

Mark Scheme (Results) Summer 2008

GCSE

GCSE Physical Education (1827) paper 01

Unit 1 Factors affecting participation and performance

SECTION ONE

Question Number	Answer	Mark
1 (a)	D	(1)
(b)	C	(1)
(c)	C	(1)
(d)	D	(1)
(e)	B	(1)
(f)	D	(1)
(g)	C	(1)
(h)	C	(1)
(i)	A	(1)
(j)	A	(1)
(Total 10 marks)		
TOTAL FOR SECTION ONE: 10 MARKS		

SECTION TWO

Question Number	Answer	Mark
2(a)(i)	Credit any answer provided answer given. Accept responses one to seven. Accept answers where more than one response given.	(1)

Question Number	Answer	Mark
2(a)(ii)	<ul style="list-style-type: none"> • Physical - explanation/interpretation of training effects linked to physical activity • Mental - explanation/interpretation of psychological factors linked to physical activity. <p>Do not accept looking good / better as a physical benefit.</p> <p>Do not credit answer twice if for physical and mental they have used the same explanation</p>	(2)

Question Number	Answer	Mark
2(b)(i)	Social. Do not accept: socialising	(1)

Question Number	Answer	Mark
2(b)(ii)	Relevant social example, eg make friends/spend time with friends/socialising. If wrong in 2bi do not credit, with one exception - socialising.	(1)

Question Number	Answer	Mark
2(c)(i)	Relevant link between cricket and co-operation. Eg work together within a team/teamwork/work with partner (in practice)/team mate. Do not accept: co-operate with others (ie use of question word)	(1)

Question Number	Answer	Mark
2(c)(ii)	Relevant link between cricket and competition. Eg play/participate matches against others Do not accept: league match/equiv on own without qualification of playing Do not accept: competition against others (ie use of question word)	(1)

(Total 7 marks)

Question Number	Answer	Mark
3(a)(i)	The amount of <u>force</u> a muscle can <u>exert</u> (accept equiv eg apply) against a resistance/equiv, eg amount of force a muscle can withstand, how much weight you can hold/lift. Do not accept: strength/power unless qualified.	(1)

Question Number	Answer	Mark				
3(a)(ii)-(iii)	<table border="1"> <tr> <td>(ii) Activity requiring muscular strength</td> <td>(iii) example of use of muscular strength in this activity</td> </tr> <tr> <td>Accept suitable strength related activity in own right or as an aspect of power. Do not accept: eg long distance running/running.</td> <td>Correct application of candidates answer to previous part of question, eg if rugby, accept scrum, tackling, holding off opposition. Do not accept: answers relating to other components of fitness, or vague eg kicking (accept shooting/long pass).</td> </tr> </table> <p>Do not credit 2nd column if answer in 1st column incorrect.</p>	(ii) Activity requiring muscular strength	(iii) example of use of muscular strength in this activity	Accept suitable strength related activity in own right or as an aspect of power. Do not accept: eg long distance running/running.	Correct application of candidates answer to previous part of question , eg if rugby, accept scrum, tackling, holding off opposition. Do not accept: answers relating to other components of fitness, or vague eg kicking (accept shooting/long pass).	(2)
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Question Number	Answer	Mark
3(b)(i)	The ability to use (voluntary) <u>muscles</u> , <u>many times/equiv</u> (without getting tired/equiv). Do not accept: how long they can carry on.	(1)

Question Number	Answer	Mark								
<p>3(b)(ii)(iii)</p>	<p>Accept:</p> <table border="1"> <thead> <tr> <th>(ii)</th> <th>(iii)</th> </tr> </thead> <tbody> <tr> <td>Flexibility</td> <td> Longer strides/better technique, therefore covers the distance more easily/equiv. Do not accept: reference to injury. </td> </tr> <tr> <td>Body Composition</td> <td> Correct ratio of muscle to fat - body is efficient/not carrying unnecessary weight/sufficient muscle to complete task/equiv therefore can cover the distance more easily </td> </tr> <tr> <td> Cardiovascular fitness/stamina/ cardiovascular endurance Do not accept: CV/fitness or endurance. NB If CV fitness/ CV given allow access to second mark only. </td> <td> Can continue to work aerobically so can maintain performance for longer/equiv therefore has a quicker time. Accept reference to oxygen transport. Do not accept: reference to pumping blood. </td> </tr> </tbody> </table> <p>NB - must relate to a long distance runner. Part (ii) must be correct to award a mark to part (iii).</p> <p>Do not accept: muscular endurance or muscular strength for part (ii).</p>	(ii)	(iii)	Flexibility	Longer strides/better technique, therefore covers the distance more easily/equiv. Do not accept: reference to injury.	Body Composition	Correct ratio of muscle to fat - body is efficient/not carrying unnecessary weight/sufficient muscle to complete task/equiv therefore can cover the distance more easily	Cardiovascular fitness/stamina/ cardiovascular endurance Do not accept: CV/fitness or endurance. NB If CV fitness/ CV given allow access to second mark only.	Can continue to work aerobically so can maintain performance for longer/equiv therefore has a quicker time. Accept reference to oxygen transport. Do not accept: reference to pumping blood.	<p>(2)</p>
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<p>(Total 6 marks)</p>										

