks up for pass to a number of possible		If combined
	Eg planning the tactics for the free kick			f Broad and Internal (sub max 2): Eg football player looks up for pass to a number of possible teammates but still has ball under control		If combined then look for equivalent to
Eg planning the tactics for the free kick			5. (Broad Eg)	Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick Eg a tennis player realises that she does not feel confident when attempting a serve with slice.		If combined then look for equivalent to
			5. (Broad Eg)	Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick Eg a tennis player realises that she does not feel confident when attempting a serve with slice.		If combined then look for equivalent to
			5. (Broad Eg)	Eg football player looks up for pass to a number of possible teammates but still has ball under control eg tactics for a free kick Eg a tennis player realises that she does not feel confident when attempting a serve with slice.		If combined then look for equivalent to

Question		Answer	Marks	Guidance
(c)	5 marks for 5 from:		5	
	1. (Acceptance/belonging)	To be accepted/behaviour can follow that of others to seek acceptance or a sense of belonging to a group (which can lead to positive or negative lifestyle behaviours) or you make more friends giving a sense of belonging or well-being		
	2. (Norms/pressure/conformity)	Influence of group norms/pressure from others in the group or pressure to conform to follow a certain lifestyle or way of behaving (positive or negative)		
	3. (values)	The values of the group may be adopted which may lead to positive or negative lifestyle behaviour		
	4. (positive/negative – motivation)	Can motivate/encourage you to follow an active and healthy lifestyle or not to follow an active and healthy lifestyle		
	5. (confidence)	Confidence can be increased with the presence of others in the group or it may be decreased (leading to social loafing)		
	6. (social loafing)	Individuals may not make as much effort as others in the group/have lower motivation.		
	7. (aggression/assertion)	Assertion may increase when in a group/aggression		
	8. (deindividuation – loss of being an individual)	Deindividuation/loss of sense of being an individual/lose sense of identity can occur when in a group which can lead to dysfunctional/anti-social/unhealthy behaviour		
	9. (able to identify with others)	Increased sense of group identity can lead to positive or negative lifestyle behaviour		
	10. (prejudice)	Being part of a group can make you more prejudiced against other individuals/groups / the In-group Out-group effect		
	11. (leaders)	Leaders in the group can influence behaviour (positive or negative effects) / become a leader / role model yourself to influence a healthy lifestyle		
	12. (creativity)	Creativity can increase because of dynamic features of being in a group or creativity can be diminished because of the influences to conform		

(d)*	
Levels Descriptors	Levels Discriminators
Level 4 (18 – 20 marks) A comprehensive answer: • detailed knowledge & excellent understanding • detailed analysis and excellent critical evaluation • well-argued, independent opinion and judgements which are well supported by relevant practical examples • very accurate use of technical and specialist vocabulary • high standard of written communication throughout. Level 3 (13 - 17 marks) A competent answer: • good knowledge and clear understanding • good analysis and critical evaluation • independent opinions and judgements will be present but may not always be supported by relevant practical examples • generally accurate use of technical and specialist vocabulary • written communication is generally fluent with few errors.	 Discriminators at Level 4 are likely to include: detailed knowledge and excellent understanding of all three theories of leadership detailed analysis and excellent critical evaluation of all three leadership theories both positive and negative aspects of theories are explored well detailed knowledge of both leadership styles (described in detail) effectively applied to lifestyle behaviour a well structured, balanced answer. Discriminators at Level 3 are likely to include: good knowledge and clear understanding of the three theories of leadership all three leadership theories analysed with a good attempt at critical evaluation for at least one theory both positive and negative aspects of theories explored for at least one theory good knowledge of both leadership styles (clearly described) with a good attempt at addressing how they affect lifestyle behaviour all aspects of the question attempted competently a competently structured, balanced answer
Level 2 (8 - 12 marks) A limited answer: Imited knowledge and understanding some evidence of analysis and critical evaluation opinion and judgement given but often unsupported by relevant practical examples technical and specialist vocabulary used with limited success written communication lacks fluency and contains errors.	 Discriminators at Level 2 <u>are likely</u> to include: at least two theories explained with evidence of at least one being critically evaluated perhaps with limited success at least one style described with limited reference to how it might affect lifestyle behaviour or at the bottom of this level with some reference to sport alone
Level 1 (0 - 7 marks) A basic answer: • basic knowledge and little understanding • little relevant analysis or critical evaluation • little or no attempt to give opinion or judgement • little or no attempt to use technical and specialist vocabulary • errors in written communication will be intrusive. [0 marks] No response or no response worthy of credit.	At Level 1 candidates <u>are likely</u> to: show basic knowledge and understanding of theories of leadership describe leadership theories rather than critically evaluate leadership styles described but with little reference to how they might affect lifestyle behaviour

