

GCE

Physical Education

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

Advanced GCE

Mark Scheme for June 2015

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, Cambridge Nationals, Cambridge Technicals, 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 2015

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

Annotation	Meaning
✓	= Correct response
BOD	= Benefit of the doubt
REP	= Repeat
TV	= Too Vague
DEV	= Development (levels scheme)
SEEN	= Noted but no credit given
L1	= Level 1 (levels scheme)
L2	= Level 2 (levels scheme)
L3	= Level 3 (levels scheme)
L4	= Level 4 (levels scheme)
EG	= Practical example (levels scheme)
S	= Sub max

Subject-specific Marking Instructions

Marking responses ‘a – c’; points marked questions

An element of professional judgement is required in the marking of G453. 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 or e-mail.

Marking response ‘d’; levels of response marked question

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

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

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

Approach to marking levels of response questions:

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

Section A - Historical Studies (Option A1)

Question		Answer	Marks	Guidance																												
1	(a)	<p>4 marks for 4 of:</p> <p>Objectives of 1933 syllabus (sub max 3)</p> <table border="1"> <tr> <td>1. (fitness/health)</td> <td>Physical fitness/strengthening or health or therapeutic benefits</td> </tr> <tr> <td>2. (skills)</td> <td>Acquiring skills</td> </tr> <tr> <td>3. (physique)</td> <td>Physique development / improving physique</td> </tr> <tr> <td>4. (posture)</td> <td>Development of (correct) posture</td> </tr> <tr> <td>5. (mind and body)</td> <td>Holistic development / development of mind and body</td> </tr> </table> <p>Reason why 1933 syllabus replaced in 1950s (sub max 1) Accept first answer only</p> <table border="1"> <tr> <td>6 (philosophy child centred)</td> <td>post war or 1950s were more idealistic times or changes in educational philosophy or a more child centred approach</td> </tr> <tr> <td>7 (welfare state)</td> <td>welfare state system (in 1950s) or improved standard of living or government provision for/ encouragement of health</td> </tr> <tr> <td>8 (creativity)</td> <td>more creative approach needed or need / desire for fewer prescriptive 'tables' or less prescriptive syllabus</td> </tr> <tr> <td>9 (skills)</td> <td>desire to develop cognitive / social skills or to develop problem solving</td> </tr> <tr> <td>10 (content)</td> <td>more varied content needed or 1933 too limited or dance influence</td> </tr> <tr> <td>11 (war/ re-building / provision)</td> <td>war time bombing created need for re-building programme or new schools built with new gymnasia or improved provision / facilities / equipment / apparatus / army assault courses or additions to playgrounds</td> </tr> <tr> <td>12 (teacher training)</td> <td>(By 1950s) better teaching or PE a profession or PE colleges training specialist teachers or need / desire for more autonomy for teachers</td> </tr> <tr> <td>13 (female)</td> <td>(By 1950) female PE teachers demanded a different / more child centred approach</td> </tr> <tr> <td>14 (social change)</td> <td>social change or more equal opportunity for all or (strict) class system being eroded</td> </tr> </table>	1. (fitness/health)	Physical fitness/strengthening or health or therapeutic benefits	2. (skills)	Acquiring skills	3. (physique)	Physique development / improving physique	4. (posture)	Development of (correct) posture	5. (mind and body)	Holistic development / development of mind and body	6 (philosophy child centred)	post war or 1950s were more idealistic times or changes in educational philosophy or a more child centred approach	7 (welfare state)	welfare state system (in 1950s) or improved standard of living or government provision for/ encouragement of health	8 (creativity)	more creative approach needed or need / desire for fewer prescriptive 'tables' or less prescriptive syllabus	9 (skills)	desire to develop cognitive / social skills or to develop problem solving	10 (content)	more varied content needed or 1933 too limited or dance influence	11 (war/ re-building / provision)	war time bombing created need for re-building programme or new schools built with new gymnasia or improved provision / facilities / equipment / apparatus / army assault courses or additions to playgrounds	12 (teacher training)	(By 1950s) better teaching or PE a profession or PE colleges training specialist teachers or need / desire for more autonomy for teachers	13 (female)	(By 1950) female PE teachers demanded a different / more child centred approach	14 (social change)	social change or more equal opportunity for all or (strict) class system being eroded	4	<p>Sub max 3 for objectives of 1933 syllabus</p> <p>Sub max 1 for reason for replacement Accept first answer only</p>
1. (fitness/health)	Physical fitness/strengthening or health or therapeutic benefits																															
2. (skills)	Acquiring skills																															
3. (physique)	Physique development / improving physique																															
4. (posture)	Development of (correct) posture																															
5. (mind and body)	Holistic development / development of mind and body																															
6 (philosophy child centred)	post war or 1950s were more idealistic times or changes in educational philosophy or a more child centred approach																															
7 (welfare state)	welfare state system (in 1950s) or improved standard of living or government provision for/ encouragement of health																															
8 (creativity)	more creative approach needed or need / desire for fewer prescriptive 'tables' or less prescriptive syllabus																															
9 (skills)	desire to develop cognitive / social skills or to develop problem solving																															
10 (content)	more varied content needed or 1933 too limited or dance influence																															
11 (war/ re-building / provision)	war time bombing created need for re-building programme or new schools built with new gymnasia or improved provision / facilities / equipment / apparatus / army assault courses or additions to playgrounds																															
12 (teacher training)	(By 1950s) better teaching or PE a profession or PE colleges training specialist teachers or need / desire for more autonomy for teachers																															
13 (female)	(By 1950) female PE teachers demanded a different / more child centred approach																															
14 (social change)	social change or more equal opportunity for all or (strict) class system being eroded																															

Question	Answer	Marks	Guidance																						
1 (b)	<p>5 marks for 5 of:</p> <p>Activities associated with community sports festivals (sub max 4)</p> <table border="1" data-bbox="360 347 1581 970"> <tr> <td>1. (races)</td> <td>pedestrian races or men's running races or smock races or women's races</td> </tr> <tr> <td>2. (other races or chases)</td> <td>chasing / catching pigs with a soaped tail or jumping in sacks or donkey riding races or wheelbarrow races or cheese rolling</td> </tr> <tr> <td>3. ('fighting')</td> <td>fencing or archery or stick fighting or cudgels or single sticks or backwording or jousting or shin kicking or wrestling or bare fist fights or prize fighting</td> </tr> <tr> <td>4. (baiting / blood sports)</td> <td>(hare) coursing where hares are pursued by hounds which chase by sight not by scent or dog or cock fighting where dogs / fighting cocks are put in 'ring' to the death or bear or badger baiting or other examples of baiting / blood sports</td> </tr> <tr> <td>5. (games)</td> <td>mob football / cricket</td> </tr> <tr> <td>6. (fun)</td> <td>'gurning' or grinning contests where contestants try to pull the funniest / ugliest face or jingling matches where some are blindfolded and while chasing the 'jingler' / whistling where contestants try to sing a tune while someone tries to make them laugh or climbing the greasy pole</td> </tr> <tr> <td>7. (other)</td> <td>(tea) drinking contests or swimming contests or frost fairs where any of above are pursued on frozen rivers or throwing activities / highland games</td> </tr> </table> <p>Pre-industrial activity adapted to athletics event in Public schools (sub max 1) Accept first answer only</p> <table border="1" data-bbox="360 1106 1581 1281"> <thead> <tr> <th>Pre-industrial activity:</th> <th>Adapted to:</th> </tr> </thead> <tbody> <tr> <td>8. Steeplechase (on horseback)</td> <td>...steeplechase or running / jumping over hedges (on foot) or cross country</td> </tr> <tr> <td>9. Fox hunting</td> <td>..hare and hounds or paper chase</td> </tr> <tr> <td>10. Pedestrianism</td> <td>..cross country or distance running</td> </tr> </tbody> </table>	1. (races)	pedestrian races or men's running races or smock races or women's races	2. (other races or chases)	chasing / catching pigs with a soaped tail or jumping in sacks or donkey riding races or wheelbarrow races or cheese rolling	3. ('fighting')	fencing or archery or stick fighting or cudgels or single sticks or backwording or jousting or shin kicking or wrestling or bare fist fights or prize fighting	4. (baiting / blood sports)	(hare) coursing where hares are pursued by hounds which chase by sight not by scent or dog or cock fighting where dogs / fighting cocks are put in 'ring' to the death or bear or badger baiting or other examples of baiting / blood sports	5. (games)	mob football / cricket	6. (fun)	'gurning' or grinning contests where contestants try to pull the funniest / ugliest face or jingling matches where some are blindfolded and while chasing the 'jingler' / whistling where contestants try to sing a tune while someone tries to make them laugh or climbing the greasy pole	7. (other)	(tea) drinking contests or swimming contests or frost fairs where any of above are pursued on frozen rivers or throwing activities / highland games	Pre-industrial activity:	Adapted to:	8. Steeplechase (on horseback)	...steeplechase or running / jumping over hedges (on foot) or cross country	9. Fox hunting	..hare and hounds or paper chase	10. Pedestrianism	..cross country or distance running	5	<p>Sub max 4 for activities associated with early community sports festivals</p> <p>Sub max 1 for adaptation</p> <p>Accept first answer only.</p> <p>Must have both pre-industrial activity AND athletics event to gain mark</p>
1. (races)	pedestrian races or men's running races or smock races or women's races																								
2. (other races or chases)	chasing / catching pigs with a soaped tail or jumping in sacks or donkey riding races or wheelbarrow races or cheese rolling																								
3. ('fighting')	fencing or archery or stick fighting or cudgels or single sticks or backwording or jousting or shin kicking or wrestling or bare fist fights or prize fighting																								
4. (baiting / blood sports)	(hare) coursing where hares are pursued by hounds which chase by sight not by scent or dog or cock fighting where dogs / fighting cocks are put in 'ring' to the death or bear or badger baiting or other examples of baiting / blood sports																								
5. (games)	mob football / cricket																								
6. (fun)	'gurning' or grinning contests where contestants try to pull the funniest / ugliest face or jingling matches where some are blindfolded and while chasing the 'jingler' / whistling where contestants try to sing a tune while someone tries to make them laugh or climbing the greasy pole																								
7. (other)	(tea) drinking contests or swimming contests or frost fairs where any of above are pursued on frozen rivers or throwing activities / highland games																								
Pre-industrial activity:	Adapted to:																								
8. Steeplechase (on horseback)	...steeplechase or running / jumping over hedges (on foot) or cross country																								
9. Fox hunting	..hare and hounds or paper chase																								
10. Pedestrianism	..cross country or distance running																								

Question	Answer	Mark	Guidance																								
1 (c)	<p>6 marks for 6 of: Football in stage one v stage three - technical development and values –Sub max 4 for either technical development or values</p> <table border="1" data-bbox="344 355 1352 1417"> <thead> <tr> <th colspan="3" data-bbox="344 355 1352 395">Technical Development:</th> </tr> <tr> <th data-bbox="344 395 584 427"></th> <th data-bbox="584 395 920 427">Stage one</th> <th data-bbox="920 395 1352 427">Stage three</th> </tr> </thead> <tbody> <tr> <td data-bbox="344 427 584 667">1. (facilities/ boundaries)</td> <td data-bbox="584 427 920 667">simple / natural facilities or e.g. the cloister at Charterhouse wall at Eton or no clear boundaries or pitch sizes or markings</td> <td data-bbox="920 427 1352 667">specialist football pitches or clear boundaries / pitch sizes / markings</td> </tr> <tr> <td data-bbox="344 667 584 767">2. (equipment)</td> <td data-bbox="584 667 920 767">simple / natural / non specialist equipment or 'jumpers' as posts</td> <td data-bbox="920 667 1352 767">specialist equipment or footballs / corner posts / goal posts or kit</td> </tr> <tr> <td data-bbox="344 767 584 1038">3. (rules)</td> <td data-bbox="584 767 920 1038">rules differed from school to school or simple / unwritten rules or rules passed from generation to generation or rules passed on by word of mouth</td> <td data-bbox="920 767 1352 1038">(much more) codified or structured or rule based or (increasing) use of NGB rules / FA rules</td> </tr> <tr> <td data-bbox="344 1038 584 1209">4.(spectators)</td> <td data-bbox="584 1038 920 1209">not a spectator attraction or if present assumed involved / playing</td> <td data-bbox="920 1038 1352 1209">spectator attraction or inter house / inter schools games for spectators or (some) provision for spectators</td> </tr> <tr> <td data-bbox="344 1209 584 1281">5 (skill)</td> <td data-bbox="584 1209 920 1281">more force than skill or violent / dangerous</td> <td data-bbox="920 1209 1352 1281">more skill than force or aggression channelled</td> </tr> <tr> <td data-bbox="344 1281 584 1417">6 (positions)</td> <td data-bbox="584 1281 920 1417">Large numbers or no designated positions</td> <td data-bbox="920 1281 1352 1417">Smaller numbers or specialist positions</td> </tr> </tbody> </table>	Technical Development:				Stage one	Stage three	1. (facilities/ boundaries)	simple / natural facilities or e.g. the cloister at Charterhouse wall at Eton or no clear boundaries or pitch sizes or markings	specialist football pitches or clear boundaries / pitch sizes / markings	2. (equipment)	simple / natural / non specialist equipment or 'jumpers' as posts	specialist equipment or footballs / corner posts / goal posts or kit	3. (rules)	rules differed from school to school or simple / unwritten rules or rules passed from generation to generation or rules passed on by word of mouth	(much more) codified or structured or rule based or (increasing) use of NGB rules / FA rules	4.(spectators)	not a spectator attraction or if present assumed involved / playing	spectator attraction or inter house / inter schools games for spectators or (some) provision for spectators	5 (skill)	more force than skill or violent / dangerous	more skill than force or aggression channelled	6 (positions)	Large numbers or no designated positions	Smaller numbers or specialist positions	6	<p>Accept opposites</p> <p>One mark for each technical development change up to sub max of four marks</p> <p>One mark for each value change up to sub max of four marks (Six marks max)</p> <p>Accept <i>direct</i> changes e.g. 'in stage 3 there was more skill than' or <i>inferred</i> changes eg specialised kit was introduced at stage 3.</p> <p>If a stage 2 development is given that is equivalent to stage 3 award the mark</p>
Technical Development:																											
	Stage one	Stage three																									
1. (facilities/ boundaries)	simple / natural facilities or e.g. the cloister at Charterhouse wall at Eton or no clear boundaries or pitch sizes or markings	specialist football pitches or clear boundaries / pitch sizes / markings																									
2. (equipment)	simple / natural / non specialist equipment or 'jumpers' as posts	specialist equipment or footballs / corner posts / goal posts or kit																									
3. (rules)	rules differed from school to school or simple / unwritten rules or rules passed from generation to generation or rules passed on by word of mouth	(much more) codified or structured or rule based or (increasing) use of NGB rules / FA rules																									
4.(spectators)	not a spectator attraction or if present assumed involved / playing	spectator attraction or inter house / inter schools games for spectators or (some) provision for spectators																									
5 (skill)	more force than skill or violent / dangerous	more skill than force or aggression channelled																									
6 (positions)	Large numbers or no designated positions	Smaller numbers or specialist positions																									

