

Mark Scheme (Results)

Summer 2013

GCSE Physical Education (5PE01/01)
Unit 1: The Theory of Physical
Education

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Section A: Computer Marked

Question Number	Answer	Mark
1a	C Labelled C	1
Question Number	Answer	Mark
1b	D 1500 m runner	1
Question Number	Answer	Mark
1c	B Progressive overload	1
Question Number	Answer	Mark
1d	D Weight	1
Question Number	Answer	Mark
1e	D Carbohydrates	1
Question Number	Answer	Mark
1f	D Improved reaction time	1
Question Number	Answer	Mark
1g	C Anabolic steroids taken by a discus thrower will allow them to train for longer	1
Question Number	Answer	Mark
1h	A High blood pressure	1
Question Number	Answer	Mark
1i	C Muscles are arranged in pairs, for example the hamstrings and quadriceps	1
Question Number	Answer	Mark
1j	B Gives the skeleton strength	1

Section B: ePEN Marking

Question	Answer		Marks	Total
2	Benefit (a)	How achieved (b)	3x2	(6)
	1. Feel good OR Enjoyment OR Fun OR Happy/less depressed (1)	(increased) release of serotonin/endorphins OR Playing with friends OR Makes a change from work/study OR Due to success (1).		
	2. Stress relief (1)	Taking your mind off of your concerns /catharsis (1).		
	3. (Increase your) self-esteem OR (Increased) confidence OR Feel better about yourself OR (more) motivated (1)	Because you get recognition for being good at sport OR because you improve performance/increased your fitness/health OR Feel good about weight loss <u>because</u> previous overweight (1).		
	4. (Provides) competition (1)	Through playing <u>against/trying to beat</u> others/play matches/fixtures (1).		
	5. (Develops) aesthetic appreciation (1)	As you increase understanding of skilful movement (1).		
	6. (Provides a mental) challenge (1)	By putting yourself under pressure to achieve a goal/ makes you more determined OR Gives you a sense of achievement once completed (1).		
	Additional Guidance:			
	<ul style="list-style-type: none"> • May be overlap between benefits listed in 1 and 3 and how achieved. For example you could increase self-esteem (1) because you have widened your circle of friends. (1) This is OK to credit provided the same point is not credited twice. I.e. feel good because made new friends and increased self-esteem through meeting new people • Only credit (b) 'How Achieved' if correctly linked to mental benefit in (a) • Pt 4 - accept description of <u>competitive</u> situation, e.g. match/fixture • Pt 6 - accept the term physical challenge if description focuses on 'mental' aspect of challenge or if description is blank. • Can credit relevant statement in (b) provided 'mental' stated as minimum in (a) or description of mental, e.g. serotonin released. • if two examples from the same category given in (a) e.g. feel better about themselves and improve self-esteem (both pt 3 on m/s) then this can only gain credit once in (a). But can access 2 marks in (b) if correctly applied 			
	Do not accept:			
<ul style="list-style-type: none"> • Do not credit any physical or social benefits in (a) (although can be part of response in (b) see Pt 1. • If physical or social or example of them identified in (a) then no credit in (b) as not addressing qu. • Increased knowledge of sport in (a). • Team building/team work (a). 				

NB can credit relevant description of mental benefit in column two if column one simply states 'mental'

Question	Answer	Do not accept	Additional Guidance	Marks	Total
Q03	<ul style="list-style-type: none"> • People • Resources 	<i>Anything else</i>	Accept - Phonetic spelling: Responses in any order: Accept if correct answer appears <u>after</u> egs of 'people' or 'resources' For example: Family, friends, people Access, availability, resources	2x1	(2)

Question	Answer	Do not accept	Additional Guidance	Marks	Total		
4	a		One purpose from: <ul style="list-style-type: none"> • increase participation/encourage people to participate/get people active (1) OR <ul style="list-style-type: none"> • keep/remain/regular/retain people in sport (1) <i>Credit <u>increase/maintain</u> health/fitness (as ultimate aim of initiatives)</i>	<i>Start, stay, succeed on own.</i>	<i>Credit response that indicates opportunity is being given, i.e. any alternative for getting people to start or helping them to stay involved</i> <i>If stated credit response related to talent identification e.g. spot young players with high ability</i>	1x1	(1)