	Answer	Marks	Guidanc
Indicative Content:		20	
Traits of leadership	 Innate/genetically determined. Great man theory/males more predetermined towards leadership (Male dominance disputed because females make just as good 		
2. Traits of leadership	Stable/enduring characteristics • Unchanging in all/many situations		
3. Traits of leadership	Traits are behaviours that are pre-determined • rather than learned Examples of traits eg confidence/assertion/interpersonal skills		
4. Traits of leadership	Leadership influence may be affected positively or negatively by your innate personality characteristics • Examples eg extroversion may help with leadership or (trait) confidence		
5. Traits of leadership (negative view)	 This is an unsuccessful theory because leaders do not show leadership traits at all times. Many leaders do not show leadership characteristics unless a situation demands it / does not take into account the environment Many leaders do not show leadership characteristics unless others are present to be copied or influences are present Females just as able to become leaders 		
6. Social learning	(Bandura) - We observe and copy behaviour.		
7. Social learning	Learn leadership through copying significant others/role models In sport this may be the copying the most successful/high profile leaders Practical examples eg a captain of a football team may copy the		
	 Traits of leadership Traits of leadership Traits of leadership Traits of leadership Traits of leadership (negative view) Social learning 	1. Traits of leadership Innate/genetically determined. Great man theory/males more predetermined towards leadership (Male dominance disputed because females make just as good leaders or there are examples of female leaders) Stable/enduring characteristics Unchanging in all/many situations Leaders will not lose their influence over time Traits of leadership Traits are behaviours that are pre-determined Examples of traits eg confidence/assertion/interpersonal skills Leadership influence may be affected positively or negatively by your innate personality characteristics Examples eg extroversion may help with leadership or (trait) confidence This is an unsuccessful theory because leaders do not show leadership traits at all times. Many leaders do not show leadership characteristics unless a situation demands it / does not take into account the environment Many leaders do not show leadership characteristics unless others are present to be copied or influences are present Females just as able to become leaders Gandura We observe and copy behaviour. Reinforcement of leader behaviour a key feature Learn leadership through copying significant others/role models In sport this may be the copying the most successful/high profile leaders	Indicative Content: 1. Traits of leadership

Question		Answer	Marks	Guidance
	8. Social learning (negative view)	Not a successful theory because different people exposed to the same role models do not all display leadership characteristics Importance of situational/environmental factors makes this theory invalid / it ignores inherited traits Practical examples eg the aggression of a well-respected captain may not be copied by all the players in the team.		
	9. Interactionist	Interaction of traits with the environment or traits can be triggered by environmental factors • Practical example of the environment triggering certain leadership behaviour traits (eg danger might illicit autocratic style)		
	10. Interactionist	In sport you may show leadership traits because the situation demands that you are Examples eg in a rugby match you show leadership because the aim is to win Leadership performance may be affected positively or negatively depending how the performer perceives the requirements of the situation		
	11. Interactionist (Negative view)	Does not take into account those that are predictable / consistent in their behaviours or those who are natural (born) leaders in every situation. • Eg a school pupil is the Head Boy and captain of the school rugby team and leads an exercise class		