Question	Answer			Mark	Guidance
	Values: submax 4				Do not accept 'lack of' values for stage 1
		Stage one	Stage three		
	7 (benefit)	enjoyment / fun or relieve boredom or no social control	social control or keep everyone occupied or use up energy		
	8 (character)	not for character development	games played to develop character or leadership		
	9 (ethics)	'every man for himself' or lack of teamwork / individuality	Teamwork or respect for team mates / opposition or loyalty or support / look after team mates		
	10 (morals)	'anything goes' or violence or cheating or dishonesty	honesty or integrity or sportsmanship or fair play or other examples / moral behaviour in football		
	11 (respect)	lack of respect for opposition	respect for team mates / opposition		
	12 (health)	no health emphasis	health benefits or 'healthy mind and body'		

(d)* Levels of Response	
<p>Level 4 (18-20 marks) A comprehensive answer:</p> <ul style="list-style-type: none"> • 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. 	<p><u>At Level 4 answers are likely to show:</u></p> <ul style="list-style-type: none"> • detailed knowledge and excellent understanding of how increased free time and improved transport affected the emergence of rational recreations • detailed coverage of then and good coverage of now (today) • both free time and transport addressed with balance • a well structured answer
<p>Level 3 (13-17 marks) A competent answer:</p> <ul style="list-style-type: none"> • 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. 	<p><u>At Level 3 answers are likely to show:</u></p> <ul style="list-style-type: none"> • good knowledge and clear understanding of how increased free time and improved transport affected the emergence of rational recreations • good coverage of then and some coverage of now (today) • both free time and transport addressed, but not necessarily with balance • a competently structured answer
<p>Level 2 (8-12 marks) A limited answer:</p> <ul style="list-style-type: none"> • 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. 	<p><u>At Level 2 answers likely to show:</u></p> <ul style="list-style-type: none"> • limited knowledge and understanding of how increased free time and improved transport affected the emergence of rational recreations • at top of this level, some reference to now (today) – at bottom of this level ‘now’ may be omitted • an unbalanced approach but at the top end of this level both free time and transport addressed • attempt at structure
<p>Level 1 (0 – 7 marks) A basic answer:</p> <ul style="list-style-type: none"> • 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. 	<p><u>At Level 1 answers are likely to show:</u></p> <ul style="list-style-type: none"> • basic knowledge and understanding of how increased free time and improved transport affected the emergence of rational recreations • lack of reference to now / today • lack of balance or only free time or transport addressed • lack of structure

Question		Answer	Marks	Guidance
1	(d)*	<p>Impact of increased free time and improved transport on the emergence of rational recreations from 1850 to today Indicative Content:</p> <p>Background:</p> <p>1. Explanation that the first half of the century, (up to 1850), saw decline in opportunity and provision (for working class)</p> <ul style="list-style-type: none"> • migration of lower classes from rural to urban areas (for regular work or pay) • loss of space / poor health / poverty / poor working and living conditions. • a more structured lifestyle / 'machine time' (rather than 'seasonal' time) • 12 hour working day / 72 hour week / no time to 'play' <p>2. Increased free time and transport were crucial to the emergence of rational recreations from 1850 to today</p> <p>3. Accept reference, as background / introduction, to other influential socio-cultural factors e.g. urbanisation / improved provision or technology / income / class / media / literacy / law and order / church acceptance / public school influence / factory teams / business opportunities</p> <p>Increased free time:</p> <p>4. Because long working hours increasingly thought to be damaging to BAHL of workforce</p> <p>5. shorter working day</p> <ul style="list-style-type: none"> • 12 hour to 10 hour day / 72 to 60 hour week • more time 'to play' • more energy (after work) • improved BAHL of workforce <p>6. early closing movement</p> <ul style="list-style-type: none"> • series of Bills through parliament that sought to reduce working hours • particularly for shop workers • Wednesday half day for shop workers • e.g. Sheffield Wednesday FC • campaign for 8 hour day or 40 hour week <p>7. Saturday half day</p> <ul style="list-style-type: none"> • Ideal 'slot' for development • spectators 	20	<ul style="list-style-type: none"> • Give KU for <u>relevant</u> knowledge points (usually main headings) • Give DEV for <u>relevant</u> development points (usually bullet points) • Give EG for <u>relevant</u> practical examples • Always indicate the Level at the base of the answer (L1,L2, L3 or L4) • Do not be limited by the indicative content give credit for other relevant points or developments. • Do not give credit to irrelevant material

Question	Answer	Marks	Guidance
	e.g. football		
	8. (annual) week paid holiday <ul style="list-style-type: none"> Between 1870 – 1890 First to skilled, then semi-skilled, then unskilled 		
	9. seaside 'culture' developed e.g. Brighton <ul style="list-style-type: none"> linked to time and transport taking people to coast / excursion trips to seaside 		
	10. (annual) excursion trips <ul style="list-style-type: none"> provided by factory owner to increase productivity as genuine philanthropic gesture (lead to) increased loyalty of work force 		
	11. broken time payments <ul style="list-style-type: none"> compensation for players who could not afford to miss work (and pay) to play e.g. in Association Football or Rugby League 		
	12. professionalism <ul style="list-style-type: none"> a good opportunity or good job / chance to escape factory or urban deprivation / improved lifestyle and regular wages - but not security e.g. being a professional footballer 		
	Improved transport:		
	13. Invention / development of (steam) train travel <ul style="list-style-type: none"> train journey as enjoyable pastime in own right 		
	14. increased speed meant less time needed for travelling / increased speed meant you could travel further <ul style="list-style-type: none"> national or international travel travel to away matches 		
	15. (football) significance of third class tickets <ul style="list-style-type: none"> ...so working class could travel 		
	16. (football) spectators could travel to 'away' matches / they could support their teams more avidly <ul style="list-style-type: none"> less time need to get to 'away' matches increased regularity of matches 		
	17. (football) sporting heroes developed <ul style="list-style-type: none"> linked impact of newspapers or literacy or education or sporting press 		

Question	Answer	Marks	Guidance
	e.g. Bells Life		
	18. (football) leagues or cups or competitions established		
	19. standardised set of rules needed / codification needed <ul style="list-style-type: none"> ex public school boys (helped to) set up National Governing Bodies e.g. FA (1863)		
	Accept accurate reference and developments to impact of increased free time and/or transport on case studies and other rational recreations, for example:		
	20. athletics <ul style="list-style-type: none"> transport enabled athletics meets to become popular (summer) attractions <i>Deerfoot</i> (American Indian) able to travel to UK spectators could travel to watch either of above 		
	21. cricket <ul style="list-style-type: none"> reference to International travel impact on England v Australia matches reference to the Ashes mythology William Clarke as cricketing entrepreneur resultant business opportunities 		
	22. tennis <ul style="list-style-type: none"> establishment of Wimbledon competition travel by middle class to 'garden parties' / tennis as a social occasion 		
	Also:		
	23. horse racing <ul style="list-style-type: none"> horses transported to venues (instead of walking) so less tired ...so able to race more 		
	24. cycling <ul style="list-style-type: none"> people could 'get back to' or explore the countryside (having taken bicycles on trains) better roads in (late) 19th century lead to cycle road racing 		
	More recently/today – accept other relevant points		
	Increased free time:		
	25. impact of flexible free time through 'flexitime' at work		
	26. issues related to unemployment or redundancy or economic recession		
	27. But - impact of Sunday trading		

Question	Answer	Marks	Guidance
	<ul style="list-style-type: none"> Traditional holidays losing significance for sport 		
	28. But - high demands or long hours at work.		
	<ul style="list-style-type: none"> But - in contemporary society some are 'money rich but time poor.' 		
	Improved transport		
	29. variety of transport options e.g. cheap internal and European flights e.g. inter-city coach travel e.g. 'special' trains or flights or coaches for big matches e.g. helicopter use for some players or high earning spectators living distant from club		
	30. Increase in competitions <ul style="list-style-type: none"> Mid week matches Increase in international competitions 		
	31. But - increased petrol costs		
	32. But - increased road congestion		
	33. But - impact of closure of some inner city venues e.g. football / rugby		
	34. But - 'out of town' stadia – need for transport e.g. Reading or other suitable example		

Section A - Comparative Studies (Option A2)

Question		Answer	Marks	Guidance
2	(a)	<p>5 marks for 5 of: Popularity of Australian Rules Football in Australia</p> <p>1. (Australian) Adapted from Aboriginal game or links to indigenous population or links to heritage or distinctly Australian game or national pride</p> <p>2. (cricket) Links with cricket helped development or started as winter training game for cricketers or use of cricket pitches</p> <p>3. (People's game/ egalitarian) The People's Game or Populo Ludos Populi or appeals to all or inclusive game or opportunity for minority or ethnic group or game for players and spectators from all social backgrounds or suits / links with egalitarian culture or Aboriginals well represented or disproportionate number of Aboriginals at top level or supports notion of Australia as 'land of fair go'</p> <p>4. (frontierism) Reflection of bush culture/Australian culture or frontier / pioneering spirit or reflects need to work together in 'hostile environment' or manly image.</p> <p>5. (space) Plenty of space Or large open spaces throughout the country</p> <p>6. (National) Spread beyond roots in Victoria or played in all states or national competitions have helped spread the game</p> <p>7. (media/commercial) Wide media appeal or exciting to watch or good product for media or commercial breaks during games an opportunity for commercialism or highly commercialised(at top level) or opportunities for commercialism / business sponsorship</p>	5	

Question	Answer	Marks	Guidance
	8. (Draft)		
	8. (Draft) Draft system helps clubs the following season or gives low finishing clubs first opportunity to select the best players.		
	9. (fame/fortune)		
	9. (fame/fortune) Opportunity for fame or fortune for top players or influence of role models		
	10. (women)		
	10. (women) Promotion of female participation or governing bodies promote female participation or can be played by all body types.		
	11. (schools)		
	11. (schools) Played extensively in schools or played by boys and girls in school or focus on fair play in schools		
	12. (pathway to top)		
	12. (pathway to top) Extensive pathway programmes or opportunity for progression or ASC initiatives		
	13. (season)		
	13. (season) Long season or 8 month season or always at forefront of people's minds		

Question	Answer	Marks	Guidance	
(b)	<p>5 marks for 5 of:</p> <p>Outline of Australia cultural values (sub max 4)</p>	5	<p>Sub max 4 for Australia</p> <p>Do not accept identification of points such as 'bush culture' on their own.....an <i>impact</i> is required.</p>	
	1. (Bush culture)			(legacy of) bush culture which is showing determination / courage / persistence or culture of coping in a difficult environment.
	2. (Equality/democracy)			Australia as an egalitarian society therefore it is democratic or equal or social class and privilege are (allegedly) irrelevant or Australia as (allegedly) the land of the fair go therefore racism or discrimination does not exist o/ has been overcome or Australia is democratic therefore citizens are encouraged to be active in political / civic life / enjoy human rights or Australia is a country where laws and procedures apply equally to all citizens
	2. (Melting pot/Multi-culturalism)			Australia as a social melting pot which is a blend of different peoples / backgrounds / immigrants or Australia is (now) committed to multi-culturalism / is a multi-cultural society meaning that many / different races / ethnic groups / cultures exist together
	3. (Tradition)			Long tradition of involvement in sport with many sports adopted from Britain.
	4. (Fair play)			Fair play / sportsmanship / justice is respected / admired / is important to (the sporting ethos of) Australia
	5. (Teamwork)			Teamwork / co-operation / joint effort is respected / admired
	6. (Individuality)			Individuality / independence / self-reliance is respected / admired
	7. (Competitiveness)			Competitiveness / the desire to achieve / winning is important to many Australians
	8. (Participation)			Taking part in sport /physical activity is fashionable / high status / important for health
	9. (Political)			Government values participation in sport and have involvement in both policies and funding.
10. (Pride)	Australians have a view that sport is an expression of national pride			

Question	Answer	Marks	Guidance		
	<p data-bbox="327 217 1615 280">Describe how <u>one</u> of these values originates from Australia's historical relationship with UK (Sub max 1 mark)</p> <table border="1" data-bbox="327 316 1711 451"><tr><td data-bbox="327 316 607 451">11. (value)</td><td data-bbox="607 316 1711 451">Fair play / teamwork / competitiveness / participation / democracy from games culture of (nineteenth century) English public schools which was taken to and then copied in Australia</td></tr></table>	11. (value)	Fair play / teamwork / competitiveness / participation / democracy from games culture of (nineteenth century) English public schools which was taken to and then copied in Australia		
11. (value)	Fair play / teamwork / competitiveness / participation / democracy from games culture of (nineteenth century) English public schools which was taken to and then copied in Australia				