Question Number	Answer	Mark										
4(a)(i)	<table border="1"> <tr> <td></td> <td>(i)</td> </tr> <tr> <td>Co-ordination</td> <td>to get correct timing/together/rhythm of arm and leg action/breathing /equiv</td> </tr> <tr> <td>Agility</td> <td>executing turns to maintain speed/equiv</td> </tr> <tr> <td>Reaction time</td> <td>at the start of the race to get a good start/equiv</td> </tr> <tr> <td>Do not accept: reactions</td> <td>Do not accept: need to react quickly or react - unless qualified</td> </tr> </table> <p>Any two - any order.</p> <p>Do not accept: other aspects of skill related fitness. Do not accept: Definitions.</p> <p>NB - must relate to a swimmer.</p>		(i)	Co-ordination	to get correct timing/together/rhythm of arm and leg action/breathing /equiv	Agility	executing turns to maintain speed/equiv	Reaction time	at the start of the race to get a good start/equiv	Do not accept: reactions	Do not accept: need to react quickly or react - unless qualified	(2)
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Question Number	Answer	Mark		
4(a)(ii)	<table border="1"> <tr> <td>Agility</td> <td>(Only one length therefore) no need to change direction quickly/equiv</td> </tr> </table> <p>Do not accept: other aspects of skill related fitness.</p>	Agility	(Only one length therefore) no need to change direction quickly/equiv	(2)
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Question Number	Answer	Mark
4(b)(i)	<p>Power - strength performances at speed/combination of strength/speed.</p> <p>Speed - the rate at which a performer can move part or all of the body.</p> <p>Difference - speed is a component of power/equiv.</p> <p>Max of 1 mark for description of either power or speed or both.</p> <p>For second mark, candidate must state the difference between power and speed.</p>	(2)

Question Number	Answer	Mark
4(b)(ii)	<p>Must be an anaerobic activity or anaerobic aspect of aerobic activity eg shot putt, boxing, weight lifting, tennis serve, high jump etc.</p> <p>Answer must be specific.</p> <p>Do not accept: football/kicking a ball/hitting a ball/tennis/equiv.</p>	(1)

(Total 7 marks)

Question Number	Answer	Mark
5(a)(i)	<p>Overload - training more than you normally do/equiv. Allow approx example that demonstrates an increase in workload.</p> <p>Do not accept: work body to more than it is capable of, working harder than you are supposed to, working over your maximum heart rate/working above upper threshold of training/equiv.</p> <p>Do not accept: overwork/pushed to limits Do not accept: training at an intensity high enough to improve performance. Do not accept: applying FITT unless qualified.</p>	(1)

Question Number	Answer	Mark
5(a)(ii)	<p>We would see an increase in the workload/specific example of improved recovery/equiv, eg increasing number of reps.</p> <p>Do not accept: her fitness is increasing unless qualified.</p>	(1)