Question		Answer	Marks	Guidance
	Description of autocrati	C:		
	12. (Autocratic)	Autocratic is task oriented gets job done or the task is the most important good when there is little time/time is short practical example		
	13. (Autocratic)	Can be authoritarian or disciplinarian not bothered about personal consequences or personal relationships / not sharing decisions. practical example		
	Autocratic affects lifesty			
	14. (Autocratic – affect lifestyle)	 Will have a strong message to influence (positively or negatively) seems confident leadership decisions must be right because of conviction/tone 		
	15. (Autocratic – affect lifestyle)	 May be intimidated into following leader fear of not conforming practical example eg you don't like being shouted at so you don't exercise 		
	16. (Autocratic – affect lifestyle)	Novices more likely to be influenced		
	17. (Autocratic – affect lifestyle)	Males more likely to be influenced males respond better to authoritarian behaviour some dispute over this research because some females also respond well to autocratic		

Question		Answer	Marks	Guidance
	18. (Autocratic – affect lifestyle)	Good for large groups need for control/discipline practical example		
	19. (Autocratic – affect lifestyle)	Good for hostile groups or dangerous situations • need to establish/maintain discipline/authority		
	Democratic characteristi	ics:		
	20. (Democratic)	 Democratic is person orientated concerned with keeping good personal relations/getting on with the group. when there is time available practical example 		
	21. (Democratic)	Decisions are shared		
	Democratic affects lifest	vle behaviour:		
	22. (Democratic – affect lifestyle)	4		
	23. (Democratic – affect lifestyle)			
	24. (Democratic – affect lifestyle)			

G453 Mark Scheme January 2012

Question		Answer	Marks	Guidance
	25. (Democratic – affect lifestyle)	 Females more likely to respond positively females tend to want to contribute more or are better at interpersonal communication/ relations some dispute over this because many males display these characteristics 		
	26. (Democratic – affect lifestyle	Good for friendly or positive groups/individuals more likely for such people to want to contribute to decisions		

Section B Biomechanics (Option B2)

Q	uesti	on			Answer	Marks	Guidance
4	(a)		3 m	narks in tot	tal	3	
			1.	(Axis of rotation)	Transverse		
			2.	(formula)	angular velocity/ ω = angular distance/displacement/ θ Time/t or		
					ω = <u>6</u> 0.5		
			3.	(answer)	12 rad/s or rads ⁻¹ (units must be correct)		

Question		Answer	Marks	Guidance
(b)	Graph (sub max 2):		6	Sub max 2 for graph
	FORCE			Sub max 4
	1 1	No follow through.		for effects
		Follow through.		
		TIME		
	1. (axes)	Force and time labelled on correct axes and non follow through curve		
	2. (follow through)	Follow through curve as an extension to original curve		
	Effects (sub max 4):	·		
	3. (time)	Increases time that force is applied		
1 1	4. (impulse)	Increases impulse acting on ball		
	- (impulse)			
	5. (momentum)	Increases momentum of ball		
		Increases momentum of ball Increases velocity of/distance travelled by ball	_	

Question		Answer	Marks	Guidance
(c)	Explanation (sub n	nax 5):	6	Sub max 5 for explanation
	1. (aerofoil)	Discus is an aerofoil shape		Sub max 2 for effects
	2. (angle of attack)	Takes on an appropriate angle of attack to the direction of motion		
	3. (distance)	Air has to travel further over the top of the discus		
	4. (speed)	Air travels faster over the top of the discus		
	5. (low pressure)	This creates a low pressure area on top of the discus		
	6. (Bernoulli)	Called the Bernoulli principle		
	7. (pressure gradient)	Air tries to move from high to low pressure (creating the lift force)	•	
	Effects (sub max 2	r):		
	8. (non parabolic)	Makes flight path non parabolic/asymmetrical		
	9. (distance)	Lengthens flight path/discus travels further / is in air for longer		