Question		Answer	Marks	Guidance																										
2	(c)	<p>5 marks for 5 of:</p> <p>Strategies to encourage mass participation in the USA. (sub max 3 from either section)</p> <table border="1"> <tr> <td>1.(Equality/Title IX)</td> <td>Title IX or equality of provision or equality of funding or adapted activities (for disability)</td> </tr> <tr> <td>2. (role models)</td> <td>Promotion of role models to encourage participation</td> </tr> <tr> <td>3. (community)</td> <td>Community provision or initiatives such as midnight leagues/ jogging clubs</td> </tr> <tr> <td>4. (named initiatives)</td> <td>Accept named contemporary community initiative/s eg Hook a Kid on golf</td> </tr> <tr> <td>5. (schools)</td> <td>Schools provide intra-mural sport or through PE programmes in schools</td> </tr> <tr> <td>6. (camps)</td> <td>(private / state) summer camps for physical activities / weight management</td> </tr> <tr> <td>7. (children's' leagues)</td> <td>little league or Pop Warner or Bidy basketball or Peewee baseball or other example of little league/community sports teams for children</td> </tr> <tr> <td>8. (facilities)</td> <td>availability of (private) gyms/gym at work/country clubs</td> </tr> </table> <p>Explanation of fewer opportunities in USA (sub max 3)</p> <table border="1"> <tr> <td>9.(club)</td> <td>Less community/club provision or community/taster days in USA limited to private clubs e.g. gym culture</td> </tr> <tr> <td>10.(mass participation)</td> <td>greater emphasis on excellence / winning in USA or USA selection by professional sport or scholarships in USA or more drop out in USA</td> </tr> <tr> <td>11.(money)</td> <td>High level sport more commercial in USA or money to be made from participation as well as spectatorism in UK</td> </tr> <tr> <td>12.(tradition)</td> <td>Tradition of participation in UK or tradition of spectatorism in USA or more common to watch than play in USA</td> </tr> <tr> <td>13.(initiatives)</td> <td>Government / school / NGB or other initiatives for participation and healthy lifestyles in UK or Home country council or target group work to increase participation in UK</td> </tr> </table>	1.(Equality/Title IX)	Title IX or equality of provision or equality of funding or adapted activities (for disability)	2. (role models)	Promotion of role models to encourage participation	3. (community)	Community provision or initiatives such as midnight leagues/ jogging clubs	4. (named initiatives)	Accept named contemporary community initiative/s eg Hook a Kid on golf	5. (schools)	Schools provide intra-mural sport or through PE programmes in schools	6. (camps)	(private / state) summer camps for physical activities / weight management	7. (children's' leagues)	little league or Pop Warner or Bidy basketball or Peewee baseball or other example of little league/community sports teams for children	8. (facilities)	availability of (private) gyms/gym at work/country clubs	9.(club)	Less community/club provision or community/taster days in USA limited to private clubs e.g. gym culture	10.(mass participation)	greater emphasis on excellence / winning in USA or USA selection by professional sport or scholarships in USA or more drop out in USA	11.(money)	High level sport more commercial in USA or money to be made from participation as well as spectatorism in UK	12.(tradition)	Tradition of participation in UK or tradition of spectatorism in USA or more common to watch than play in USA	13.(initiatives)	Government / school / NGB or other initiatives for participation and healthy lifestyles in UK or Home country council or target group work to increase participation in UK	5	<p>Sub max 3 for description of the strategies and provision</p> <p>Sub max 3 for explanation of fewer opportunities in the USA</p>
1.(Equality/Title IX)	Title IX or equality of provision or equality of funding or adapted activities (for disability)																													
2. (role models)	Promotion of role models to encourage participation																													
3. (community)	Community provision or initiatives such as midnight leagues/ jogging clubs																													
4. (named initiatives)	Accept named contemporary community initiative/s eg Hook a Kid on golf																													
5. (schools)	Schools provide intra-mural sport or through PE programmes in schools																													
6. (camps)	(private / state) summer camps for physical activities / weight management																													
7. (children's' leagues)	little league or Pop Warner or Bidy basketball or Peewee baseball or other example of little league/community sports teams for children																													
8. (facilities)	availability of (private) gyms/gym at work/country clubs																													
9.(club)	Less community/club provision or community/taster days in USA limited to private clubs e.g. gym culture																													
10.(mass participation)	greater emphasis on excellence / winning in USA or USA selection by professional sport or scholarships in USA or more drop out in USA																													
11.(money)	High level sport more commercial in USA or money to be made from participation as well as spectatorism in UK																													
12.(tradition)	Tradition of participation in UK or tradition of spectatorism in USA or more common to watch than play in USA																													
13.(initiatives)	Government / school / NGB or other initiatives for participation and healthy lifestyles in UK or Home country council or target group work to increase participation in UK																													

Question			Answer	Marks	Guidance
		14. (NC)	National curriculum for schools / exams in PE emphasise participation and BAHL in UK		
		15.(training)	Training opportunities via NGB / JSLA/ CSLA / HSLA		
		16.(mini games)	Mini versions of major games such as Kwik Cricket in UK		
		17.(funding)	Lottery funding or funding from government agencies/other organisation in UK		

(d)* Levels of Response	
<p>Level 4 (18-20 marks) A comprehensive answer:</p> <ul style="list-style-type: none"> • 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. 	<p><u>At Level 4 answers are likely to show:</u></p> <ul style="list-style-type: none"> • detailed knowledge and excellent understanding of many types of cultural factors that impact on excellence in sport in the USA and the UK. • Mostly direct comparisons of cultural factors • high quality independent opinion/judgement re the similarities and differences • a well-structured, balanced answer
<p>Level 3 (13-17 marks) A competent answer:</p> <ul style="list-style-type: none"> • 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. 	<p><u>At Level 3 answers are likely to show:</u></p> <ul style="list-style-type: none"> • good knowledge and clear understanding of several cultural factors that impact on excellence in the USA and the UK • some direct comparisons which show good knowledge of the cultural factors that influence sporting excellence. • some independent opinion/judgement re the similarities and differences • a competently structured, balanced answer
<p>Level 2 (8-12 marks) A limited answer:</p> <ul style="list-style-type: none"> • 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. 	<p><u>At Level 2 answers are likely to show:</u></p> <ul style="list-style-type: none"> • limited knowledge and understanding of a few cultural factors that impact on excellence in sport in the USA and the UK • some attempt at a comparison of the cultural factors • a description of cultural factors rather than a focus on the impact • have a basic structure and lack balance
<p>Level 1 (0 – 7 marks) A basic answer:</p> <ul style="list-style-type: none"> • 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. 	<p><u>At Level 1 answers are likely to show:</u></p> <ul style="list-style-type: none"> • show basic knowledge of very few cultural factors • make little or no attempt to compare the cultural factors • little description of the factors rather than focus on their impact on sporting excellence • lack structure and balance.

Question		Answer	Marks	Guidance																		
2	(d)*	<p>Indicative Content:</p> <p>Reference to question: Comparison of cultural factors impacting on excellence in sport in USA and UK. (historical, geographical, social, values)</p> <p>SIM = similarities between two systems</p> <p>DIFF = differences between two systems</p> <table border="1"> <thead> <tr> <th></th> <th>In USA</th> <th>In UK</th> </tr> </thead> <tbody> <tr> <td colspan="3">Historical factors</td> </tr> <tr> <td>1. (Pro/am)</td> <td> No tradition of amateurism <ul style="list-style-type: none"> Professionalism embraced in major sports </td> <td> DIFF: Tradition of amateurism <ul style="list-style-type: none"> Professionalism resisted by many sports e.g. rugby union Professionalism embraced in e.g. rugby league </td> </tr> <tr> <td>2. (Frontier spirit)</td> <td> Frontier spirit/pioneering spirit creates competitive drive <ul style="list-style-type: none"> Players as gladiators Legacy in team names e.g. forty niners </td> <td> DIFF: No frontier spirit <ul style="list-style-type: none"> But ...mob games encouraged physicality/physicality needed for success </td> </tr> <tr> <td>3. (Invention)</td> <td> Isolationist policy <ul style="list-style-type: none"> UK sports marginalised USA sports/'big four' promoted </td> <td> DIFF: Many sports invented/created in UK <ul style="list-style-type: none"> Colonialism/sports taken to USA UK tend to reflect on former glories </td> </tr> <tr> <td>4. (public schools)</td> <td> Limited tradition or influence of schools <ul style="list-style-type: none"> High school sport mimics pro game Win ethic promoted High status for elite performers </td> <td> DIFF: Influence of C19 public schools <ul style="list-style-type: none"> Importance of fair play Participation ethic/all rounder High status for games players </td> </tr> </tbody> </table>		In USA	In UK	Historical factors			1. (Pro/am)	No tradition of amateurism <ul style="list-style-type: none"> Professionalism embraced in major sports 	DIFF: Tradition of amateurism <ul style="list-style-type: none"> Professionalism resisted by many sports e.g. rugby union Professionalism embraced in e.g. rugby league 	2. (Frontier spirit)	Frontier spirit/pioneering spirit creates competitive drive <ul style="list-style-type: none"> Players as gladiators Legacy in team names e.g. forty niners 	DIFF: No frontier spirit <ul style="list-style-type: none"> But ...mob games encouraged physicality/physicality needed for success 	3. (Invention)	Isolationist policy <ul style="list-style-type: none"> UK sports marginalised USA sports/'big four' promoted 	DIFF: Many sports invented/created in UK <ul style="list-style-type: none"> Colonialism/sports taken to USA UK tend to reflect on former glories 	4. (public schools)	Limited tradition or influence of schools <ul style="list-style-type: none"> High school sport mimics pro game Win ethic promoted High status for elite performers 	DIFF: Influence of C19 public schools <ul style="list-style-type: none"> Importance of fair play Participation ethic/all rounder High status for games players 	20	<ul style="list-style-type: none"> Give KU for <u>relevant</u> knowledge points (usually main headings) If KU a comparison use highlight annotation Give DEV for <u>relevant</u> development points (usually bullet points) Give EG for <u>relevant</u> practical examples Always indicate the Level at the base of the answer (L1,L2, L3 or L4) Do not be limited by the indicative content give credit for other relevant points or developments.
	In USA	In UK																				
Historical factors																						
1. (Pro/am)	No tradition of amateurism <ul style="list-style-type: none"> Professionalism embraced in major sports 	DIFF: Tradition of amateurism <ul style="list-style-type: none"> Professionalism resisted by many sports e.g. rugby union Professionalism embraced in e.g. rugby league 																				
2. (Frontier spirit)	Frontier spirit/pioneering spirit creates competitive drive <ul style="list-style-type: none"> Players as gladiators Legacy in team names e.g. forty niners 	DIFF: No frontier spirit <ul style="list-style-type: none"> But ...mob games encouraged physicality/physicality needed for success 																				
3. (Invention)	Isolationist policy <ul style="list-style-type: none"> UK sports marginalised USA sports/'big four' promoted 	DIFF: Many sports invented/created in UK <ul style="list-style-type: none"> Colonialism/sports taken to USA UK tend to reflect on former glories 																				
4. (public schools)	Limited tradition or influence of schools <ul style="list-style-type: none"> High school sport mimics pro game Win ethic promoted High status for elite performers 	DIFF: Influence of C19 public schools <ul style="list-style-type: none"> Importance of fair play Participation ethic/all rounder High status for games players 																				

Question	Answer			Marks	Guidance
	Geographical factors				<ul style="list-style-type: none"> Do not give credit to irrelevant material
5. (Population)	Population over 300 million	<ul style="list-style-type: none"> Concept of large country aiming high Huge talent pool to draw from 	DIFF: Population approx 60 million <ul style="list-style-type: none"> Concept of small country aiming low Smaller talent pool available 		
	Political factors				
6. (system)	Decentralised system	<ul style="list-style-type: none"> Government not involved in policy decisions Governing body control 	SIM: Decentralised system <ul style="list-style-type: none"> Government not (directly) involved in policy decisions Governing body control of some sports Role of UKSI 		
7. (funding)	Limited government/federal funding	<ul style="list-style-type: none"> Private funding/sponsorship 	SIM: Limited government funding <ul style="list-style-type: none"> Lottery funding Private funding/sponsorship 		
8. (economy)	Capitalist economy	<ul style="list-style-type: none"> Capitalism drives competitiveness/pursuit of excellence 	DIFF: Mixed economy <ul style="list-style-type: none"> Economy less driven by competition 		
9. (golden triangle)	Link between commercialism and sport	<ul style="list-style-type: none"> Golden triangle Sport, sponsorship and media 24 hour media coverage 	SIM: Increasing commercialisation of sport <ul style="list-style-type: none"> UK following USA model 		
10. (pathway)	Clear pathway to excellence	<ul style="list-style-type: none"> High School to College/University Scholarships Special admit programmes (for less academic students) 	Different pathways to excellence <ul style="list-style-type: none"> Some High Schools are centres of excellence Role of academies/apprenticeships Institutes of sport/link to Universities 		

Question	Answer			Marks	Guidance
		<ul style="list-style-type: none"> Pro-draft to professional sport 	<ul style="list-style-type: none"> Some scholarships available No draft system 		
	Social factors				
	11 (Rags to riches)	Rags to riches <ul style="list-style-type: none"> Pursuit of excellence brings fame/fortune American Dream High profile role models (mainly men still) E.g. LeBron James 	SIM: Excellence brings fame/fortune <ul style="list-style-type: none"> Dominance of Association Football Less so in other sports High profile role models (mainly male) 		
	12. (Opportunity)	Land of opportunity/land of the free <ul style="list-style-type: none"> Opportunity for all Pluralism 	SIM: Opportunity for all <ul style="list-style-type: none"> Multicultural society 		
	13. (Discrimination)	Discrimination still exists <ul style="list-style-type: none"> Hierarchy Hegemony WASP dominance Restricted opportunities for minority groups Ref. stacking/centrality 	SIM: Discrimination still exists <ul style="list-style-type: none"> Class system Restricted opportunities for minority groups 		
	14. (Assimilation)	Assimilation/athletes identifying with and being accepted by USA <ul style="list-style-type: none"> Representing USA at Olympics 	SIM: Athletes identifying with and being accepted by UK <ul style="list-style-type: none"> Representing UK at Olympics E.g. Mo Farah 		
	Values				
	15. (tradition)	Lack of tradition of mass participation <ul style="list-style-type: none"> Focus is on elite performance 	DIFF: Tradition of mass participation <ul style="list-style-type: none"> Widening base of performance pyramid 		