Question		Answer	Do not accept	Additional Guidance	Marks	Total
4	b	<p>A description that makes reference to any one of the following developed points:</p> <ol style="list-style-type: none"> Improves social health through involvement with others through participation (1) rather than being isolated (1) <i>Additional example answer: Social benefit through making friends(1) improving their ability to interact/work with others</i> Improves physical health through weight reduction if <u>overweight</u> (1) e.g. less chance of diabetes (1) <i>Additional example answer: healthier because drop in blood pressure(1) leading to less chance of CHD (1)</i> Improves physical health through improving fitness (1) e.g. reduces risk of heart disease (1) <i>Additional example answer: keeping fit gives you better health (1) leading to drop in cholesterol levels (1)</i> Improves mental health through positive use of time/don't sit at home bored (1) if previously unengaged (1) <i>Additional example answer: mentally better due to stress relief (1) therefore less likely to suffer with depression (1)</i> <p><i>Accept other health benefits if linked with becoming more active</i></p>	<p><i>Do not accept the following:</i></p> <ul style="list-style-type: none"> <i>A description that does not link to the stated purpose</i> <i>Purposes relating to healthy diet</i> <i>Purpose relating to education unless in context of increasing participation</i> <i>Improves health unless qualified</i> 	<p>Pt 2 accept other <u>long term</u> benefits to physical health, e.g. (retain) can lead to increased bone density <u>therefore</u> less risk of osteoporosis</p> <p>If (a) is blank DO NOT mark (b)</p> <p>If the response given for Q04a is incorrect, but the description provided for Q04b is correct, the candidate is able to access the full mark range for Q04b.</p>	1x2	(2)

Question		Answer	Do not accept	Additional Guidance	Marks	Total
5	(a)	<p><i>Credit any specific technique or description of action where strength is critical to performance. E.g.</i></p> <ul style="list-style-type: none"> • Hitting the ball hard (squash) • Holding off tackle (rugby) • Sprinting between hurdles (hurdles) • Knockout in boxing • Holding body weight (gym) <p>Accept strength as aspect of 'power'.</p>	<p><i>Do not accept examples where strength would not be of benefit</i></p> <ul style="list-style-type: none"> • <i>Fitness tests</i> 	<p><i>Answer must link to named activity.</i></p> <p><i>If no named activity or generic activity (e.g. athletics) use first stated activity in candidate responses as activity for all aspects of question</i></p>	1x1	(1)
5	(b)	<p><i>Credit any specific technique or description of action where muscular endurance is critical to performance. (Not 100m) E.g.</i></p> <ul style="list-style-type: none"> • Still getting into correct position on court in fifth game (squash) • Towards the end of the match still able to tackle (rugby) • Play 90 minutes of game (without muscles tiring) • Last 50m of 400m (hurdles) <p>Accept example that implies <u>muscles</u> have been working for extended periods.</p>	<p><i>Do not accept the following:</i></p> <ul style="list-style-type: none"> • <i>Anaerobic activities</i> • <i>Any correct answer from (a)</i> • <i>Running/jogging</i> • <i>Fitness tests</i> 	<p><i>Answer must link to named activity.</i></p> <p><i>If no named activity use first stated activity in candidate responses</i></p>	1x1	(1)
5	(c)	<p><i>Credit any specific technique or description of action where flexibility is critical to performance. E.g.</i></p> <ul style="list-style-type: none"> • Stretch to reach drop shot (squash) • During tackling (rugby) • Technique when clearing hurdle • Splits (gym) <p>Accept example linked to increase pace; good technique; increased range of motion or technique where evident that flexibility required, e.g. 'splits'; Fosbury Flop.</p>	<p><i>Do not accept the following:</i></p> <ul style="list-style-type: none"> • <i>Any correct answer from (a) or (b)</i> • <i>Stretching</i> • <i>Fitness tests</i> 	<p><i>Answer must link to named activity.</i></p> <p><i>If no named activity use first stated activity in candidate responses</i></p>	1x1	(1)

Question		Answer	Do not accept	Additional Guidance	Marks	Total
6	(a)	<ul style="list-style-type: none"> • Measureable 	<i>Anything else</i>	Accept - Phonetic spelling: Only accept FIRST response on line.	1x1	(1)
6	(b)	Credit explanation consisting of any three aspects of linked explanation: <ol style="list-style-type: none"> 1. B is time bound/has time limit/time frame (1) 2. this means the performer has a deadline/endpoint by which to achieve their target/they have given themselves a month to complete /when to achieve/accomplish by(1) 3. therefore each session they can see if they are moving closer to their target or if it needs to be re-established (1) 4. This will allow them to maintain their motivation (1) 	<i>Do not credit reference to other aspects of SMART principle</i> Pt 1 - No credit for stating 'B' without explanation	Point 1 - Credit first point if candidate makes this point by referring to A and C as not being time-bound or provides actual statement from question and says time-bound Point 3/4 only credit if clear this is in relation to time bound (i.e. not 'measureable' target)	3x1	(3)