Question Number	Answer	Mark												
5(b)	<table border="1"> <thead> <tr> <th>(i) Principles</th> <th>(ii) explanation</th> </tr> </thead> <tbody> <tr> <td>Progression</td> <td> Gradually increase the amount you do. Do not accept: Progress </td> </tr> <tr> <td>Specificity</td> <td> Match the training to the needs of the <u>sport/activity/playing position/equiv</u> (can accept reference to energy systems/particular muscle requirements). Do not accept: specific </td> </tr> <tr> <td>Individual Needs</td> <td> Match the training to the needs of the <u>individual/playing position/equiv</u> NB do not credit playing position twice. </td> </tr> <tr> <td>Thresholds of training (Accept Training threshold)</td> <td> Training intensity - minimum and maximum heart rate values that the performer should be working within/heart rate values between 60-80% MHR/equiv </td> </tr> <tr> <td>Moderation</td> <td> Doing the right amount of training - not too much; not too little/equiv. Do not accept: avoid injury unless qualified. Do not accept: moderation/moderate. Do not accept: reference to diet. </td> </tr> </tbody> </table> <p> Take first 4 Only accept the above, (eg not tedium, not reversibility, not overload). NB If stated principle incorrect, ignore the </p>	(i) Principles	(ii) explanation	Progression	Gradually increase the amount you do. Do not accept: Progress	Specificity	Match the training to the needs of the <u>sport/activity/playing position/equiv</u> (can accept reference to energy systems/particular muscle requirements). Do not accept: specific	Individual Needs	Match the training to the needs of the <u>individual/playing position/equiv</u> NB do not credit playing position twice.	Thresholds of training (Accept Training threshold)	Training intensity - minimum and maximum heart rate values that the performer should be working within/heart rate values between 60-80% MHR/equiv	Moderation	Doing the right amount of training - not too much; not too little/equiv. Do not accept: avoid injury unless qualified. Do not accept: moderation/moderate. Do not accept: reference to diet.	(8)
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(Total 10 marks)

Question Number	Answer	Mark
6(i)	Fartlek. Accept: phonetic spelling. Do not accept: speed play.	(1)

Question Number	Answer	Mark
6(ii)	Short sprints/sprinting up hills/when sprinting.	(1)

Question Number	Answer	Mark
6(iii)	This is continuous - no breaks/ varied terrain/different surfaces. Do not accept: Description of interval training only.	(1)

Question Number	Answer	Mark
6(iv)	1) Allows for <u>recovery</u> during the session 2) Able to work at high intensity due to the recovery periods. Do not accept: breaks or rests.	(1)

Question Number	Answer	Mark
6(v)	Isotonic. Accept: phonetic spelling	(1)

Question Number	Answer	Mark
6(vi)	1. muscular hypertrophy/equiv (bigger muscles, larger muscles) 2. stronger muscles, increase in power etc 3. capillarisation/equiv 4. Increased resistance to fatigue/increased lactate threshold/increased muscular endurance 5. increased mitochondria/equiv explanation 6. increased myoglobin/equiv explanation - but check not awarding same point twice for explanation. Only accept one answer per numbered item. Do not accept: toned muscles on own, but accept with reference to increased strength etc.	(2)

(Total 7 marks)

Question Number	Answer	Mark
7(a)	Mesomorph/s Mesomorphic. Accept: phonetic spelling. Do not accept: metamorph.	(1)

Question Number	Answer	Mark
7(b)	First blank Thin/lean/skinny/equiv Do not accept: slim, light, wiry, gangly, under weight (as in question). Second Blank Aerobic/endurance/1500m or greater/High Jump/jockeys equiv Do not accept: Basketball players/gymnasts	(2)

Question Number	Answer	Mark
7(c)	<ul style="list-style-type: none"> • Endomorph/ic • Weight/fat/size/body mass/additional bulk/equiv Accept: phonetic spelling	(2)

(Total 5 marks)

Question Number	Answer	Mark
8	<ol style="list-style-type: none"> 1. protect players from injury/increase safety/equiv 2. Increase the enjoyment/fun of the activity (players/spectators)/encourage good sporting behaviour/maintain control/prevent arguments/equiv 3. so the game is fair/so there is no cheating/equiv 4. give the game structure/identify winners/better competition/equiv. NB Any order Only credit 1 point per category of answer. Do not accept balanced competition/reference to technique/to discipline players.	(3)

(Total 3 marks)