(d)*	
Levels Descriptors	Levels Discriminators
Level 4 (18 – 20 marks) A comprehensive answer: • detailed knowledge & excellent understanding • detailed analysis and excellent critical evaluation • well-argued, independent opinion and judgements which are well supported by relevant practical examples • very accurate use of technical and specialist vocabulary • high standard of written communication throughout. Level 3 (13 - 17 marks) A competent answer: • good knowledge and clear understanding • good analysis and critical evaluation • independent opinions and judgements will be present but may not always be supported by relevant practical examples • generally accurate use of technical and specialist vocabulary • written communication is generally fluent with few errors.	Discriminators at Level 4 are likely to include: detailed understanding of balanced and unbalanced forces detailed application of concepts to vertical and horizontal directions detailed analysis accurate and clear use of free body diagrams to illustrate analysis relevant sporting examples throughout the answer very accurate use of technical language throughout the answer a well structured, balanced answer Discriminators at Level 3 are likely to include: good knowledge and understanding of both balanced and unbalanced forces good application of concepts to both horizontal and vertical directions but answer may not always include the effect of the combination of forces good analysis free body diagrams are clear and used throughout the answer; at the lower end of this level the diagrams may be inaccurate some sporting examples used generally accurate use of technical language a competently structured, balanced answer
Level 2 (8 - 12 marks) A limited answer: Imited knowledge and understanding some evidence of analysis and critical evaluation opinion and judgement given but often unsupported by relevant practical examples technical and specialist vocabulary used with limited success written communication lacks fluency and contains errors. Level 1 (0 - 7 marks) A basic answer: basic knowledge and little understanding little relevant analysis or critical evaluation little or no attempt to give opinion or judgement little or no attempt to use technical and specialist vocabulary errors in written communication will be intrusive. [0 marks] No response or no response worthy of credit.	Discriminators at Level 2 are likely to include: Iimited knowledge of either balanced or unbalanced forces concepts applied to either horizontal or vertical directions but answers may not always include the correct forces Iimited attempt at analysis free body diagrams attempted but there are likely to be inaccuracies free body diagrams attempted but are likely to be inaccurate an attempt at a sporting example Iimited success in respect of the use of correct technical language At Level 1 candidates are likely to: show basic knowledge and understanding of either balanced or unbalanced forces describe rather than analyse show little or no identification of vertical or horizontal forces make an attempt at a free body diagram

Question		Answer	Marks	Guidance
(d)*	Indicative Content:		20	
	Balanced forces:			
	1. (net force)	Net/resultant force is zero		
		forces cancel each other out		
		equal in size but opposite in direction		
	2. (stationary)	Body will remain stationary		
		Eg rugby scrum		
	3. (constant velocity)	Body will move with constant velocity/no acceleration		
		Eg marathon runner		
	Vertical:			
	4. (RF = W)	Reaction force = weight		
		• net vertical force = 0		
		weight and reaction cancel each other out		
		(a = 0)		
		No acceleration in vertical direction		
		Eg quadriceps stretch when standing up		

Question		Answer	Marks	Guidance
	5. (Free body diagram)	 (Free body diagram) Weight acting downwards from centre of mass Reaction force acting upwards from point of contact and equal in length to weight 		
	Horizontal: 6. (AR = F)	Air resistance = friction/forward force • net horizontal force = 0 • AR and friction/force cancel out		
	7. (a = 0)	No acceleration in horizontal direction • Eg swimmer/runner moving with constant speed		
	8. (Free body diagram)	 (Free body diagram) Air resistance acting from CM opposite direction of motion friction/force acting from point of contact and equal in length to AR 		

Question	Answer	Marks	Guidance
	AR Prochon AR Froichon		
	Unbalanced forces: 9. (net force) Net/resultant force does not equal zero • force acting in one direction on a body is greater in size than the force acting in the opposite direction 10. (acceleration) Body will accelerate • in direction of net force • Eg Rugby ball when being kicked		
	Vertical: 11. (RF>W) Reaction force > weight net upwards force upwards acceleration Eg high jumper at take off		

Question		Answer	Marks	Guidance
	12. (free body diagram)	 (Free body diagram) Weight acting downwards from CM RF acting upwards from feet but longer than Weight 		
	13. (RF <w)< td=""><td>Reaction force < weight</td><td></td><td></td></w)<>	Reaction force < weight		

Question	Answer	Marks	Guidance
	14. (Free body diagram) • Weight acting downwards from CM • Reaction force acting upwards from feet reaction force at all	t smaller than Weight/No	
	Horizontal:		
	15. (F>AR) Friction/force > Air resistance/fluid friction net forwards force forward acceleration Eg sprint start.		