Question		Answer	Do not accept	Additional Guidance	Marks	Total
7	(a)	<p>The following target zone:</p> <ul style="list-style-type: none"> • 108:144 bpm 	<p><i>Any other numbers</i></p> <p><i>144:108 bpm</i></p>	<p><i>Can accept</i></p> <p><i>108:144</i></p> <p><i>108 to 144</i></p> <p><i>108-144</i></p> <p><i>60-80%</i></p> <p><i>108:144 (bpm)</i></p>	1x1	(1)
7	(b)	<p>Credit explanation consisting of any three aspects of following linked explanation:</p> <ol style="list-style-type: none"> 1. <u>Maximum</u> heart rate = 220 - age (1) 2. <u>Therefore</u> as you age your <u>maximum</u> heart reduces (1) 3. Target zones are worked out as a <u>percentage</u> of maximum heart rate (1) 4. <u>Thus</u> the 20 year old would have a higher <u>maximum</u> heart rate/higher target zone. OR <u>Thus</u> the 40 year old would have a lower <u>maximum</u> heart rate/lower target zone (1). 	<p><i>Because 20 year old is younger</i></p> <p><i>Do not credit figures relating to bpm from (a)</i></p>	<p><i>Accept from either 20 year old or 40 year old perspective.</i></p> <p><i>Pt 1 accept calculation, i.e. MHR for 40 year old = 180 AND for 20 year old = 200</i></p> <p><i>Pt 4 should only be credited if argument justified (i.e. if also achieve pt's 1,2 or 3).</i></p>	1x3	(3)

Question		Answer	Do not accept	Additional Guidance	Marks	Total
7	(c)	<p>An explanation that makes reference to three of the following:</p> <ol style="list-style-type: none"> Resting heart rate is lower because this is the heart rate whilst the individual is inactive (1) At rest the body has its lowest demand on the circulatory system/lower demand for oxygen/less blood flow/less CO₂ (1) <u>therefore</u> resting heart rate does not need to be high/heart doesn't need to work as hard (1) recovery heart rate is higher as the body needs increased blood flow/ more oxygen to recuperate after exercise/pay back oxygen debt (1) 		<p><i>Pt 2 - at rest muscles don't need as much O₂</i></p> <p><i>Pt 4 Accept specific example of 'recuperate' for credit, e.g. more oxygen to pay off oxygen debt; to remove lactate/lactic acid</i></p>	1x3	(3)

Question	Answer	Do not accept	Additional Guidance	Marks	Total
8	<p>An explanation that makes reference to the following:</p> <p>Micronutrients</p> <ol style="list-style-type: none"> 1. Insufficient can lead to deficiency illnesses OR lack of <u>vitamins/minerals</u> can lead to ill health/ OR micronutrients are <u>vitamins and minerals</u> (1) 2. for example, without enough calcium an individual could suffer with osteoporosis/weak bones making it difficult to lead a healthy, active lifestyle (1) <p>OR (if approached from positive viewpoint)</p> <ol style="list-style-type: none"> 3. (The correct ratio of) micronutrients are vitamins <u>and</u> minerals OR they help to maintain health/body systems (1) 4. For example, iron prevents anaemia. OR vitamin D helps increase strength of bones (1) 	<p><i>Pt 2.</i> <i>Keep us fit</i></p> <p><i>Pt 3.</i> <i>Answer that includes a list of more than vitamins and minerals or 'bodily functions'</i></p>	<p>Explanation must be linked to correct aspect of diet.</p> <p><i>Pt 1.</i> Credit other specific examples of impact of vitamin or mineral deficiencies</p> <p><i>Pt 2/4.</i> Credit other <u>specific</u> examples of impact of health but must state vitamin or mineral name and purpose, e.g. calcium to strengthen bones</p>	2x1	(2)

Question		Answer	Do not accept	Additional Guidance	Marks	Total
9		<p>Any one of the following risks and risk reduction measure:</p> <ol style="list-style-type: none"> 1. Risk: Struck with paddle/hit head on rocks (1) Measure to reduce risk: wear helmets (1) 2. Risk: Capsizing (1) Measure to reduce risk: experienced instructors in the boat (1) 3. Risk: Falling out of raft OR Harm from dangerous marine life (1) Measure to reduce risk: Follow (raft) safety rules 4. Risk: Crashing (1) Measure to reduce risk: plan route through course to avoid (1) 5. Risk: Storms (1) Measure to reduce risk: Check weather reports before participating (1) 	<p><i>Do not accept drowning (in question)</i></p> <p><i>Faulty equipment unless risk of this elaborated on</i></p>	<p>Accept specific injuries as 'risk' provided linked to scenario in question, e.g. concussion</p> <p>Risk reduction measure must link to risk for credit</p> <p>Pt 3 - Measure - accept specific safety rule, e.g. remain seated in raft/boat</p> <p>Also accept reference to life jacket if in context of maintaining core temperature/ protecting ribs from rocks if capsized/hit by paddle so make sure properly spaced in raft. (2 marks)</p>	<p>1x1 1x1</p>	<p>(2)</p>