Question Number	Answer	Mark																					
9	<table border="1"> <thead> <tr> <th></th> <th>Potential Sports Injury</th> <th>Preventative Measure</th> </tr> </thead> <tbody> <tr> <td>i)</td> <td>Fracture</td> <td>shin guards/referee/ helmet/umpire</td> </tr> <tr> <td>ii)</td> <td>Concussion</td> <td>face mask/helmet/ referee/umpire</td> </tr> <tr> <td>iii)</td> <td>Soft tissue injury</td> <td>warm up/ referee/ studs/umpire</td> </tr> <tr> <td>iv)</td> <td>Grazes (from slipping)</td> <td>studs</td> </tr> <tr> <td>v)</td> <td>Dehydration</td> <td>water</td> </tr> <tr> <td>vi)</td> <td>Hypothermia</td> <td>ski jacket/survival blanket</td> </tr> </tbody> </table>		Potential Sports Injury	Preventative Measure	i)	Fracture	shin guards/referee/ helmet/umpire	ii)	Concussion	face mask/helmet/ referee/umpire	iii)	Soft tissue injury	warm up/ referee/ studs/umpire	iv)	Grazes (from slipping)	studs	v)	Dehydration	water	vi)	Hypothermia	ski jacket/survival blanket	(6)
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	v)	Dehydration	water																				
	vi)	Hypothermia	ski jacket/survival blanket																				
<p>Only credit preventative measure once. Allow answers if candidate has described how the preventative measure is used, eg wear helmet; have a referee. Allow answers where candidate has linked image to injury.</p>																							

(Total 6 marks)

Question Number	Answer	Mark
10(a)(i)	Veins/vena cava/ pulmonary vein.	(1)

Question Number	Answer	Mark
10(a)(ii)	Stop backflow of blood/stop blood going backwards/stop blood going the wrong way/equiv.	(1)

Question Number	Answer	Mark	
10(b)	(i) Component of blood	(ii) Function of each component	(iii) Importance to sports performer
	Red blood cells Do not accept plasma as does not match entry in final column	Carry/ collect/ transport <u>oxygen/O²</u> Do not accept haemoglobin on its own Do not accept provide/produce oxygen	
		Fight disease/help immune system/ equiv	Keep the performer healthy so they can compete /equiv Do not accept keep healthy on its own
	Platelets Do not accept plasma as does not match entry in final column	Aid clotting/form a scab/ equiv	
		(6)	
(Total 8 marks)			

Question Number	Answer	Mark
11(a)	Tidal volume.	(1)

Question Number	Answer	Mark
11(b)	Vital capacity.	(1)

Question Number	Answer	Mark
11(c)	Oxygen debt/deficit/ O ² debt.	(1)

(Total 3 marks)

Question Number	Answer	Mark
12(a)(i)	A - Femur.	(1)

Question Number	Answer	Mark
12(a)(ii)	B - Fibula.	(1)

Question Number	Answer	Mark
12(a)(iii)	C - Tibia.	(1)

Question Number	Answer	Mark
12(a)(iv)	Long (bones).	(1)

Question Number	Answer	Mark
12(a)(v)	<u>Levers</u> /red blood cell production. Do not accept: help us move unless qualified with reference to levers.	(1)

Question Number	Answer	Mark
12(b)(i)	<ul style="list-style-type: none"> • Hinge • Flexion (flexion/extension in any order) • Extension (flexion/extension in any order). <p>NB only accept flexion or extension once.</p>	(3)

Question Number	Answer	Mark
12(b)(ii)	<ul style="list-style-type: none"> • Hip • Ball and socket. 	(2)

(Total 10 marks)

Question Number	Answer	Mark
13(a)	Tendon/s.	(1)

Question Number	Answer	Mark
13(b)	Ligament/s.	(1)

Question Number	Answer	Mark
13(c)	Ligament/s.	(1)

Question Number	Answer	Mark
13(d)	(i) Tendon/s. (ii) Ligament/s.	(1)

(Total 4 marks)

Question Number	Answer	Mark						
14	<table border="1"> <thead> <tr> <th>(i) Muscle Type</th> <th>(ii) Example</th> </tr> </thead> <tbody> <tr> <td>Cardiac</td> <td>Heart</td> </tr> <tr> <td>Voluntary</td> <td>Biceps</td> </tr> </tbody> </table>	(i) Muscle Type	(ii) Example	Cardiac	Heart	Voluntary	Biceps	(4)
(i) Muscle Type	(ii) Example							
Cardiac	Heart							
Voluntary	Biceps							

(Total 4 marks)

TOTAL FOR SECTION TWO: 80 MARKS

SECTION THREE

Question Number	Answer	Mark
15(a)(i)	Aesthetic (appreciation). Allow phonetic spelling.	(1)

Question Number	Answer	Mark
15(a)(ii)	<p>Fitness - the ability to meet the demands of the environment. Do not accept: alternative wording.</p> <p>Performance - how well a task is completed. Do not accept: alternative wording.</p>	(2)