Question		Answer	Marks	Guidance
	16. (Free body diagram)	 (Free body diagram) Friction/force acting from feet parallel to surface Air resistance acting from CM opposite direction of motion and smaller than friction Direction of Mohord AR Fraction Fraction		
	17. (F <ar)< td=""><td>Friction/force < Air resistance/fluid friction net backwards force deceleration/negative acceleration Eg any braking/changing direction</td><td></td><td></td></ar)<>	Friction/force < Air resistance/fluid friction net backwards force deceleration/negative acceleration Eg any braking/changing direction		

Question		Answer	Marks	Guidance
	18. (Free body diagram)	 (Free body diagram) Friction/force < or in same direction as AR AR acting from CM opposite direction of motion and larger than friction 		
		Ocception of Motion		
		AR XF		
		> F/Frichwin		

Section B Exercise and Sport Physiology (Option B3)

C	Question		Answer			Guidance
5	(a)		4 mark	s for 4 of:	4	
			1.	Glucose/Carbohydrate (Fuel) / glycogen		
			2.	Broken down into/Converted into Pyruvic Acid		
			3.	By the enzyme Phosphofructokinase (PFK)		
			4.	In the absence of oxygen/anaerobically		
			5.	Re synthesises 2 ATP's		
			6.	Glycogen can be converted into glucose		
			7.	Via the enzyme Glycogen Phosphorylase (GPP)		
			8.	Pyruvic acid converted to lactic acid via lactate dehydrogenase		
	(b)		Calcul	ation (sub max 2):	5	Sub max 2 for calculation
			1.	80		
				4		Sub max 3 for effects
			2.	20 (kg/m ⁻² /BMI)		
		Effects (sub max 3):				
			3.	Increased risk of injury		
			4.	More load bearing on joints joint pain		
			5.	Decreased (joint) flexibility/mobility		
			6.	Likely to tire/suffer fatigue more quickly		
			7.	Long term stress on the cardio vascular/respiratory system may		
				make exercise dangerous / may be better doing low-impact		
				activities		
			8.	Ought to seek medical advice before embarking upon any		
				exercise regime		
			9.	May not wish to get involved in exercise because of the potential		
				for ridicule / lack of confidence		

Question		Answer	Marks	Guidance			
(c)	Physio	logical factors (sub max 2):	6	Sub max 2 for physiological factors			
	1.	Muscle size/cross sectional area (of the muscle)					
	2. Muscle fibre type or % of fast/slow twitch fibres (in the muscle)			Sub max 4 for plyometrics training			
	3.	Amount of strength training undertaken resulting in hypertrophy					
		of muscle (slightly different from pt 1)					
	4.	Physical inactivity (due to injury) resulting in reversibility/atrophy					
		of muscle					
	5.	Amount of testosterone in the body					
	6.	Joint angle – weakest point in a range of movement is relative to					
		the angle of the joint					
	7.	Muscle shape Eg multipennate					
	8.	Doesn't require complicated equipment / bounding / depth jumping					
		etrics training (sub max 4):					
		7 1 0					
	9.	Recruiting more motor units/muscle fibres (to increase force of					
	10.	contraction) / converting eccentric work to concentric work					
	10.	Important to consider the principles of moderation/overload/warm up/cool down					
	11.						
	' ' '	Most plyometric exercises are associated with the lower leg/but the principle can be applied to all skeletal muscle					
	12.	More beneficial for athletes who perform explosive movements					
	13.	There's a decreased risk of injury during competition if					
	13.	undergone plyometrics training					
	14.	Good pre strength training is required before undertake					
	14.	plyometrics/not appropriate for sedentary individual or novice as					
		can carry an increased risk of injury					