Question		Answer	Do not accept	Additional Guidance	Marks	Total
10	(a)	<p>Cardiac output = Heart Rate x</p> <p>Stroke Volume</p> <p>OR</p> <p>Q = Heart Rate x Stroke Volume</p> <p>OR</p> <p>CO = Heart Rate x Stroke Volume</p> <p>OR</p> <p>Cardiac output = Heart Rate x SV</p> <p>OR</p> <p>Q = Heart Rate x SV</p> <p>OR</p> <p>CO = Heart Rate x SV</p> <p>OR</p> <p><i>Can accept definition of the terms</i></p> <p><i>The amount of blood ejected from the heart per minute</i></p> <p><i>=heart rate X</i></p> <p><i>the amount of blood ejected from the heart per beat</i></p>	<p><i>Partial answers</i></p> <p><i>Any other terms</i></p>	<p><i>Accept response describing cardiac output and SV. I.e.</i></p> <p><i>The amount of blood ejected from the heart per minute =heart rate X the amount of blood ejected from the heart per beat</i></p>	1x1	(1)

Question		Answer	Do not accept	Additional Guidance	Marks	Total
10	b i)	Diastolic Diastole	<i>Distolic</i> <i>Diatolic</i> <i>Dystolic</i> <i>Diostolic</i>	Accept phonetic spellings provided contains the 'as' sound 'Diastolic' 'Dyastolic' Only accept FIRST response on line.	1x1	(1)
10	bii	An explanation that makes reference to the following: 1. Immediate increase in blood pressure as a result of exercise (1) 2. due to increased blood flow/ <i>increased heart rate/need for more blood to muscles (1)</i>	<i>Explanation to justify drop in blood pressure</i> <i>long term effects, e.g. lower blood pressure</i>	<i>Credit response giving explanation first provided correct, e.g. due to increased blood flow (1) pressure increases (1)</i>	1x2	(2)

Question		Answer	Do not accept	Additional Guidance	Marks	Total
11	(a)	<p>Two explanations that make reference to the following (any order):</p> <p>1. Explanation <u>Increased/more</u> demand for oxygen (1)</p> <p>to supply (working) muscles/because need (more) energy for exercise/removal of lactate/removal of lactic acid (1)</p> <p>2. Explanation: <u>More</u> carbon dioxide is produced during exercise (1)</p> <p>therefore there is an increased need to remove carbon dioxide (1)</p> <p>3. Explanation: (Respiratory system responsible for increased) exchange of gases/gaseous exchange/oxygen in and carbon dioxide out (1)</p> <p>therefore (see Pt 3 Additional guidance) (1)</p>	<p>Reference to 'air' or 'blood' in place of oxygen/CO₂</p> <p>For the body' is too vague for (working) muscles</p>	<p>Accept higher level responses if presented which <u>accurately</u> reference role of CO₂ and chemoreceptors triggering response</p> <p>Need to develop point for two marks for each explanation.</p> <p>If both explanations relate to oxygen (or carbon dioxide) and second explanation is better than first credit second statement</p> <p><u>If (ii) left blank</u> and both answers recorded in (i) can credit</p> <p>Pt 3 To gain second mark this first point can be linked to either O₂ or CO₂ provided forms a developed point provided not repeated point</p>	<p>1x2 1x2</p>	(4)

Question		Answer	Do not accept	Additional Guidance	Marks	Total
11	(b)	<p>An explanation that makes reference to any three of the following:</p> <ol style="list-style-type: none"> 1. Delivering oxygen to the alveoli OR by replacing/return/pay back 'lost' O₂ 2. Through an elevated breathing rate (1) 3. <u>Therefore</u> there is more oxygen available/trying to get more oxygen (1) 4. Therefore can break down/remove lactic acid (1) 	<p><i>Definition of oxygen debt unless linked to question</i></p> <p><i>More blood pumped around the body</i></p> <p><i>Heart ensures more oxygen pumped around body</i></p>	<p><i>Accept higher level responses which accurately reference role of O₂ in ATP resynthesis or resaturation of myoglobin stores</i></p> <p><i>Pt 3- must be linked to point 2 for credit</i></p> <p><i>Pt 4 - accept more oxygen available to release energy to rebuild energy stores (1)</i></p>	1x3	(3)