Question			Answer		Marks	Guidance
		16. (Lombardianism)	Lombardian/win ethic is predominant value <ul style="list-style-type: none"> • Ref. Vince Lombardi • Counter culture ethic evident in activities such as jogging 	DIFF: Participation/fair play ethic predominant <ul style="list-style-type: none"> • Increasing shift towards Lombardianism at elite level • E.g. 'Diving' in football. 		
		17. (Radical)	Equal importance between taking part and winning <ul style="list-style-type: none"> • Many elite performers show this ethic • E.g. Admit 'miss' in golf even if not seen by opponent 	SIM: Many elite performers follow radical ethic <ul style="list-style-type: none"> • Credit suitable example 		
		18. (little leagues)	Little leagues/sport for young people driven by Lombardianism <ul style="list-style-type: none"> • Sports (mainly) played on full size pitches / few mini versions of games 	DIFF: Junior sport driven by participation as well as performance <ul style="list-style-type: none"> • Some junior sport driven by Lombardianism • Mini versions of games used to develop skills over athletic ability 		
		19. (Elitism)	Elitist system/elitism dominant	DIFF: Elitism not a traditional value/reluctant to adopt elitist policy		
		20. (Zero-sum)	Zero-sum mentality/ethic <ul style="list-style-type: none"> • No draws / must be a winner 	DIFF: Draws allowed <ul style="list-style-type: none"> • Playing for a draw an acceptable tactic • Some sports/cup ties follow zero-sum ethic 		

Section B - Sports Psychology (Option B1)

Question		Answer	Marks	Guidance								
3	(a)	<p>4 marks for 4 of:</p> <p>Description of social learning (sub max 2)</p> <table border="1"> <tr> <td>1. (Observe and copy)</td> <td>We (observe and) copy/emulate behaviour (of others) or copy significant others or copy role models</td> </tr> <tr> <td>2. (reinforcement)</td> <td>Learning requires reinforcement or vicarious reinforcement</td> </tr> </table> <p>Description of interactionist (sub max 2)</p> <table border="1"> <tr> <td>3. (trait – environment)</td> <td>(Personality determined by the) interaction/function/relationship between personality/traits and the situation/environment or personality interacting or reacting to the environment/situation</td> </tr> <tr> <td>4. (Changes in behaviour)</td> <td>Behaviour changes depending on the demands of the situation/environment/role or personality is not predictable/stable.</td> </tr> </table>	1. (Observe and copy)	We (observe and) copy/emulate behaviour (of others) or copy significant others or copy role models	2. (reinforcement)	Learning requires reinforcement or vicarious reinforcement	3. (trait – environment)	(Personality determined by the) interaction/function/relationship between personality/traits and the situation/environment or personality interacting or reacting to the environment/situation	4. (Changes in behaviour)	Behaviour changes depending on the demands of the situation/environment/role or personality is not predictable/stable.	4	<p>Sub max 2 for social learning</p> <p>Sub max 2 for interactionist</p> <ul style="list-style-type: none"> Do not accept a list. There must be an attempt at a description for marks to be awarded. Do not accept $B=f(PE)$ for point 3 (must describe) Do not accept interactionist is a combination of trait and social learning (must describe) Accept a practical example as a description
1. (Observe and copy)	We (observe and) copy/emulate behaviour (of others) or copy significant others or copy role models											
2. (reinforcement)	Learning requires reinforcement or vicarious reinforcement											
3. (trait – environment)	(Personality determined by the) interaction/function/relationship between personality/traits and the situation/environment or personality interacting or reacting to the environment/situation											
4. (Changes in behaviour)	Behaviour changes depending on the demands of the situation/environment/role or personality is not predictable/stable.											

Question		Answer	Marks	Guidance														
3	(b)	<p>5 marks for 5 of: Reference to question : Explain why people adopt different attitudes towards a balanced, active and healthy lifestyle.</p> <table border="1"> <tr> <td>1.(cognitive)</td> <td>Because people are educated / have knowledge/beliefs/cognitive (responses) about what is good/healthy for them Eg people know which foods are healthy</td> </tr> <tr> <td>2.(affective)</td> <td>Because of an emotional/affective response or because they enjoy or do not enjoy a healthy lifestyle Eg they enjoy regular exercise</td> </tr> <tr> <td>3. (Significant others)</td> <td>The influence of significant others or role models or celebrities or influences from friends/peers/teachers/coaches Eg Your coach follows a healthy diet</td> </tr> <tr> <td>4.(group)</td> <td>To feel you belong or feel you are accepted by a group Eg you exercise to belong to an exercise class</td> </tr> <tr> <td>5.(culture/religion)</td> <td>Through socialisation or cultural norms or cultural influences or religious influences or upbringing Eg It is more acceptable to avoid smoking in UK culture</td> </tr> <tr> <td>6.(competition)</td> <td>To be the best or competitive factors or to win or to avoid losing Eg you want to get a better time for your morning jogging circuit</td> </tr> <tr> <td>7.(Media)</td> <td>Media influences or examples of media influences Eg a media campaign on the negative aspects of taking drugs encourages you to avoid taking drugs</td> </tr> </table>	1.(cognitive)	Because people are educated / have knowledge/beliefs/cognitive (responses) about what is good/healthy for them Eg people know which foods are healthy	2.(affective)	Because of an emotional/affective response or because they enjoy or do not enjoy a healthy lifestyle Eg they enjoy regular exercise	3. (Significant others)	The influence of significant others or role models or celebrities or influences from friends/peers/teachers/coaches Eg Your coach follows a healthy diet	4.(group)	To feel you belong or feel you are accepted by a group Eg you exercise to belong to an exercise class	5.(culture/religion)	Through socialisation or cultural norms or cultural influences or religious influences or upbringing Eg It is more acceptable to avoid smoking in UK culture	6.(competition)	To be the best or competitive factors or to win or to avoid losing Eg you want to get a better time for your morning jogging circuit	7.(Media)	Media influences or examples of media influences Eg a media campaign on the negative aspects of taking drugs encourages you to avoid taking drugs	5	<ul style="list-style-type: none"> • Sub max of 3 marks for no BAHL examples • Sub max of 4 marks for one example • For max of 5 marks must have at last two practical BAHL examples (question asks for examples) • Accept practical example equivalents for each point • <u>Accept negative aspects if given for each point</u> - for example: some do not believe in a healthy lifestyle (Pt1) or some enjoy dysfunctional or unhealthy behaviour (pt2)
1.(cognitive)	Because people are educated / have knowledge/beliefs/cognitive (responses) about what is good/healthy for them Eg people know which foods are healthy																	
2.(affective)	Because of an emotional/affective response or because they enjoy or do not enjoy a healthy lifestyle Eg they enjoy regular exercise																	
3. (Significant others)	The influence of significant others or role models or celebrities or influences from friends/peers/teachers/coaches Eg Your coach follows a healthy diet																	
4.(group)	To feel you belong or feel you are accepted by a group Eg you exercise to belong to an exercise class																	
5.(culture/religion)	Through socialisation or cultural norms or cultural influences or religious influences or upbringing Eg It is more acceptable to avoid smoking in UK culture																	
6.(competition)	To be the best or competitive factors or to win or to avoid losing Eg you want to get a better time for your morning jogging circuit																	
7.(Media)	Media influences or examples of media influences Eg a media campaign on the negative aspects of taking drugs encourages you to avoid taking drugs																	

Question	Answer	Marks	Guidance
	8. (Opportunity/availability) Attitudes affected by the availability of facilities / gym access / outdoor space / equipment / access arrangements (if have a disability) or affordability of BAHL/activities		
	9.(Previous experiences) Previous experiences or what has happened before (will shape attitudes) or if successful more likely to have a positive attitude or if unsuccessful a negative attitude Eg you succeeded in completing a whole exercise routine last week		
	10.(perceptions) The perception of our own ability or you think you are good enough or you think you are not good enough or you have high/low self-esteem (can shape attitudes) Eg you think that you are able to carry out an exercise programme		
	11.(Attributions > Learned helplessness) Attributions / reasons for failure are internal or dispositional can lead to <u>learned helplessness</u> Eg you give up exercise because you feel you cannot carry out the skills needed		
	12.(Attributions > mastery orientation) Attributions / reasons for success are internal or dispositional lead to <u>mastery orientation</u> Eg you are fit because you have shown determination		

Question	Answer	Marks	Guidance												
3 (c)	<p>6 marks for 6 of:Using practical examples, describe the possible causes of aggressive behaviour in sport.</p> <table border="1" data-bbox="342 284 1485 1406"> <tr> <td data-bbox="342 284 701 456">1. (innate)</td> <td data-bbox="701 284 1485 456">Innate/genetic causes/determinants or behaviours are traits or we can't help our behaviour because it is natural /genetically determined/spontaneous Eg lash-out at an opponent in rugby when feeling threatened</td> </tr> <tr> <td data-bbox="342 456 701 826">2. (frustration / arousal)</td> <td data-bbox="701 456 1485 826">Because of blocked goals or frustration or high arousal or need for catharsis or to get rid of frustration or (perception) that ability is poor /effort by teammates or a cause of frustration e.g. perceived /actual unfairness or refs' / officials' poor decisions. Or losing / poor performance Eg the poor referee's decisions causes a player to hit out at an opponent in rugby.</td> </tr> <tr> <td data-bbox="342 826 701 967">3. (copying others)</td> <td data-bbox="701 826 1485 967">Copying others (who are role models/significant others) or via social learning / vicarious learning Eg watching a premier league footballer and copying violent behaviour.</td> </tr> <tr> <td data-bbox="342 967 701 1203">4. (tribal/group/culture)</td> <td data-bbox="701 967 1485 1203">Wanting to be accepted by a group or group norms dictate such behaviour/(tribal) instincts or feeling more protected if following group behaviour or cultural influences or it is expected or it is a normal behaviour of the culture. Eg to be accepted within your netball team you show aggressive behaviour.</td> </tr> <tr> <td data-bbox="342 1203 701 1305">5. (game norms)</td> <td data-bbox="701 1203 1485 1305">Game determinants or nature of the game or expected/norms in the game eg it is expected to be violent in ice hockey.</td> </tr> <tr> <td data-bbox="342 1305 701 1406">6. (cues)</td> <td data-bbox="701 1305 1485 1406">Triggers / cues / signals / stimuli from the environment elicit/cause an aggressive response or the crowd</td> </tr> </table>	1. (innate)	Innate/genetic causes/determinants or behaviours are traits or we can't help our behaviour because it is natural /genetically determined/spontaneous Eg lash-out at an opponent in rugby when feeling threatened	2. (frustration / arousal)	Because of blocked goals or frustration or high arousal or need for catharsis or to get rid of frustration or (perception) that ability is poor /effort by teammates or a cause of frustration e.g. perceived /actual unfairness or refs' / officials' poor decisions. Or losing / poor performance Eg the poor referee's decisions causes a player to hit out at an opponent in rugby.	3. (copying others)	Copying others (who are role models/significant others) or via social learning / vicarious learning Eg watching a premier league footballer and copying violent behaviour.	4. (tribal/group/culture)	Wanting to be accepted by a group or group norms dictate such behaviour/(tribal) instincts or feeling more protected if following group behaviour or cultural influences or it is expected or it is a normal behaviour of the culture. Eg to be accepted within your netball team you show aggressive behaviour.	5. (game norms)	Game determinants or nature of the game or expected/norms in the game eg it is expected to be violent in ice hockey.	6. (cues)	Triggers / cues / signals / stimuli from the environment elicit/cause an aggressive response or the crowd	6	<p>Sub max 3 for points made without practical examples</p> <p>Sub max 5 marks for points made with only one practical example</p> <p>For full 6 marks to be gained at least two practical examples must be given</p>
1. (innate)	Innate/genetic causes/determinants or behaviours are traits or we can't help our behaviour because it is natural /genetically determined/spontaneous Eg lash-out at an opponent in rugby when feeling threatened														
2. (frustration / arousal)	Because of blocked goals or frustration or high arousal or need for catharsis or to get rid of frustration or (perception) that ability is poor /effort by teammates or a cause of frustration e.g. perceived /actual unfairness or refs' / officials' poor decisions. Or losing / poor performance Eg the poor referee's decisions causes a player to hit out at an opponent in rugby.														
3. (copying others)	Copying others (who are role models/significant others) or via social learning / vicarious learning Eg watching a premier league footballer and copying violent behaviour.														
4. (tribal/group/culture)	Wanting to be accepted by a group or group norms dictate such behaviour/(tribal) instincts or feeling more protected if following group behaviour or cultural influences or it is expected or it is a normal behaviour of the culture. Eg to be accepted within your netball team you show aggressive behaviour.														
5. (game norms)	Game determinants or nature of the game or expected/norms in the game eg it is expected to be violent in ice hockey.														
6. (cues)	Triggers / cues / signals / stimuli from the environment elicit/cause an aggressive response or the crowd														

Question	Answer	Marks	Guidance
	<p>or provocation eg chanting by the opponents supporters in a tennis match might elicit aggressive behaviour or having a stick in your hand.</p>		
	<p>7. (retaliation/revenge) Getting your own back or retaliating after experiencing the aggression of others eg you are elbowed in a football game so next time you tackle that opponent you seek revenge and elbow him back.</p>		
	<p>7. (event importance) Event importance or competitiveness or need to/pressure to win or rewards or as an instrument to gain success. or (local) derby games / rivals eg. a crucial end of season football match might cause high emotions and therefore aggression.</p>		
	<p>8. (pressure from others) Pressure from others or obeying orders/tactics or others' expectations. Eg the coach of a rugby team orders his forwards to intimidate through physical violence.</p>		
	<p>9. (Alcohol / drugs) Alcohol / drugs may affect the body/brain or your inhibitions are lowered or sense of right/wrong is confused eg An athlete might take steroids but can't help but be aggressive towards the officials.</p>		
	<p>10. (other external influences) Pressures experiences from outside the game or life baggage / events / personal problems</p>		