Question Number	Answer			Mark
15(b)	Component of principle		Explanation of component	Example of application to create overload
	(i)	F	(Frequency) - how often (training occurs) Do not accept frequency on own	Training once a week and then increased to twice/eqiv Do not accept training more often
	(ii)	I	(Intensity) - how hard (the person is working) Do not accept intensity on own	Sprinting 20 shuttles rather than 18 - ie example demonstrates working harder Do not accept training harder
	(iii)	T	(Time) - how long (the person trains for) Do not accept time on own	First session was 20mins but by 5 th session working for 30mins/eqiv Do not accept training longer
	(iv)	T	(Type) - the training must match the needs of the activity Do not accept the type of training unless qualified	
				(7)

Question Number	Answer	Mark
15(c)(i)	62 (bpm) (allow answer between 60 - 65).	(1)

Question Number	Answer	Mark
15(c)(ii)	4 th (minute). (Allow 3 rd if anticipatory rise not considered).	(1)

Question Number	Answer	Mark
15(c)(iii)	13 th (minute).	(1)

Question Number	Answer	Mark
15(c)(iv)	End of 13 th (minute)/14 th (minute)/between 13 th and 14 th .	(1)

Question Number	Answer	Mark
15(c)(v)	No. Don't forget to turn page for (c)(vi).	(1)

Question Number	Answer	Mark
15(c)(vi)	Did not return to resting heart rate by end of recovery period. Do not credit if (c)(v) is incorrect.	(1)

Question Number	Answer	Mark
15(c)(vii)	1. $220 - 16/\text{age}$ 2. $204 = \text{max HR}$ 3. Upper/lower limit 4. Between 60 & 80% (allow figures in either order) 5. Between 120 & 165 bpm. (allow figures in either order). Any three points from separate rows in sensible order.	(3)

Question Number	Answer	Mark
15(c)(viii)	9 - 13 mins.	(1)

(Total 20 marks)

Question Number	Answer	Mark
16(a)(i)	Flexibility.	(1)

Question Number	Answer	Mark
16(a)(ii)	Soft tissue injury/strain/muscle tear/ruptures.	(1)

Question Number	Answer	Mark
16(b)	Back of the upper thigh/eqiv (must be clear). Do not accept back of the leg / top of thigh.	(1)

Question Number	Answer	Mark
16(c)(i)	Quadriceps. Do not accept quads.	(1)

Question Number	Answer	Mark
16(c)(ii)	One muscle relaxes to allow the other to contract. Do not accept reference to flexion/extension. Do not accept muscles working in pairs/together/ opposite unless qualified.	(1)

Question Number	Answer	Mark									
16(d)	<table border="1"> <thead> <tr> <th>Function of skeleton (i)</th> <th>Explanation of how function is achieved (ii)</th> <th>Use in Figure 6 (Playing badminton shot) (iii)</th> </tr> </thead> <tbody> <tr> <td>Protection</td> <td>Bones protect vital <u>organs</u> Accept bones cover/surround/encase/eqiv provided linked to organs</td> <td>Skull/Cranium protects brain from blow from racket/eqiv</td> </tr> <tr> <td>Blood /Red blood cell production</td> <td>Made in bone <u>marrow</u></td> <td style="background-color: black;"></td> </tr> </tbody> </table> <p>Do not award 2 marks within 1 box.</p>	Function of skeleton (i)	Explanation of how function is achieved (ii)	Use in Figure 6 (Playing badminton shot) (iii)	Protection	Bones protect vital <u>organs</u> Accept bones cover/surround/encase/eqiv provided linked to organs	Skull/Cranium protects brain from blow from racket/eqiv	Blood /Red blood cell production	Made in bone <u>marrow</u>		(5)
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Question Number	Answer	Mark																		
16(e)	<table border="1"> <thead> <tr> <th>(i) Sport involving greater risk</th> <th>(ii) Explanation of risk</th> <th>(iii) Explain</th> </tr> </thead> <tbody> <tr> <td></td> <td>Look for one of two things: specific injury description of situation that could result in injury</td> <td>Consider this column in relation to middle column</td> </tr> <tr> <td>Eg Invasion games/ football/rugby /hockey</td> <td>Broken leg</td> <td>Contact sport</td> </tr> <tr> <td>Trampolining/ equiv</td> <td>Allow examples of serious injury as a result of falling from trampoline, eg concussion</td> <td>It relies on others to maintain safety or equivalent/ falling from height</td> </tr> <tr> <td>Javelin/equiv</td> <td>Allow examples of serious injury/equiv as a result being hit with javelin eg stabbed/ death/loss of eye</td> <td>The equip used in Javelin can cause more harm than the equipment in badminton/ javelin is a weapon</td> </tr> <tr> <td>Boxing</td> <td>Concussion/ brain damage/ death</td> <td>Combat sport</td> </tr> </tbody> </table> <p>Accept any appropriate sport (ie one that provides greater risk).</p> <p>If inappropriate sport stated no credit for rest of row.</p> <p>Examiner hint - when marking (iii) ask yourself the question is the explanation worse than something that would happen in badminton.</p> <p>NB consider final column in relation to the middle column.</p>	(i) Sport involving greater risk	(ii) Explanation of risk	(iii) Explain		Look for one of two things: specific injury description of situation that could result in injury	Consider this column in relation to middle column	Eg Invasion games/ football/rugby /hockey	Broken leg	Contact sport	Trampolining/ equiv	Allow examples of serious injury as a result of falling from trampoline, eg concussion	It relies on others to maintain safety or equivalent/ falling from height	Javelin/equiv	Allow examples of serious injury/equiv as a result being hit with javelin eg stabbed/ death/loss of eye	The equip used in Javelin can cause more harm than the equipment in badminton/ javelin is a weapon	Boxing	Concussion/ brain damage/ death	Combat sport	(6)
(i) Sport involving greater risk	(ii) Explanation of risk	(iii) Explain																		
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Javelin/equiv	Allow examples of serious injury/equiv as a result being hit with javelin eg stabbed/ death/loss of eye	The equip used in Javelin can cause more harm than the equipment in badminton/ javelin is a weapon																		
Boxing	Concussion/ brain damage/ death	Combat sport																		