Question		Answer	Do not accept	Additional Guidance	Marks	Total
12	(a)	<ul style="list-style-type: none"> • Gluteals 	<p><i>Anything else</i></p>	<p><i>Accept phonetic spellings</i></p> <p>Only accept FIRST response given on line.</p>	1x1	(1)
12	(b)	<ul style="list-style-type: none"> • Latissimus dorsi • Trapezius 	<p><i>Anything else including abbreviations</i></p> <p><i>Lats</i></p> <p><i>Pecs</i></p>	<p><i>Accept phonetic spellings</i></p> <p>Only accept FIRST response given on line.</p>	1x1	(1)
12	(c)	<ul style="list-style-type: none"> • Pectorals OR • Latissimus dorsi 		<p><i>Accept phonetic spellings</i></p> <p>Only accept FIRST response given on line.</p>	1x1	(1)

Question		Answer	Do not accept	Additional Guidance	Marks	Total	
13		(a)	<ul style="list-style-type: none"> • Weight training Or • Resistance training Or • Resistance Or • Weight Or • Weights Or • <i>Circuit training with weights</i> • 	<p><i>Weight lifting</i></p> <p><i>Anything else</i></p>	<p><i>Accept phonetic spellings</i></p> <p>Only accept FIRST response given on line.</p>	1x1	(1)
13		(b)	<p>Any one weight bearing exercise activity e.g:</p> <ul style="list-style-type: none"> • Running • Jogging • Walking • Weight bearing activity • Fartlek training session • Continuous training session 	<p><i>Any activity where not <u>clearly</u> maintaining own body weight e.g.</i></p> <p><i>Swimming</i></p> <p><i>Cycling</i></p> <p><i>Rowing</i></p> <p><i>Weight lifting</i></p> <p><i>Circuit training</i></p> <p><i>Cross training</i></p> <p><i>Any activity which is short duration, e.g. vertical jump test</i></p>	<p><i>Accept specific sports which are weight bearing, e.g. rugby; aerobics; yoga; netball; tennis</i></p>	1x1	(1)

Question		Answer	Do not accept	Additional Guidance	Marks	Total
14	(a)	Any order: Flexion to Extension Or <i>Flex to extend</i> Or <i>Extend to flex</i> Or <i>Extension to flexion</i> Or <i>Extension to flex</i> Or <i>Flex to extension</i> Or <i>Flexing to Extending</i> Or <i>Flexing to extend</i> Or <i>Flex to extension</i> •	<i>Partial answers</i> <i>Forwards - backwards;</i> <i>Bending - straightening</i>	<i>Accept phonetic spellings</i>	1x1	(1)

Question		Answer	Do not accept	Additional Guidance	Marks	Total
14	(bi)	<p>Any one of the following examples:</p> <ul style="list-style-type: none"> • Knee (joint) • Elbow (joint) <p><i>Accept (inter) phalangeal (joint)</i></p>	<p><i>Any other joint</i></p> <p><i>Finger</i></p>		1x1	(1)
14	(bii)	<p>Any one of the following examples of sporting actions:</p> <ul style="list-style-type: none"> • Biceps curl (elbow) • Shooting In archery (elbow) • Serving in tennis (elbow or knee) • Shooting in football (knee) • Running (knee) • Sprinting (elbow/knee) 	<p><i>Name of activity, e.g. football; gymnastics; tennis; javelin; boxing</i></p>	<p><i>If (bi) incorrect (bii) can still gain credit provided stated action demonstrates flexion/extension at a hinge joint.</i></p> <p><i>Accept other relevant actions, provided a specific technique is being described and links to (bi) e.g. leg action in sprinting OR sprinting if knee identified in (bi).</i></p>	1x1	(1)

Question		Answer	Do not accept	Additional Guidance	Marks	Total
15	(a)	<p>Any one of the following:</p> <p>PAR-Q</p> <p>PARQ</p> <ul style="list-style-type: none"> • Physical activity readiness questionnaire • Personal activity readiness questionnaire • Physical readiness assessment questionnaire 	<p><i>Anything else</i></p> <p><i>Phonetic spelling for PAR-Q PARQ PAQ</i></p>	<p><i>must be correctly stated</i></p> <p><i>Accept phonetic spellings for rest of correct answers</i></p> <p>Only accept FIRST response given on line.</p>	1x1	(1)