(d)* Levels of Response	
<p>Level 4 (18-20 marks) A comprehensive answer:</p> <ul style="list-style-type: none"> • 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. 	<p>At Level 4 answers <u>are likely to show</u>:</p> <ul style="list-style-type: none"> • All elements of Vealey's model are addressed in excellent detail • Practical example used to explain all elements of the model • An excellent awareness of the interaction between trait and state • Detailed explanation of how subjective outcomes influences state sport confidence • A wide and well explained range of methods to raise self-efficacy • A very well-balanced answer between explanation of model and description of methods
<p>Level 3 (13-17 marks) A competent answer:</p> <ul style="list-style-type: none"> • 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. 	<p>At Level 3 answers <u>are likely to show</u>:</p> <ul style="list-style-type: none"> • Most elements of the model addressed in detail • Practical example used to explain the majority of the model's elements • Showing some awareness of the interactions within the model • Well explained range of methods to raise self-efficacy • Good explanation of how subjective outcomes influences state sport confidence or relationship between outcomes and confidence is clear • A fairly balanced answer between explanation of model and description of methods
<p>Level 2 (8-12 marks) A limited answer:</p> <ul style="list-style-type: none"> • 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. 	<p>At Level 2 answers <u>are likely to show</u>:</p> <ul style="list-style-type: none"> • Some areas of the model are addressed in some detail • Practical eg used but only related to a minority of theoretical points • At the lower end of the mark range part of the question may not be answered but what is attempted is sound or much of the model is simply repeated • A narrow range of methods to raise self-efficacy • A lack of balance with more description of methods than explanation of the model
<p>Level 1 (0 – 7 marks) A basic answer:</p> <ul style="list-style-type: none"> • 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. 	<p>At Level 1 responses <u>are likely to show</u>:</p> <ul style="list-style-type: none"> • Miss out much of the model's elements and interactions • Practical example missing for model or ineffectively used • Some methods to raise self-efficacy inappropriate or repetitive

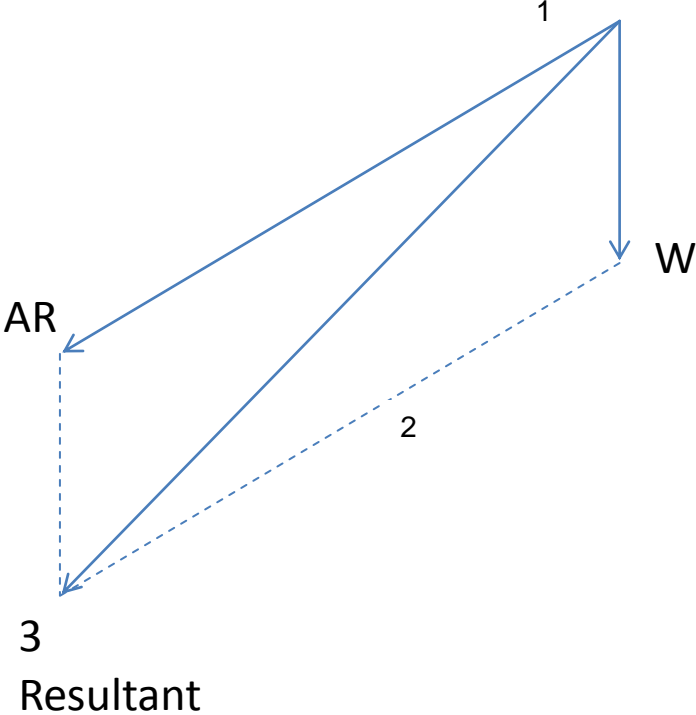
Question		Answer	Marks	Guidance																		
3	(d)*	<p>Indicative Content:</p> <p>Reference to question : Using one example from sport, explain Vealey’s model of sports confidence.</p> <table border="1"> <tr> <td>1.</td> <td>Objective sport situation is • eg a penalty kick in football</td> </tr> <tr> <td>2.</td> <td>Trait sport confidence (SC-Trait) is innate / born with it • underlying potential • stable • eg the football player might have an in-built high level of confidence</td> </tr> <tr> <td>3.</td> <td>SC-Trait affects state sports confidence(SC-State) / self-efficacy • eg the football players confidence in taking the kick depends on SC-Trait levels</td> </tr> <tr> <td>4.</td> <td>competitive orientation is the level of competitiveness that the performer may have • set challenging goals • eg the football player is naturally very competitive and really wants to score the penalty.</td> </tr> <tr> <td>5.</td> <td>State sports confidence (SC- State) is the confidence you have in an actual/specific situation or environment • Is changeable • e.g. the football player has high confidence in scoring the penalty kick.</td> </tr> <tr> <td>6.</td> <td>behavioural responses are the actions or performance outcomes • eg the football player kicks the ball at the goal</td> </tr> <tr> <td>7.</td> <td>The subjective outcomes are how the performer judges or interprets the outcomes/performance. • Eg the football player interprets that a good goal has been scored from the penalty and the goalkeeper was well beaten</td> </tr> <tr> <td>8.</td> <td>The subjective outcomes affects future SC-Trait / future competitiveness • eg the football player’s view of the goal may make him more confident generally and more competitive</td> </tr> <tr> <td>9.</td> <td>The subjective outcomes therefore eventually affect state sports confidence (SC-State) • how you interpret your actions affects your confidence in the future. • SC-trait and competitiveness and SC-State all affect confidence/self-efficacy</td> </tr> </table>	1.	Objective sport situation is • eg a penalty kick in football	2.	Trait sport confidence (SC-Trait) is innate / born with it • underlying potential • stable • eg the football player might have an in-built high level of confidence	3.	SC-Trait affects state sports confidence(SC-State) / self-efficacy • eg the football players confidence in taking the kick depends on SC-Trait levels	4.	competitive orientation is the level of competitiveness that the performer may have • set challenging goals • eg the football player is naturally very competitive and really wants to score the penalty.	5.	State sports confidence (SC- State) is the confidence you have in an actual/specific situation or environment • Is changeable • e.g. the football player has high confidence in scoring the penalty kick.	6.	behavioural responses are the actions or performance outcomes • eg the football player kicks the ball at the goal	7.	The subjective outcomes are how the performer judges or interprets the outcomes/performance. • Eg the football player interprets that a good goal has been scored from the penalty and the goalkeeper was well beaten	8.	The subjective outcomes affects future SC-Trait / future competitiveness • eg the football player’s view of the goal may make him more confident generally and more competitive	9.	The subjective outcomes therefore eventually affect state sports confidence (SC-State) • how you interpret your actions affects your confidence in the future. • SC-trait and competitiveness and SC-State all affect confidence/self-efficacy	20	<ul style="list-style-type: none"> • Give KU for <u>relevant</u> knowledge points (usually main headings) • Give DEV for <u>relevant</u> development points (usually bullet points) • Give EG for <u>relevant</u> practical examples • Always indicate the Level at the base of the answer (L1,L2, L3 or L4) • Do not be limited by the indicative content give credit for other relevant points or developments • Do not give credit to irrelevant material
1.	Objective sport situation is • eg a penalty kick in football																					
2.	Trait sport confidence (SC-Trait) is innate / born with it • underlying potential • stable • eg the football player might have an in-built high level of confidence																					
3.	SC-Trait affects state sports confidence(SC-State) / self-efficacy • eg the football players confidence in taking the kick depends on SC-Trait levels																					
4.	competitive orientation is the level of competitiveness that the performer may have • set challenging goals • eg the football player is naturally very competitive and really wants to score the penalty.																					
5.	State sports confidence (SC- State) is the confidence you have in an actual/specific situation or environment • Is changeable • e.g. the football player has high confidence in scoring the penalty kick.																					
6.	behavioural responses are the actions or performance outcomes • eg the football player kicks the ball at the goal																					
7.	The subjective outcomes are how the performer judges or interprets the outcomes/performance. • Eg the football player interprets that a good goal has been scored from the penalty and the goalkeeper was well beaten																					
8.	The subjective outcomes affects future SC-Trait / future competitiveness • eg the football player’s view of the goal may make him more confident generally and more competitive																					
9.	The subjective outcomes therefore eventually affect state sports confidence (SC-State) • how you interpret your actions affects your confidence in the future. • SC-trait and competitiveness and SC-State all affect confidence/self-efficacy																					

Question	Answer	Marks	Guidance
	<ul style="list-style-type: none"> • Positive subjectivity leads to mastery orientation • Negative subjectivity leads to learned helplessness 		
	<p>Describe the methods that might be used to raise self-efficacy in sports performance.</p>		
	<p>10. (attribution)</p> <p>Encourage attribution</p> <ul style="list-style-type: none"> • of any previous failure or learned helplessness to controllable/internal factors • or unstable factors • or don't blame yourself / give other reasons for past failures • Eg lack of effort/inappropriate goals in netball 		
	<p>11. (reinforcement)</p> <p>Give verbal persuasion</p> <ul style="list-style-type: none"> • encouragement / praise / reward • positive reinforcement • Eg The coach praises a young volleyball players serve to raise confidence 		
	<p>12.(control arousal / stress management)</p> <p>Control arousal</p> <ul style="list-style-type: none"> • Give them anxiety or stress management strategies • emotional control or control arousal • imagery or mental practice / rehearsal or visualisation • Positive thinking /self talk or negative thought stopping • Somatic strategies to calm down e.g. biofeedback or PMR • Eg Encourage the sprinter to imagine winning the race 		
	<p>12. (Vicarious)</p> <p>Vicarious experiences</p> <ul style="list-style-type: none"> • See others achieve • Show others of similar ability succeed. • Show role models to inspire • Eg the diver lacked confidence but saw another diver of a similar ability dive off the top board and this raised her confidence 		
	<p>13. (success)</p> <p>Performance accomplishments</p> <ul style="list-style-type: none"> • Give early success to raise confidence • encourage small achievable goals at first / goal setting • highlight previous success 		

Question		Answer	Marks	Guidance
		<ul style="list-style-type: none"> practice / train hard / learn skills / strategies Eg Remind the discus thrower that he has reached a certain distance before 		
	14. (Educate)	<p>Educate or inspire or teach appropriate skills or tactics</p> <ul style="list-style-type: none"> show what the player can do to enhance performance. Eg the coach teaches the hockey player new stick skills to beat an opponent 		
	15. (Others)	<p>Show others who are less good or who are less able or who also lack confidence.</p> <ul style="list-style-type: none"> Show them that they are not abnormal or that lack of confidence is not to be ashamed of. Eg Show a tennis player a video of other players who have been successful but who show low confidence levels 		

Section B - Biomechanics (option B2)

Question		Answer	Marks	Guidance																						
4	(a)	<p>1 mark for</p> <p>Definition of Impulse</p> <table border="1"> <tr> <td>1. (Impulse)</td> <td>Force x time / Ft Or change in momentum Or product of force and the time force is applied</td> </tr> </table> <p>Explanation of graph (sub max 4)</p> <table border="1"> <tr> <td>2. (1st Section)</td> <td>Impulse is negative</td> </tr> <tr> <td>3. (1st Section)</td> <td>Force acting on sprinter is opposite to the direction of motion/ force opposes motion/ foot plant in front of the line of gravity</td> </tr> <tr> <td>4. (1st Section)</td> <td>Forward momentum of sprinter decreases / deceleration.</td> </tr> <tr> <td>5. (2nd Section)</td> <td>Impulse is positive</td> </tr> <tr> <td>6. (2nd Section)</td> <td>Force acting on sprinter is in the same direction as the direction of motion/ force assists motion/ foot plant behind the line of gravity</td> </tr> <tr> <td>7. (2nd Section)</td> <td>Forward momentum of sprinter increases / acceleration.</td> </tr> <tr> <td>8. (Overall force)</td> <td>Positive/forward force > negative/backward force or net force positive/forward</td> </tr> <tr> <td>9. (overall time)</td> <td>Positive time > negative time (force is applied)</td> </tr> <tr> <td>10. (Overall impulse)</td> <td>Positive impulse > negative impulse or net impulse is positive.</td> </tr> <tr> <td>11. (Overall)</td> <td>Causes acceleration in early part of race.</td> </tr> </table>	1. (Impulse)	Force x time / Ft Or change in momentum Or product of force and the time force is applied	2. (1st Section)	Impulse is negative	3. (1st Section)	Force acting on sprinter is opposite to the direction of motion/ force opposes motion/ foot plant in front of the line of gravity	4. (1st Section)	Forward momentum of sprinter decreases / deceleration.	5. (2nd Section)	Impulse is positive	6. (2nd Section)	Force acting on sprinter is in the same direction as the direction of motion/ force assists motion/ foot plant behind the line of gravity	7. (2nd Section)	Forward momentum of sprinter increases / acceleration.	8. (Overall force)	Positive/forward force > negative/backward force or net force positive/forward	9. (overall time)	Positive time > negative time (force is applied)	10. (Overall impulse)	Positive impulse > negative impulse or net impulse is positive.	11. (Overall)	Causes acceleration in early part of race.	5	<p>Sub max 1 for definition</p> <p>Sub max 4 for explanation</p>
1. (Impulse)	Force x time / Ft Or change in momentum Or product of force and the time force is applied																									
2. (1st Section)	Impulse is negative																									
3. (1st Section)	Force acting on sprinter is opposite to the direction of motion/ force opposes motion/ foot plant in front of the line of gravity																									
4. (1st Section)	Forward momentum of sprinter decreases / deceleration.																									
5. (2nd Section)	Impulse is positive																									
6. (2nd Section)	Force acting on sprinter is in the same direction as the direction of motion/ force assists motion/ foot plant behind the line of gravity																									
7. (2nd Section)	Forward momentum of sprinter increases / acceleration.																									
8. (Overall force)	Positive/forward force > negative/backward force or net force positive/forward																									
9. (overall time)	Positive time > negative time (force is applied)																									
10. (Overall impulse)	Positive impulse > negative impulse or net impulse is positive.																									
11. (Overall)	Causes acceleration in early part of race.																									

Question	Answer	Marks	Guidance						
4 (b)	<p data-bbox="360 220 770 245">Sub max 3 marks for diagram</p>  <p data-bbox="360 1166 640 1192">Diagram must show</p> <table border="1" data-bbox="376 1198 1323 1369"> <tr> <td data-bbox="376 1198 730 1233">1. (Forces)</td> <td data-bbox="730 1198 1323 1233">Air resistance longer than Weight</td> </tr> <tr> <td data-bbox="376 1233 730 1302">2. (Parallelogram)</td> <td data-bbox="730 1233 1323 1302">Parallelogram using forces in 1 (dotted lines)</td> </tr> <tr> <td data-bbox="376 1302 730 1369">3. (Resultant / net force)</td> <td data-bbox="730 1302 1323 1369">Resultant or net force shown correctly.</td> </tr> </table>	1. (Forces)	Air resistance longer than Weight	2. (Parallelogram)	Parallelogram using forces in 1 (dotted lines)	3. (Resultant / net force)	Resultant or net force shown correctly.	5	<p data-bbox="1554 220 1872 245">Sub max 3 for diagram</p> <p data-bbox="1554 284 1921 309">Sub max 3 for explanation</p>
1. (Forces)	Air resistance longer than Weight								
2. (Parallelogram)	Parallelogram using forces in 1 (dotted lines)								
3. (Resultant / net force)	Resultant or net force shown correctly.								