(d)*	
Levels Descriptors	Levels Discriminators
Level 4 (18 – 20 marks) A comprehensive answer: detailed knowledge & excellent understanding detailed analysis and excellent critical evaluation well-argued, independent opinion and judgements which are well supported by relevant practical examples very accurate use of technical and specialist vocabulary high standard of written communication throughout.	Discriminators at Level 4 are likely to include: detailed knowledge and excellent understanding of a wide range of ergogenic aids comprehensive coverage of possible benefits to the athlete, demonstrating thorough understanding of the physiological effects upon the body comprehensive coverage of harmful side effects excellent understanding of legal status. detailed analysis and excellent critical evaluation of a wide range of ergogenic aids
 Level 3 (13 - 17 marks) A competent answer: good knowledge and clear understanding good analysis and critical evaluation independent opinions and judgements will be present but may not always be supported by relevant practical examples generally accurate use of technical and specialist vocabulary written communication is generally fluent with few errors. 	Discriminators at Level 3 are likely to include: good knowledge and clear understanding of a range of ergogenic aids good coverage of possible benefits to the athlete, demonstrating good understanding of the physiological effects upon the body good coverage of harmful side effects good understanding of legal status. good analysis and critical evaluation of a range of ergogenic aids
Level 2 (8 - 12 marks) A limited answer: Imited knowledge and understanding some evidence of analysis and critical evaluation opinion and judgement given but often unsupported by relevant practical examples technical and specialist vocabulary used with limited success written communication lacks fluency and contains errors.	 Discriminators at Level 2 are likely to include: limited knowledge and understanding of a limited range of ergogenic aids limited understanding of both positive and negative effects on the body limited understanding of the legality issues. some evidence of analysis and critical evaluation at the top end of this level although description is likely to be widespread
Level 1 (0 - 7 marks) A basic answer: basic knowledge and little understanding little relevant analysis or critical evaluation little or no attempt to give opinion or judgement little or no attempt to use technical and specialist vocabulary errors in written communication will be intrusive. [0 marks] No response or no response worthy of credit.	At Level 1 candidates are likely to: show basic knowledge of ergogenic aids show little or no knowledge of effects on body have no reference to legality issues describe rather than analyse/evaluate

Question			Answer			Marks	Guidance
(d)*	Indi	cative Content:				20	
	1.		nic aids with improvements in around a long time (Eg Gre		6)		
	2.	World Anti Doping Agend lists of banned/illegal erg varies from one column.	cy (WADA)/national & interna ogenic aids and codes of pra	ational governing bodies of actice			
	3.	New "masking" drugs hid	e the use of banned substar n mask – helping to flush ste	nces	e body via the		
		Ergogenic aid	Possible benefit/advantage to performer	Possible harmful side effects	Legal status		
	Die	etary Manipulation					
	4.	Carb loading	Increase body glycogen stores/helps delay fatigue	May cause gastro problems	Legal		
	5.	Pre/Competition day meal	Carb rich meal 2-4 hrs before event can help top up glycogen stores	May cause rebound hypoglycaemia if eaten too close to an events (chocolate 5mins before wont cause this)	• Legal		
	6.	Food/fluid intake during event (hypotonic & hypertonic drinks)	Replenishes glycogen stores/reduces risk of dehydration /prevents increase in body temperature (and possibility of heat exhaustion) /delays fatigue	 Bloated stomach Dilute sodium levels in blood leading to fatigue 	Legal		