Question	Answer	Do not accept	Additional Guidance	Marks	Total
15 (b)	An explanation that makes reference to any two of the following points to develop response: 1. (A form of) <u>physical</u> activity 2. (That if completed regularly can) to improve fitness/ cardiovascular fitness (and health) 3. It is not competitive (sport)	Pt 2 specific aspects of fitness e.g. strength Pt 2 health/stamina Pt 3 response that says can be either/both competitive/ non-competitive	Point 2 Accept fitness on own as health mentioned in question Point 2 Accept done to get fit OR for fitness/CV fitness	1x2	(2)

15 (c)	Speed					
	Use in game	Importance of use in game				
	1. Moving arm quickly (must be implied speed) OR playing a fast shot OR return the ball quickly OR 1. Moving body into position quickly (must be implied speed) e.g move across the table quickly to get to the ball	e.g. increasing power of return e.g. making the shot more difficult to return e.g. in a better position to play shot e.g. more time to play shot e.g. reach the ball in time e.g. can get to a well-placed shot even if far from you			2X2	(4)
	Coordination					
	2. Hitting the ball or any example of a named shot, e.g. serve	e.g. correct timing of shot e.g. not a miss-hit shot e.g. better technique/technically correct e.g. make proper contact				
Additional Guidance <i>Needs to be a clear difference between points being made for use and importance, e.g. speed to get to ball (1) so can get to every ball is same response as use - would need further context for credit. Can credit 'importance' even when 'use' is too vague for credit Pt 1& 2 - accept suitable named technique, (i.e. one involving speed or coordination) e.g. forehand top spin for speed and serving for coordination Pt 2 - accept hit the ball for use (coordination)</i>						
Do not accept <i>Explanation of importance if use incorrect Do not credit 'across points', i.e. importance must match identified use. Pt 1 - Do not accept hit the ball for use (speed) Pt 2 - opposite response to 'use', i.e. use - to hit ball; importance - don't miss as both responses say the same thing. Importance would need further explanation/context for credit.</i>						

Question	Answer	Do not accept	Additional Guidance	Marks	Total
15	<p>(d) Credit explanation consisting of any three aspects of following linked explanation:</p> <ol style="list-style-type: none"> 1. Description of the 30m sprint test (1) e.g. <i>how fast you can run 30m</i> e.g. <i>sprint in a straight line</i> 2. Therefore useful to measure speed of whole body/lower body/speed in a straight line/test speed in legs(1) 3. Description of type of movement in table tennis (1) e.g. <i>no need to run 30m in TT/no need to sprint</i> e.g. <i>need upper body speed</i> e.g. <i>side to side movement</i> e.g. <i>involves change of direction</i> 4. <u>Therefore</u> no need to test sprint speed <u>as</u> not valid e.g. <u>therefore</u> not valid <u>as</u> not specific to their sport 5. Sprint test more suitable for activities where longer sprints required (1) e.g. would be used by sprinters e.g. reaction time test more relevant e.g. test of arm speed/how fast they can hit the ball more relevant 		<p><i>Pt 4 this is for credit for development of point 3, i.e. the concept there is a mismatch between the test and the activity</i></p> <p><i>Pt 5 accept reference to other tests that would be more suitable, e.g. coach devised test of agility or reaction time/.</i></p>	1x3	(3)

Question	Answer
16	A discussion of the relative importance of agility and reaction time in activities like badminton and 400m that makes reference to:

Indicative content

A - Definition of terms unrelated to activities - Simple statements

Agility is being able to change position quickly (and to control the movement of the whole body)

Reaction time is the time between the presentation of a stimulus and the onset of movement

B - Importance in badminton (NB Must be applied to appropriate sporting situation)

Badminton player - Agility

- agility required to allow quick change of direction after completing one shot to play the next (SS) e.g. from backhand clear to front court forehand net shot (DS).
- *Response needs to relate to agility rather than speed, however, given dimensions of badminton court if talking of 'covering court when returning shuttle' this implies need for change in direction (DS)*

Badminton player - Reaction Time

- Reaction time required to change decision based on new information (SS) e.g. when shuttle hits top of net and changes flight path/to deal with an unexpected shot
- OR because shuttle moves quickly very little time (SS) to decide where shuttle is going/how to respond (DS)

C - Importance in 400m (NB Must be applied to appropriate sporting situation)

400m runner Agility

- Agility used running bends (at speed) (SS) to allow them to maintain pace/lane positioning (DS).
- Not used much in 400m as not changing direction (SS) but do need to stay in lane and run bends/need some agility to move from start position to sprint position efficiently (DS)