Question	Answer	Marks	Guidance						
	<p data-bbox="360 213 1384 245">Explanation of how net force causes deviation in Flight Path. (Sub max 3)</p> <table border="1" data-bbox="371 277 1323 555"> <tr> <td data-bbox="371 277 730 379">4. (Description)</td> <td data-bbox="730 277 1323 379">Shuttle decelerates or follows a non-parabolic or asymmetric flight path</td> </tr> <tr> <td data-bbox="371 379 730 481">5. (Explanation)</td> <td data-bbox="730 379 1323 481">Resultant / net force is (nearly) same direction as air resistance / closest to air resistance/ opposite direction of motion</td> </tr> <tr> <td data-bbox="371 481 730 555">6. (Explanation)</td> <td data-bbox="730 481 1323 555">Resultant / net force shows direction / magnitude (size) of acceleration of shuttle</td> </tr> </table>	4. (Description)	Shuttle decelerates or follows a non-parabolic or asymmetric flight path	5. (Explanation)	Resultant / net force is (nearly) same direction as air resistance / closest to air resistance/ opposite direction of motion	6. (Explanation)	Resultant / net force shows direction / magnitude (size) of acceleration of shuttle		
4. (Description)	Shuttle decelerates or follows a non-parabolic or asymmetric flight path								
5. (Explanation)	Resultant / net force is (nearly) same direction as air resistance / closest to air resistance/ opposite direction of motion								
6. (Explanation)	Resultant / net force shows direction / magnitude (size) of acceleration of shuttle								

Question	Answer	Marks	Guidance																								
4 (c)	<p>5 marks for 5 of: Moment of Inertia (sub max 3) Sub max of one mark for definition</p> <table border="1" data-bbox="342 357 1561 531"> <tr> <td data-bbox="342 357 701 459">1. (Moment of Inertia)</td> <td data-bbox="701 357 1561 459">Resistance of a rotating body to change its state of angular motion (rotation) / resistance of a body to start or stop rotating / angular or rotational resistance.</td> </tr> <tr> <td data-bbox="342 459 701 496">2.</td> <td data-bbox="701 459 1561 496">is the rotational equivalent to inertia.</td> </tr> <tr> <td data-bbox="342 496 701 531">3.</td> <td data-bbox="701 496 1561 531">$\sum mr^2$</td> </tr> </table> <p>Sub max two marks for explanation</p> <table border="1" data-bbox="342 600 1561 911"> <tr> <td data-bbox="342 600 701 636">4. (Mass)</td> <td data-bbox="701 600 1561 636">Depends on the mass of an object</td> </tr> <tr> <td data-bbox="342 636 701 673">5. (Mass)</td> <td data-bbox="701 636 1561 673">Greater the mass of an object the greater is its MI or opposite.</td> </tr> <tr> <td data-bbox="342 673 701 738">6. (Distribution of Mass)</td> <td data-bbox="701 673 1561 738">Depends on the distribution of mass from the axis of rotation</td> </tr> <tr> <td data-bbox="342 738 701 804">7. (Distribution of Mass)</td> <td data-bbox="701 738 1561 804">The further the mass is away from the axis of rotation the greater the MI or opposite</td> </tr> <tr> <td data-bbox="342 804 701 911">8. (Force)</td> <td data-bbox="701 804 1561 911">The greater the MI the greater the (moment of) force / torque required to increase or decrease rate of spin / rotation/ angular acceleration</td> </tr> </table> <p>Recovery phase of leg action (sub max 3)</p> <table border="1" data-bbox="342 1015 1561 1287"> <tr> <td data-bbox="342 1015 701 1117">9.</td> <td data-bbox="701 1015 1561 1117">(Flexed knee means that the) mass of the leg is closer to the axis of rotation (hip) or mass distribution decreases</td> </tr> <tr> <td data-bbox="342 1117 701 1153">10.</td> <td data-bbox="701 1117 1561 1153">Therefore MI decreases /is lower</td> </tr> <tr> <td data-bbox="342 1153 701 1219">11.</td> <td data-bbox="701 1153 1561 1219">Less force is required / easier to move leg through recovery stage</td> </tr> <tr> <td data-bbox="342 1219 701 1287">12.</td> <td data-bbox="701 1219 1561 1287">Recovery can be quicker / increases stride rate/ leg brought back to the ground faster</td> </tr> </table>	1. (Moment of Inertia)	Resistance of a rotating body to change its state of angular motion (rotation) / resistance of a body to start or stop rotating / angular or rotational resistance.	2.	is the rotational equivalent to inertia.	3.	$\sum mr^2$	4. (Mass)	Depends on the mass of an object	5. (Mass)	Greater the mass of an object the greater is its MI or opposite.	6. (Distribution of Mass)	Depends on the distribution of mass from the axis of rotation	7. (Distribution of Mass)	The further the mass is away from the axis of rotation the greater the MI or opposite	8. (Force)	The greater the MI the greater the (moment of) force / torque required to increase or decrease rate of spin / rotation/ angular acceleration	9.	(Flexed knee means that the) mass of the leg is closer to the axis of rotation (hip) or mass distribution decreases	10.	Therefore MI decreases /is lower	11.	Less force is required / easier to move leg through recovery stage	12.	Recovery can be quicker / increases stride rate/ leg brought back to the ground faster	5	<p>Sub max 3 for moment of inertia</p> <p>Sub max 3 for explanation of recovery phase</p>
1. (Moment of Inertia)	Resistance of a rotating body to change its state of angular motion (rotation) / resistance of a body to start or stop rotating / angular or rotational resistance.																										
2.	is the rotational equivalent to inertia.																										
3.	$\sum mr^2$																										
4. (Mass)	Depends on the mass of an object																										
5. (Mass)	Greater the mass of an object the greater is its MI or opposite.																										
6. (Distribution of Mass)	Depends on the distribution of mass from the axis of rotation																										
7. (Distribution of Mass)	The further the mass is away from the axis of rotation the greater the MI or opposite																										
8. (Force)	The greater the MI the greater the (moment of) force / torque required to increase or decrease rate of spin / rotation/ angular acceleration																										
9.	(Flexed knee means that the) mass of the leg is closer to the axis of rotation (hip) or mass distribution decreases																										
10.	Therefore MI decreases /is lower																										
11.	Less force is required / easier to move leg through recovery stage																										
12.	Recovery can be quicker / increases stride rate/ leg brought back to the ground faster																										

(d)* Levels of Response	
<p>Level 4 (18-20 marks) A comprehensive answer:</p> <ul style="list-style-type: none"> • 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. 	<p><u>At level 4 answers are likely to show:</u></p> <ul style="list-style-type: none"> • Accurate sketching of graph. • Correct calculations using appropriate formulae and units. • Detailed understanding and application of Newton's Laws in interpreting the speed/time graph. • Detailed analysis of a wide range of methods used to overcome air resistance / fluid friction with relevant sporting examples.
<p>Level 3 (13-17 marks) A competent answer:</p> <ul style="list-style-type: none"> • 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. 	<p><u>At level 3 answers are likely to show:</u></p> <ul style="list-style-type: none"> • Accurate sketching of graph and correct calculations but answer may not always have either the appropriate formula or units. • Good understanding and application of Newton's Laws but answer may not always be accurate in interpreting the speed/time graph. • Good analysis of a range of methods used to overcome air resistance / fluid friction with some relevant sporting examples.
<p>Level 2 (8-12 marks) A limited answer:</p> <ul style="list-style-type: none"> • 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. 	<p><u>At level 2 answers are likely to show:</u></p> <ul style="list-style-type: none"> • Good shape of graph but axes may not be fully labelled. • Some aspects of calculations correct. • Some understanding of Newton's Laws but limited application to shape of the graph. • Some methods identified that overcome air resistance / fluid friction with a few sporting examples.
<p>Level 1 (0 – 7 marks) A basic answer:</p> <ul style="list-style-type: none"> • 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. 	<p><u>At level 1 answers are likely to show:</u></p> <ul style="list-style-type: none"> • Show some correct aspects of the graph or some correct aspects of calculations. • Identify some of Newton's Laws but show limited application. • Identify some methods that overcome resistance or give a few sporting examples.

Question		Answer	Marks	Guidance																						
4	(d)*	<p>Indicative Content:</p> <p>Reference to question</p> <p>Speed/time graph</p> <p>Accept a <u>sketch graph</u></p> <table border="1"> <caption>Data points from the speed-time graph</caption> <thead> <tr> <th>Time / secs</th> <th>Speed / ms⁻¹</th> </tr> </thead> <tbody> <tr><td>0</td><td>0</td></tr> <tr><td>0.5</td><td>3.0</td></tr> <tr><td>0.6</td><td>3.1</td></tr> <tr><td>1.0</td><td>2.5</td></tr> <tr><td>1.5</td><td>2.0</td></tr> <tr><td>2.0</td><td>2.0</td></tr> <tr><td>2.5</td><td>2.0</td></tr> <tr><td>3.0</td><td>2.0</td></tr> <tr><td>3.5</td><td>2.0</td></tr> <tr><td>4.0</td><td>2.0</td></tr> </tbody> </table>	Time / secs	Speed / ms ⁻¹	0	0	0.5	3.0	0.6	3.1	1.0	2.5	1.5	2.0	2.0	2.0	2.5	2.0	3.0	2.0	3.5	2.0	4.0	2.0	20	<ul style="list-style-type: none"> • Give KU for <u>relevant</u> knowledge points (usually main headings) • Give DEV for <u>relevant</u> development points (usually bullet points) • Give EG for <u>relevant</u> practical examples • Always indicate the Level at the base of the answer (L1,L2, L3 or L4) • Do not be limited by the indicative content give credit for other relevant points or developments. • Do not give credit to irrelevant material
Time / secs	Speed / ms ⁻¹																									
0	0																									
0.5	3.0																									
0.6	3.1																									
1.0	2.5																									
1.5	2.0																									
2.0	2.0																									
2.5	2.0																									
3.0	2.0																									
3.5	2.0																									
4.0	2.0																									

Question		Answer	Marks	Guidance
	1. (Speed/time graph)	Correct axes <ul style="list-style-type: none"> • correct plotting • correct shape 		
	2. (Acceleration)	Acceleration = final-initial velocity/time or final-initial speed/time $a = v - u / t$ or $a = 3.0 - 0 / 0.5$ <ul style="list-style-type: none"> • $a = 6\text{ms}^{-2}$ (m/s/s or m.s^{-2}) 		
	3. (Net force)	$F = ma$ or $F = 80(\text{kg}) \times 6(\text{ms}^{-2})$ <ul style="list-style-type: none"> • 480 Newtons (N) 		
	4. (Newton 1)	Law of Inertia <ul style="list-style-type: none"> • An object will remain at rest or move with uniform motion / constant velocity/ constant speed unless acted upon by an external / unbalanced force. 		
	5. (Newton 2)	Law of acceleration or momentum <ul style="list-style-type: none"> • The acceleration / rate of change in momentum of an object is directly proportional to the (net) force acting upon the object and acts in the same direction as the (net) force (applied). 		
	6. (Newton 3)	Law of Reaction <ul style="list-style-type: none"> • For every action (force applied) there is an equal and opposite reaction (force). 		
	7. (1 st part of graph)	shows acceleration <ul style="list-style-type: none"> • Newton 1 suggests that because there is an acceleration there must be an external / unbalanced force acting on the swimmer / swimmer has generated/applied a force • Newton 2 suggests that the acceleration is large due to a large (net) force acting on/generated by the swimmer. 		
	8. (1 st part of graph)	shows net forward force acting on swimmer <ul style="list-style-type: none"> • Newton 3 suggests that the swimmer pushes/(applies an action force)backwards against the wall and the wall applies an equal and forwards (reaction) force on the swimmer. 		
	9. (2 nd part of graph)	shows deceleration of swimmer <ul style="list-style-type: none"> • Newton 2 suggests that a (net) force must be acting against the swimmer / opposite direction. 		