Question	Answer						Guidance
	7.	Post competition meal/fluid intake (hypertonic drinks)	First 2 hours body most receptive to carb reloading	Possible conversion of carbs to fats			
	8.	Creatine supplements	 Increase PC levels in body/improves efficiency of ATP/PC energy system 	Relatively new ergo aid and long term effects yet to be seen	• Legal		
	9.	Human growth Hormone (HGH) • Can be synthetically increased or increased via diet, sleep & exercise – a healthy lifestyle	Stimulates bone, cartilage and muscle growth (therefore enhances healing process after injury)/ increases muscle mass and strength/ increases blood glucose levels/ increases lipases/decreases overall body fat	Synthetic increase can cause joint pain/arthritis/ abnormal heart/liver growth/ muscle weakness/ increased blood fats/ glucose intolerance/ diabetes/ impotence/ hypertension	Illegal/ Banned if synthetically increased		
	10.	Gene doping	Could produce a genetically engineered super athlete / increased red blood cells / increased muscle mass	Still very early days of research/ mainly used to treat people who have medical ailments not to enhance performance	Illegal/ Banned if synthetically increased		

Question			Marks	Guidance			
	11	Blood doping	Increases total volume of red blood cells/increases oxygen carrying capacity	Increased risk of blood clots/thickening of blood	 Illegal/ Banned Athletes have different natural levels so can be difficult to tell altitude training isn't though 		
	12	Recombinant Erythropoietin (Rh EPO)	Can artificially increase red blood cell production	Reduces natural production of EPO /Increased risk of blood clots/thickening of blood	• Illegal		
	Coo	ling aids/ice baths		,			
	13	Pre cooling (eg ice jacket)	Reduces body core temperature/ particularly useful before prolonged exercise in high temperatures/ maintains intensity and speed of performance	Can cause unwanted cardio vascular responses/ reduced heart rate/difficult to perceive own exertion levels at start of exercise in first 15 mins when ice removed	• Legal		
	14	Post cooling eg ice wraps/ice baths)	 Reduces swelling and blood leaking into the tissues/aid treatment of injuries/helps remove lactic acid/when out of ice capillaries flush tissues with fresh blood/ 	Some find ice very painful/can cause angina pain if coronary arteries constricted/ may hide more serious injuries/	Legal		

Question			Marks	Guidance			
			reduce muscle damage/ decrease DOMS	increases blood pressure/ (older people) may suffer decreased efficiency of vasoconstric tion/ice burns if held on skin too long			
	15	Resistance aids/pulleys/ parachutes	Provide variety and fun/thought to be more useful than weight training in sitting or standing position / increase on overload while maintaining correct technique	Technique employed with device may be different from real technique	Legal		
	16	Alcohol	No real benefit/carb is small store of energy/can calm nerves/build confidence	Depressant in long term/can impede motor performance/slow reaction time	Legal/but can be illegal in some sports		
	17	Caffeine	Stimulates CNS/acts as a stimulant/ increases alertness/ decreases reaction time/increases breakdown of FFA's (saves important glycogen stores)/lowers perception of effort	Acts as a diuretic and can cause dehydration/ therefore causing heat regulation problems	Legal but there is a limit (of 7 - 8 strong cups of coffee)		
	18	Anabolic steroids	Promotes increase in muscle mass/aid muscle repair	Many caused by synthetically inducing these unnaturally high levels of	Illegal/banned		

Question	Answer						Guidance
				testosterone			
	19	Analgesics/anti- inflammatory agents (cortisone, aspirin, ibuprofen)	Mask pain and allow them to continue training/ performing	Can cause further injuries	Legal		
	20	Soda loading	 Neutralises blood acidity Quicker removal of lactic acid Greater strength / endurance 	Vomiting / diarrhoea	• Legal		

OCR (Oxford Cambridge and RSA Examinations) 1 Hills Road Cambridge **CB1 2EU**

OCR Customer Contact Centre

Education and Learning

Telephone: 01223 553998 Facsimile: 01223 552627

Email: general.qualifications@ocr.org.uk

www.ocr.org.uk

For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored

Oxford Cambridge and RSA Examinations is a Company Limited by Guarantee Registered in England Registered Office; 1 Hills Road, Cambridge, CB1 2EU Registered Company Number: 3484466 **OCR** is an exempt Charity

OCR (Oxford Cambridge and RSA Examinations) Head office

Telephone: 01223 552552 Facsimile: 01223 552553