Question Number	Answer	Mark
16(f)(i)	(Narcotic) analgesics. Do not accept named drugs/ pain killers/ narcotics/ or letters to represent class of drug.	(1)

Question Number	Answer	Mark
16(f)(ii)	1. make injury worse/equiv 2. against the rules/banned/ illegal/ shame/equiv 3. addictive. Any order Do not accept: harmful side effects/harm their body.	(2)

Question Number	Answer	Mark
16(g)	1. 'mask'/ equiv the presence of another drug/ 2. increase need to urinate therefore removing concentration of other drugs from system/ equiv. Do not accept lose weight.	(1)

(Total 20 marks)

Question Number	Answer	Mark
17(a)(i)	A - Semi lunar valves B - Septum C - ventricle/ventricles D - atrium/atria/atriums.	(4)

Question Number	Answer	Mark
17(a)(ii)	A - Trachea B - Bronchiole - must be spelt correctly C - Alveoli/ Alveolus.	(3)

Question Number	Answer	Mark
17(b)(i)	Ribs - <u>move up and out.</u> Diaphragm - contracts/flattens/moves down.	(2)

Question Number	Answer	Mark
17(b)(ii)	Make more room for more air/cause pressure diff to cause air to move in/equiv. Do not accept reference to oxygen must relate to air.	(1)

Question Number	Answer	Mark
17(c)	Oxygen - 17% allow 16 - 18%. Carbon Dioxide - 4% allow 3%.	(2)

Question Number	Answer	Mark
17(d)(i)	<ul style="list-style-type: none"> • Humerus • Radius • Ulna. Any order. Allow phonetic spelling.	(3)

Question Number	Answer	Mark
17(d)(ii)	Biceps/Biceps brachii. Allow phonetic spelling.	(1)

Question Number	Answer	Mark
17(d)(iii)	Pectoralis major/pectorals. Allow phonetic spelling. Do not accept Pecs.	(1)

Question Number	Answer	Mark
17(e)(i)	Fast twitch.	(1)

Question Number	Answer	Mark
17(e)(ii)	Tires quickly/ can't last for long/ can't work as long as slow twitch/ does not have much endurance /equiv. Do not accept reference to oxygen. Do not accept reference to specific sports unless qualified.	(1)

Question Number	Answer	Mark
17(e)(iii)	Weight (training)/interval (training)/plyometric (training)/circuit (training) / resistance (training). Do not accept fartlek.	(1)
(Total 20 marks)		
TOTAL FOR SECTION THREE: 60 MARKS		
TOTAL FOR PAPER : 150 MARKS		