Question		Answer	Marks	Guidance
		<ul style="list-style-type: none"> Fluid friction / Water resistance Newton 1 suggests that there must be an external / unbalanced force acting on the swimmer 		
10.	(3 rd part of the graph)	<p>shows constant speed</p> <ul style="list-style-type: none"> Newton 1 suggests that all forces are balanced as the swimmer is moving with constant velocity/speed. Newton 2 suggests the net force acting on the swimmer is zero as there is no acceleration 		
11.	(Overcoming air resistance / fluid friction / drag)	<p>Streamlining</p> <ul style="list-style-type: none"> Creating smooth flow around the performer / reducing (turbulent) drag. Reducing profile drag / turbulence behind the performer 		
12.	(clothing)	<p>Making surface of performer smoother</p> <ul style="list-style-type: none"> Use of special swimwear / hats / shaving Use of special / lycra suits for skiers or eq 		
13.	(density)	<p>Reducing friction between air / water and performer.</p> <ul style="list-style-type: none"> Reduction in density of water in swimming pools Performing at altitude 		
14.	(frontal cross-section)	<p>Reducing frontal / forward cross sectional area of performer</p> <ul style="list-style-type: none"> Lying flatter in the water Maintaining narrow body shape / tuck shape in skiing / cycling or eq. 		
15.	(shape)	<p>Changing shape / 'tear drop' shape / 'aerofoil' shape / changing action.</p> <ul style="list-style-type: none"> Dolphin action been added to all techniques not just butterfly / bike design Helmets in cycling / speed skiing 		
16.	(surface effects)	<p>Reducing surface effects / wave drag</p> <ul style="list-style-type: none"> Swimming underwater as far as possible / as far as rules allow. 		
17.	(speed)	<p>Reducing speed/velocity</p> <ul style="list-style-type: none"> Not beneficial to performance/ must reduce AR/FF in other ways 		

Section B - Exercise and Sport Physiology (Option B3)

Question		Answer	Marks	Guidance																		
5	(a)	<p>1 marks for:</p> <p>Sub max 1 for the definition</p> <table border="1"> <tr> <td>1.</td> <td>The ability to take in, (transport) and use oxygen or sustain prolonged periods of sub maximal work or maximum volume of oxygen inspired and utilised per minute or VO_{2max}</td> </tr> </table> <p>Sub max 3 for factors affecting VO_2 max; mark first three only</p> <table border="1"> <tr> <td>2. (respiratory factors)</td> <td>Size of lungs / lung volume / elasticity of lung tissues / strength of respiratory muscles or eq.</td> </tr> <tr> <td>3. (cardiac factors)</td> <td>Size of heart / stroke volume / cardiac output or eq.</td> </tr> <tr> <td>4. (vascular factors)</td> <td>Elasticity of arteries / number of red blood cells (RBCs)/capillarisation / blood volume / haemoglobin content or eq.</td> </tr> <tr> <td>5. (muscular factors)</td> <td>Muscle fibre type/ more Type I/SO and Type IIa/FOG oxidative fibres increase VO_2 max/</td> </tr> <tr> <td>6. (cellular factors)</td> <td>myoglobin stores/ number of mitochondria or eq.</td> </tr> <tr> <td>7. (training)</td> <td>Training/ altitude training / lack of training</td> </tr> <tr> <td>8. (genetic make-up)</td> <td>genetic make-up / hereditary</td> </tr> <tr> <td>9. (environmental factors)</td> <td>altitude or climate or air pressure</td> </tr> </table>	1.	The ability to take in , (transport) and use oxygen or sustain prolonged periods of sub maximal work or maximum volume of oxygen inspired and utilised per minute or VO_{2max}	2. (respiratory factors)	Size of lungs / lung volume / elasticity of lung tissues / strength of respiratory muscles or eq.	3. (cardiac factors)	Size of heart / stroke volume / cardiac output or eq.	4. (vascular factors)	Elasticity of arteries / number of red blood cells (RBCs)/capillarisation / blood volume / haemoglobin content or eq.	5. (muscular factors)	Muscle fibre type/ more Type I/SO and Type IIa/FOG oxidative fibres increase VO_2 max/	6. (cellular factors)	myoglobin stores/ number of mitochondria or eq.	7. (training)	Training/ altitude training / lack of training	8. (genetic make-up)	genetic make-up / hereditary	9. (environmental factors)	altitude or climate or air pressure	4	<p>Sub max 1 for definition</p> <p>Sub max 3 for factors affecting VO_2 max.</p> <p>Do not accept age or gender as factors affecting VO_{2max} (in question)</p>
1.	The ability to take in , (transport) and use oxygen or sustain prolonged periods of sub maximal work or maximum volume of oxygen inspired and utilised per minute or VO_{2max}																					
2. (respiratory factors)	Size of lungs / lung volume / elasticity of lung tissues / strength of respiratory muscles or eq.																					
3. (cardiac factors)	Size of heart / stroke volume / cardiac output or eq.																					
4. (vascular factors)	Elasticity of arteries / number of red blood cells (RBCs)/capillarisation / blood volume / haemoglobin content or eq.																					
5. (muscular factors)	Muscle fibre type/ more Type I/SO and Type IIa/FOG oxidative fibres increase VO_2 max/																					
6. (cellular factors)	myoglobin stores/ number of mitochondria or eq.																					
7. (training)	Training/ altitude training / lack of training																					
8. (genetic make-up)	genetic make-up / hereditary																					
9. (environmental factors)	altitude or climate or air pressure																					

Question		Answer	Marks	Guidance																												
5	(b)	<p>6 marks for 6 of:</p> <p>Sub max 3 marks for description of interval training session</p> <table border="1"> <tr> <td>1. (type/e.g. exercises)</td> <td>Repetition running/ circuits/shuttles/ skipping or eq. example exercise</td> </tr> <tr> <td>2. (work interval/ duration)</td> <td>3-5 minutes a station/ 3 minutes plus</td> </tr> <tr> <td>3. (session duration)</td> <td>20 minutes plus</td> </tr> <tr> <td>4. (intensity)</td> <td>Low-moderate/60-80 % HR_{max} / 50-70% VO_{2max}</td> </tr> <tr> <td>5 (work:rest/relief ratio)</td> <td>2:1/ 1:0.5/ work being double the rest/ equal to work:rest/relief / 1:1</td> </tr> </table> <p>Sub max 3 marks for explaining the adaptations</p> <table border="1"> <thead> <tr> <th></th> <th>Adaptation</th> <th>BAHL</th> </tr> </thead> <tbody> <tr> <td>6. (cardiac hypertrophy)</td> <td>Increase in size of the heart or greater stroke volume or lower resting heart rate (RHR) or bradycardia</td> <td>reduces risk of CHD/ or eq. or easier to perform exercise/ reduced onset of fatigue/ avoid OBLA/ increase duration/intensity of performance</td> </tr> <tr> <td>7. (blood pressure)</td> <td>Lower blood pressure</td> <td>less risk of stroke/ CHD or eq.</td> </tr> <tr> <td>8. (RBCs/Hb)</td> <td>Increased number of red blood cells/haemoglobin so more oxygen is transported around the body</td> <td>easier to perform exercise/ reduced onset of fatigue/ avoid OBLA/ increase duration/intensity of performance</td> </tr> <tr> <td>9 (respiratory structure)</td> <td>Increase d surface area of alveoli/lung capacity</td> <td>easier to perform exercise/ reduced onset of fatigue/ avoid OBLA/ increase duration/intensity of performance</td> </tr> <tr> <td>10. (respiratory muscles)</td> <td>Stronger respiratory muscles so more efficient breathing mechanics/TV/ increased VO₂ max or eq.</td> <td>easier to perform exercise/less fatigue/ alleviates symptoms of asthma</td> </tr> </tbody> </table>	1. (type/e.g. exercises)	Repetition running/ circuits/shuttles/ skipping or eq. example exercise	2. (work interval/ duration)	3-5 minutes a station/ 3 minutes plus	3. (session duration)	20 minutes plus	4. (intensity)	Low-moderate/60-80 % HR _{max} / 50-70% VO _{2max}	5 (work:rest/relief ratio)	2:1/ 1:0.5/ work being double the rest/ equal to work:rest/relief / 1:1		Adaptation	BAHL	6. (cardiac hypertrophy)	Increase in size of the heart or greater stroke volume or lower resting heart rate (RHR) or bradycardia	reduces risk of CHD/ or eq. or easier to perform exercise/ reduced onset of fatigue/ avoid OBLA/ increase duration/intensity of performance	7. (blood pressure)	Lower blood pressure	less risk of stroke/ CHD or eq.	8. (RBCs/Hb)	Increased number of red blood cells/haemoglobin so more oxygen is transported around the body	easier to perform exercise/ reduced onset of fatigue/ avoid OBLA/ increase duration/intensity of performance	9 (respiratory structure)	Increase d surface area of alveoli/lung capacity	easier to perform exercise/ reduced onset of fatigue/ avoid OBLA/ increase duration/intensity of performance	10. (respiratory muscles)	Stronger respiratory muscles so more efficient breathing mechanics/TV/ increased VO ₂ max or eq.	easier to perform exercise/less fatigue/ alleviates symptoms of asthma	6	<p>Sub max 3 for description of interval session</p> <p>Sub max 3 for explanation of adaptations</p> <p>Accept activities in point 1 that can be sustained for at least 3 minutes or 800m +</p> <p>Accept any other suitable BAHL links.</p> <p>Only give a mark when the result of the adaptation is link to BAHL</p>
1. (type/e.g. exercises)	Repetition running/ circuits/shuttles/ skipping or eq. example exercise																															
2. (work interval/ duration)	3-5 minutes a station/ 3 minutes plus																															
3. (session duration)	20 minutes plus																															
4. (intensity)	Low-moderate/60-80 % HR _{max} / 50-70% VO _{2max}																															
5 (work:rest/relief ratio)	2:1/ 1:0.5/ work being double the rest/ equal to work:rest/relief / 1:1																															
	Adaptation	BAHL																														
6. (cardiac hypertrophy)	Increase in size of the heart or greater stroke volume or lower resting heart rate (RHR) or bradycardia	reduces risk of CHD/ or eq. or easier to perform exercise/ reduced onset of fatigue/ avoid OBLA/ increase duration/intensity of performance																														
7. (blood pressure)	Lower blood pressure	less risk of stroke/ CHD or eq.																														
8. (RBCs/Hb)	Increased number of red blood cells/haemoglobin so more oxygen is transported around the body	easier to perform exercise/ reduced onset of fatigue/ avoid OBLA/ increase duration/intensity of performance																														
9 (respiratory structure)	Increase d surface area of alveoli/lung capacity	easier to perform exercise/ reduced onset of fatigue/ avoid OBLA/ increase duration/intensity of performance																														
10. (respiratory muscles)	Stronger respiratory muscles so more efficient breathing mechanics/TV/ increased VO ₂ max or eq.	easier to perform exercise/less fatigue/ alleviates symptoms of asthma																														

Question	Answer			Marks	Guidance
	11. (arterial walls)	Increased elasticity of arterial walls helps regulate blood pressure Or lower blood pressure	less risk of hypertension/ CHD/ stroke or eq		
	12. (muscular)	Muscle hypertrophy results in increased strength	everyday activities are easier to perform/ it is easier to perform exercise/ increases metabolic rate which increases energy expenditure so could help manage weight		
	13. (myoglobin)	Increased myoglobin stores improve O ₂ storage and transport to mitochondria	easier to perform exercise/ less fatigue/ more energy or eq.		
	14. (mitochondria)	Increased number of mitochondria	easier to perform exercise/less fatigue/ more energy		
	15. (enzyme activity)	Increased aerobic enzyme activity increases metabolism of fat	better weight management or eq.		
	16. (capillarisation)	Increased muscle capillarisation increases gaseous exchange/surface area for diffusion	easier to perform exercise/ less fatigue or eq.		
	17.(connective tissue)	Increased strength of tendons/ligaments	less risk of injury/ increased joint stability		
	18. (Strength of bones)	Increased strength of bones due to increased calcium content / bone (mineral) density	less risk of injuries associated with ageing/ less risk of osteoporosis		
	19 (Body composition)	Decrease in non-lean body mass/ fat mass/ % body fat/ increase in metabolic rate	easier to perform exercise/ everyday activities / metabolise/breakdown fats		
	20. (cartilage)	Increased production of synovial fluid helps lubricate joints/ nourish articular cartilage and reduce friction or thickens articular cartilage	less joint problems/ pain/ injuries/osteoarthritis		

Question	Answer	Marks	Guidance																				
5 (c)	<p>5 marks for 5 from:</p> <p>Use of RhEPO</p> <table border="1" data-bbox="342 384 1581 1110"> <tbody> <tr> <td data-bbox="342 384 703 456">1. (EPO/ Rh EPO - hormone)</td> <td data-bbox="703 384 1581 456">EPO/ Rh EPO is a hormone that is injected into the body</td> </tr> <tr> <td data-bbox="342 456 703 523">2. (RBCs/haemoglobin)</td> <td data-bbox="703 456 1581 523">Increases the volume of red blood cells/haemoglobin in athlete's body.</td> </tr> <tr> <td data-bbox="342 523 703 627">2. (O₂)</td> <td data-bbox="703 523 1581 627">more oxygen can be transported around the body or allows athlete to transport more oxygen to the working muscles to perform aerobically for longer</td> </tr> <tr> <td data-bbox="342 627 703 730">3. (aerobic)</td> <td data-bbox="703 627 1581 730">Increases the ability to produce energy aerobically/VO_{2max} / aerobic capacity / delays OBLA / fatigue or useful to aerobic performers/ e.g. cycling, rowing, marathon runners</td> </tr> <tr> <td data-bbox="342 730 703 767">4. (cheating)</td> <td data-bbox="703 730 1581 767">Cheating/ unfair/illegal/immoral</td> </tr> <tr> <td data-bbox="342 767 703 834">5. (hard to detect)</td> <td data-bbox="703 767 1581 834">Difficult to test for so performers get away with it/ can use under-threshold volume without detection</td> </tr> <tr> <td data-bbox="342 834 703 901">6. (health consequences)</td> <td data-bbox="703 834 1581 901">Heart attack/problems or increased blood pressure or increased viscosity of blood or blood clotting</td> </tr> <tr> <td data-bbox="342 901 703 968">7. (infection from needles)</td> <td data-bbox="703 901 1581 968">Contamination of needles/ HIV/hepatitis/ blood borne virus</td> </tr> <tr> <td data-bbox="342 968 703 1035">8. (performance effects)</td> <td data-bbox="703 968 1581 1035">Reduced resting HR which will reduce CO/blood flow</td> </tr> <tr> <td data-bbox="342 1035 703 1110">9. (natural)</td> <td data-bbox="703 1035 1581 1110">Decreased natural production of EPO which will reduce RBC production/ compromise longevity of career</td> </tr> </tbody> </table>	1. (EPO/ Rh EPO - hormone)	EPO/ Rh EPO is a hormone that is injected into the body	2. (RBCs/haemoglobin)	Increases the volume of red blood cells/haemoglobin in athlete's body.	2. (O ₂)	more oxygen can be transported around the body or allows athlete to transport more oxygen to the working muscles to perform aerobically for longer	3. (aerobic)	Increases the ability to produce energy aerobically/VO _{2max} / aerobic capacity / delays OBLA / fatigue or useful to aerobic performers/ e.g. cycling, rowing, marathon runners	4. (cheating)	Cheating/ unfair/illegal/immoral	5. (hard to detect)	Difficult to test for so performers get away with it/ can use under-threshold volume without detection	6. (health consequences)	Heart attack/problems or increased blood pressure or increased viscosity of blood or blood clotting	7. (infection from needles)	Contamination of needles/ HIV/hepatitis/ blood borne virus	8. (performance effects)	Reduced resting HR which will reduce CO/blood flow	9. (natural)	Decreased natural production of EPO which will reduce RBC production/ compromise longevity of career	5	
1. (EPO/ Rh EPO - hormone)	EPO/ Rh EPO is a hormone that is injected into the body																						
2. (RBCs/haemoglobin)	Increases the volume of red blood cells/haemoglobin in athlete's body.																						
2. (O ₂)	more oxygen can be transported around the body or allows athlete to transport more oxygen to the working muscles to perform aerobically for longer																						
3. (aerobic)	Increases the ability to produce energy aerobically/VO _{2max} / aerobic capacity / delays OBLA / fatigue or useful to aerobic performers/ e.g. cycling, rowing, marathon runners																						
4. (cheating)	Cheating/ unfair/illegal/immoral																						
5. (hard to detect)	Difficult to test for so performers get away with it/ can use under-threshold volume without detection																						
6. (health consequences)	Heart attack/problems or increased blood pressure or increased viscosity of blood or blood clotting																						
7. (infection from needles)	Contamination of needles/ HIV/hepatitis/ blood borne virus																						
8. (performance effects)	Reduced resting HR which will reduce CO/blood flow																						
9. (natural)	Decreased natural production of EPO which will reduce RBC production/ compromise longevity of career																						