400m runner - Reaction Time

- Reaction time required to respond quickly to the starter's gun (SS) without it they will set off after others giving them a disadvantage/need it to get in front of others (DS)

Credit discussion of these components in relation to other components if discussing 'relative' importance

e.g. Agility is not vital in 400m compared to badminton as not changing direction in 400m (SS) power is much more important because need this to be the fastest over distance (DS)

D - Relative importance (accept other accurate/reasonable alternate arguments)

- Both agility & reaction time important to badminton player. Without agility all opponent needs to do is move them around court to win points.(SS) Without good reaction time they will be too slow in deciding what shot to play so either miss the shuttle or give opponent too much time to play their next shot.(DS)
- Reaction time more important to sprinter because limited need for agility in event as part of event is run on straight track/not trying to avoid other runners whereas essential they get a good start (DS)

Credit discussion around relative importance of components for one activity compared to the other, e.g. both components more important to badminton players than 400m runner because used throughout the game e.g. quickly changing direction to retrieve a shot compared to 400m runner who only uses agility to run bends

E - Possible 'arguments' for conclusions

- However, good agility more important to a badminton player than reaction time because if they can't change direction quickly they won't be able to cover the court and return shots.
- However, good reaction time more important to a badminton player than agility because if they can't make quick decisions they won't be able to outwit their opponent and therefore they won't be able to win rallies.

Level	Mark	Descriptor
Level 0	0	No rewardable material
Level 1	1-2	<p>i) A number of simple statements that identify a benefit of agility or reaction time for badminton players and/or 400 m runner E.g. good agility will allow badminton players to change direction quickly on court. Allows 400 m runner to run bend in track</p> <p>ii) A developed statement (discussing why agility/reaction time is important to specific activity) E.g. A fast reaction time is vital in badminton because the shuttle travels at high speed eg smash so there is little time to make an effective decision.</p> <p>Candidates will produce brief and narrative responses, making a limited number of simple statements, probably with limited reference to the question. Little knowledge and understanding of the range of requirements. Responses produced by candidates will be mostly generalised, and may not fully address the requirement of the question to discuss the relative importance of agility and reaction time on performance</p> <p>Candidates' writing communicates ideas using everyday language, but lacks clarity and organisation. There will be frequent errors in candidates' spelling, grammar and punctuation.</p>
Level	Mark	Descriptor (Question 16)
Level 2	3-4	<p>i) Developed statements, i.e. simple statements with explanation or additional information about the importance to performer. E.g. good reaction time is essential to both performers for following reasons....</p> <p>ii) Developed statements providing 'weighting' of importance. E.g. of the two components, reaction time is more important to the runner because...</p> <p>iii) Basic (but accurate) conclusion in line with previous points.</p> <p>Candidates' responses will be mostly accurate and include relevant factual material. Some knowledge and understanding of the importance of agility and reaction time. Candidates will have addressed the requirement of the question to discuss the relative value of each component in relation to performance with some success.</p> <p>Candidates' writing communicates ideas with accurate use of appropriate terminology, and the organisation of the response shows some direction and control. There will be few errors in spelling, punctuation and grammar.</p>
Level 3	5-6	<p>i) Developed statements (using relevant examples) balanced and succinct.</p> <p>ii) Conclusion provided based on points raised</p> <p>Candidates will offer factually accurate and sustained responses that relate well to the focus of the question and successfully addresses the discursive demands. Sound knowledge and understanding of these components of fitness and their relative importance. The discussion will be supported by accurate factual material that is relevant to the question. The relative importance of each to performance will be fully discussed with appropriate conclusions reached. Candidates' writing communicates ideas effectively using appropriate terminology, and organises material clearly and coherently. Spelling, punctuation and grammar will be accurate throughout the response.</p>