(d)* Levels of Response	
<p>Level 4 (18-20 marks) A comprehensive answer:</p> <ul style="list-style-type: none"> • 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. 	<p><u>At Level 4 answers are likely to show:</u></p> <ul style="list-style-type: none"> • a detailed explanation of the factors affecting explosive strength. • a detailed and appropriate training programme to improve explosive strength. • detailed knowledge of sets/reps/intensity/work : relief ratio. • excellent application of the principles of training. • detailed explanation of how the programme improves health and fitness.
<p>Level 3 (13-17 marks) A competent answer:</p> <ul style="list-style-type: none"> • 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. 	<p><u>At Level 3 answers are likely to show:</u></p> <ul style="list-style-type: none"> • a good explanation of the factors affecting explosive strength. • an appropriate training programme to improve explosive strength. • good knowledge of sets/reps/intensity/work : relief ratio. • good application of the principles of training. • good explanation of how the programme improves fitness and at the top of this level including health.
<p>Level 2 (8-12 marks) A limited answer:</p> <ul style="list-style-type: none"> • 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. 	<p><u>At Level 2 answers are likely to show:</u></p> <ul style="list-style-type: none"> • a limited explanation of the factors affecting explosive strength. • a limited training programme to improve explosive strength. • basic knowledge of sets/reps/intensity/work : relief ratio. • an attempt at applying the principles of training. • Limited explanation of how the programme improves health or fitness.
<p>Level 1 (0 – 7 marks) A basic answer:</p> <ul style="list-style-type: none"> • 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. 	<p><u>At Level 1 answers are likely to show:</u></p> <ul style="list-style-type: none"> • a basic explanation of the factors affecting explosive strength. • a basic training programme to improve explosive strength. • little or no attempt to demonstrate knowledge of sets/reps/intensity/work : relief ratio. • little or no attempt at applying the principles of training. • little or no attempt at explaining how the programme improves health or fitness.

Question		Answer	Marks	Guidance														
5	(d)*	<p>Indicative Content:</p> <table border="1"> <thead> <tr> <th colspan="2">Factors affecting explosive strength</th> </tr> </thead> <tbody> <tr> <td>1. (definition)</td> <td> <p>The ability to expand a maximal amount of energy in one or a series of strong, sudden high intensity movements/ apply a successive and equal force rapidly/ maximum force generated during a fast/ quick contraction</p> <ul style="list-style-type: none"> E.g. high jump/ long jump/ sprints/ javelin (or eq.) E.g. sprint down the wing in rugby/ drive for and interception in netball </td> </tr> <tr> <td>2. (fibre type)</td> <td> <p>Muscle composition</p> <ul style="list-style-type: none"> The greater the % of fast twitch fibres the greater the (explosive) strength large motor units recruitment of FG fibres </td> </tr> <tr> <td>3. (muscle size)</td> <td> <p>Size of muscle</p> <ul style="list-style-type: none"> larger the cross sectional area/ larger the muscle the greater a force it can generate </td> </tr> <tr> <td>4. (gender)</td> <td> <p>Gender</p> <ul style="list-style-type: none"> males generally have a greater strength due to larger muscle mass/ cross-sectional area/ muscle size (or opp.) males have higher testosterone levels (or opp.) </td> </tr> <tr> <td>5. (age)</td> <td> <p>Age</p> <ul style="list-style-type: none"> strength decreases with age due to decreased testosterone/ muscle mass/ elasticity/ speed of neuromuscular system Peak strength for females – 16-25 years/ Peak strength for males – 18-30 years old Greatest gains made 20-30yrs </td> </tr> <tr> <td>6. (inactivity)</td> <td> <p>Muscles decrease in size with inactivity</p> <ul style="list-style-type: none"> Muscle atrophy Suffer loss of (explosive) strength from not taking part in regular physical activity </td> </tr> </tbody> </table>	Factors affecting explosive strength		1. (definition)	<p>The ability to expand a maximal amount of energy in one or a series of strong, sudden high intensity movements/ apply a successive and equal force rapidly/ maximum force generated during a fast/ quick contraction</p> <ul style="list-style-type: none"> E.g. high jump/ long jump/ sprints/ javelin (or eq.) E.g. sprint down the wing in rugby/ drive for and interception in netball 	2. (fibre type)	<p>Muscle composition</p> <ul style="list-style-type: none"> The greater the % of fast twitch fibres the greater the (explosive) strength large motor units recruitment of FG fibres 	3. (muscle size)	<p>Size of muscle</p> <ul style="list-style-type: none"> larger the cross sectional area/ larger the muscle the greater a force it can generate 	4. (gender)	<p>Gender</p> <ul style="list-style-type: none"> males generally have a greater strength due to larger muscle mass/ cross-sectional area/ muscle size (or opp.) males have higher testosterone levels (or opp.) 	5. (age)	<p>Age</p> <ul style="list-style-type: none"> strength decreases with age due to decreased testosterone/ muscle mass/ elasticity/ speed of neuromuscular system Peak strength for females – 16-25 years/ Peak strength for males – 18-30 years old Greatest gains made 20-30yrs 	6. (inactivity)	<p>Muscles decrease in size with inactivity</p> <ul style="list-style-type: none"> Muscle atrophy Suffer loss of (explosive) strength from not taking part in regular physical activity 	20	<ul style="list-style-type: none"> Give KU for relevant knowledge points (usually main headings) Give DEV for relevant development points (usually bullet points) Give EG for relevant practical examples Always indicate the Level at the base of the answer (L1,L2, L3 or L4) Do not be limited by the indicative content give credit for other relevant points or development Do not give credit to irrelevant material
Factors affecting explosive strength																		
1. (definition)	<p>The ability to expand a maximal amount of energy in one or a series of strong, sudden high intensity movements/ apply a successive and equal force rapidly/ maximum force generated during a fast/ quick contraction</p> <ul style="list-style-type: none"> E.g. high jump/ long jump/ sprints/ javelin (or eq.) E.g. sprint down the wing in rugby/ drive for and interception in netball 																	
2. (fibre type)	<p>Muscle composition</p> <ul style="list-style-type: none"> The greater the % of fast twitch fibres the greater the (explosive) strength large motor units recruitment of FG fibres 																	
3. (muscle size)	<p>Size of muscle</p> <ul style="list-style-type: none"> larger the cross sectional area/ larger the muscle the greater a force it can generate 																	
4. (gender)	<p>Gender</p> <ul style="list-style-type: none"> males generally have a greater strength due to larger muscle mass/ cross-sectional area/ muscle size (or opp.) males have higher testosterone levels (or opp.) 																	
5. (age)	<p>Age</p> <ul style="list-style-type: none"> strength decreases with age due to decreased testosterone/ muscle mass/ elasticity/ speed of neuromuscular system Peak strength for females – 16-25 years/ Peak strength for males – 18-30 years old Greatest gains made 20-30yrs 																	
6. (inactivity)	<p>Muscles decrease in size with inactivity</p> <ul style="list-style-type: none"> Muscle atrophy Suffer loss of (explosive) strength from not taking part in regular physical activity 																	

Question		Answer	Marks	Guidance
	7. (training)	Specific strength training can improve (explosive) strength <ul style="list-style-type: none"> • Weight / resistance / plyometric training • hypertrophy of muscles (size of cells) • hyperplasia of muscles (number of cells) 		
	8. (ROM/ joint angle)	The range of motion/ angle at a joint/length of muscle can affect the strength that an individual can exert.		
	9. (temperature)	Increased temperature can increase explosive strength <ul style="list-style-type: none"> • Increased enzyme activity • Increased speed of neural transmission • Increased elasticity 		
		Training programme		
	10. (frequency)	2-5 x a week <ul style="list-style-type: none"> • 2 rest days 		
	11. (duration)	Short duration <ul style="list-style-type: none"> • 0-30 seconds/ accept up to 60 seconds 		
	12. (duration – plyometrics)	15-30 seconds on each activity <ul style="list-style-type: none"> • 100-200 contacts • 2-3 reps 		
	13. (type – interval/circuit)	Interval/ circuit training <ul style="list-style-type: none"> • E.g. Medicine ball exercises, squats, vertical jumps, press ups, sit ups 		
	14. (type – plyometrics)	Plyometrics <ul style="list-style-type: none"> • Jumping/ bounding/hopping/ box jumps/ press up with a clap • involves a concentric contraction followed by an eccentric contraction which results in a greater force/ stretch reflex to recruit more motor units 		
	15. (type – weight training)	Weight training <ul style="list-style-type: none"> • Bench press/weighted squats/leg press • 3-10 reps 		
	16. (sets)	2/3-6 sets		
	17. (intensity)	High intensity/ fast reps		

Question	Answer	Marks	Guidance
	<ul style="list-style-type: none"> 70-90 % 1 RM 		
18. (work: rest/relief)	High work: rest/relief ratio/ 1:3/ 1:6 <ul style="list-style-type: none"> 30 seconds 50% recovery 3 minutes full recovery 		
19. (number of stations)	3-5/6 stations		
	General		
20.	Keep training diary <ul style="list-style-type: none"> to monitor intensity/duration/repetitions/work:rest ratios 		
21. (Principles of training – up to 3 dev)	Principles of training- overload; progression; variance; specificity; moderation; reversibility <ul style="list-style-type: none"> overload to increase amount of work body does/ push body beyond normal limit by increasing FIT progression to increase workloads gradually once adaptations have been made variance to maintain motivation / prevent RSI/ boredom specificity to the alactic system/ FG fibre types/ muscle group/ movement pattern moderation to provide appropriate overload/ prevent burnout/ overtraining reversibility – maintain training to prevent adaptation loss 		
22.	Appropriate test <ul style="list-style-type: none"> Vertical jump test/ standing broad jump (or eq.) Set realistic targets/ goals/ improve score on standing long jump/ vertical jump/ SMART targets		
23.	Re-test to monitor improvement / maintain progression		
24.	Periodisation <ul style="list-style-type: none"> Microcycle -Short term objective/1 to 3 weeks/recurrent units Made up of a number of training sessions 		
25.	Mesocycle <ul style="list-style-type: none"> Medium term objective/approx.6 weeks/depends on sport/objective Could be pre-season/competitive/off/ transition season 		

Question	Answer	Marks	Guidance
	<ul style="list-style-type: none"> • Made up of a number of microcycles 		
26.	Before each session the athlete should warm up <ul style="list-style-type: none"> • Increases muscle temperature/increased enzyme activity/increased elasticity of muscle/vascular shunt (or eq.) • Reduces risk of injury • Reduce the risk of DOMS • Especially with plyometric training 		
27.	After each session the performer should complete a cool down <ul style="list-style-type: none"> • Maintains venous return & stroke volume/prevents blood pooling/removes lactic acid/reduces DOMS (or eq.) 		
Health and fitness benefits			
Fitness benefits			
28. (skeletal muscle-size)	Increased ability of the muscle to produce maximal force quickly <ul style="list-style-type: none"> • Hypertrophy of the muscle • Hyperplasia/ increase in number of muscle fibre 		
29. (skeletal muscle - actin/myosin)	Increased number/ size of contractile protein <ul style="list-style-type: none"> • More actin/ myosin cross bridges 		
30. (neural - recruitment of muscle fibres/units)	Increased recruitment of fast twitch muscle fibres <ul style="list-style-type: none"> • Increased recruitment of motor units • Resulting in a stronger contraction • Improved co-ordination of motor units 		
31. (neural - reduction in antagonist inhibition)	Less inhibition from antagonist muscle/ stretch reflex <ul style="list-style-type: none"> • Allows antagonist to stretch further • So that agonist can contract with greater force 		
32. (metabolic - ATP)	Increase in ATP/PC stores <ul style="list-style-type: none"> • Increase in myoglobin stores 		
33. (buffering)	Increased buffering capacity <ul style="list-style-type: none"> • Higher tolerance to lactic acid • Delays fatigue 		
34. (enzyme activity)	Increased action of glycolytic enzymes <ul style="list-style-type: none"> • GPP/ PFK 		
35. (anaerobic	Increased anaerobic threshold		

Question		Answer	Marks	Guidance
		threshold)		
		<ul style="list-style-type: none"> • Increased recovery of ATP/PC and lactic acid system • Delays OBLA 		
	36.	(capillary density)		
		Increased density of capillaries <ul style="list-style-type: none"> • So greater O₂/CO₂ transport • Greater diffusion of oxygen • Which could result in quicker removal of lactic acid 		
		Health benefits		
	37.	(connective tissue)		
		Increased strength of connective tissue <ul style="list-style-type: none"> • Tendons/ligaments are stronger so less risk of injury 		
	38.	(bone density)		
		Increase bone density <ul style="list-style-type: none"> • Less risk of osteoporosis 		
	39.	(CHD)		
		Reduces risk of CHD <ul style="list-style-type: none"> • Due to hypertrophy of the heart 		
	40.	(blood pressure)		
		Reduces blood pressure <ul style="list-style-type: none"> • Due to stronger heart • Reduces risk of stroke 		
	41.	(weight)		
		Lose weight <ul style="list-style-type: none"> • More muscle will result in higher metabolic rate 		
	42.	(social)		
		Better body tone/hypertrophic body <ul style="list-style-type: none"> • Increased self esteem 		

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

© OCR 2015