Question	Answer
17	A discussion of the suitability of a mesomorph body type for activity that makes reference to:
<p>Indicative content</p> <p>1. Characteristics (matching body type to characteristic(s) - simple statements) Mesomorphs - Muscular/ broad shoulders/equiv; gain muscle readily/equiv. DO NOT ACCEPT big built as equivalent to muscular. Ectomorph - Slim/equiv; often tall/equiv; lightly muscled/equiv Endomorphs - Wide hips/equiv; Narrow shoulders/equiv; weight loss more difficult/equiv</p> <p>Links to other activities - simple statements Mesomorphs suited to power/strength events (if explained can be developed e.g mesomorphs are muscular <u>this is</u> good for 100m sprint <u>as they</u> need power) Mesomorphs not suited to endurance events, ectomorphs are (SS)</p> <p><i>Developed statements must be made from linked points; underlined words shown below indicate links, alternative linking words can be used provided there is appropriate development of the point.</i></p> <p>2. Advantages of body types (linking body type- characteristic- and advantage - developed discussion points) mesomorph <u>has</u> better muscle ratio than other body types/equiv <u>therefore</u> more power/speed/strength generated <u>so better</u> for power events Ectomorph <u>is</u> ideal <u>as</u> lighter (than other body types) <u>therefore</u> quicker/easier to run /more suitable Ectomorph <u>is</u> ideal <u>as</u> tall <u>therefore</u> they have a greater stride length <u>to</u> cover distance quicker Ectomorph <u>is</u> ideal <u>as</u> <u>has</u> increased stride length <u>therefore</u> fewer steps required to cover distance</p> <p>3. Disadvantages (linking body type- characteristic- and disadvantage - developed discussion points) Mesomorph not ideal <u>as</u> <u>has</u> increased weight of body <u>due to</u> muscle mass <u>therefore</u> slowing the runner down/making them work harder/need more energy/use more oxygen Mesomorph not ideal <u>as</u> <u>has</u> reduced flexibility <u>due to</u> increased muscle mass <u>therefore</u> shorter stride length Ectomorph not ideal <u>as</u> <u>has</u> reduced muscle mass (compared to mesomorphs) <u>therefore</u> cannot generate as much power or speed</p> <p>4. Conclusion An ectomorph has a lighter frame therefore less demanding physically than for other body types to complete the distance. Therefore although a mesomorph could run in this type of event it is not the 'ideal'. The extreme body type for long distance runner would be better to be ectomorph Credit alternative conclusions that identify the ideal might be a body type that is mainly ectomorph, but does have some muscle/equiv. Simple statement unless explained/developed.</p> <p><i>No credit for concluding statements that do not relate to question or candidate answer, or a concluding statement that simply repeats the question.</i></p>	

Level	Mark	Descriptor (Question 17)
Level 0	0	No rewardable material
Level 1	1-2	<p>i) A number of simple statements that identify characteristics of body types or identifying/describing advantage/disadvantage. E.g. a mesomorph is muscular; an ectomorph tends to be thin. A disadvantage of a mesomorph is muscle is heavy.</p> <p>ii) A developed statement (discussing why characteristic is an advantage/disadvantage for a specific body type) E.g. Mesomorphs tend to be muscular, this is a disadvantage as muscle is heavy therefore more weight to carry which will slow the performer.</p> <p>Candidates will produce brief and narrative responses, making a limited number of simple statements, probably with limited reference to the question. Little knowledge and understanding of the range of requirements. Responses produced by candidates will be mostly generalised, and may not fully address the requirement of the question to discuss whether a mesomorph body type is ideal for endurance activities. Candidates' writing communicates ideas using everyday language, but lacks clarity and organisation. There will be frequent errors in candidates' spelling, grammar and punctuation.</p>
Level 2	3-4	<p>i) Developed statements, i.e. simple statements with explanation or additional information about the body type in relation to the ideal for the endurance events. E.g. ectomorph has a lighter frame than other body types meaning less weight to carry <u>therefore</u> more pace.</p> <p>ii) Developed statements identifying pros and cons of mesomorph body type but may not be balanced between advantages/disadvantages.</p> <p>iii) Basic (but accurate) conclusion in line with previous points.</p> <p>Candidates' responses will be mostly accurate and include relevant factual material. Some knowledge and understanding of the importance of agility and reaction time. Candidates will have addressed the requirement of the question to discuss the mesomorph body type in relation to the ideal for performance in endurance based events with some success. Candidates' writing communicates ideas with accurate use of appropriate terminology, and the organisation of the response shows some direction and control. There will be few errors in spelling, punctuation and grammar.</p>
Level 3	5-6	PTO

Level	Mark	Descriptor (Question 17 continued)
Level 3	5-6	<p>i) Developed statements (using relevant examples) balanced and succinct. Expectation that some direct comparison between merits of different body types leading to conclusion.</p> <p>ii) Conclusion provided based on points raised</p> <p>Candidates will offer factually accurate and sustained responses that relate well to the focus of the question and successfully addresses the evaluative demands. Good level of knowledge and understanding of body type and suitability for endurance activities. The evaluation will be supported by accurate factual material that is relevant to the question. The features of the body type will be fully evaluated with appropriate conclusions reached.</p> <p>Candidates' writing communicates ideas effectively using appropriate terminology, and organises material clearly and coherently. Spelling, punctuation and grammar will be accurate throughout the response.</p>

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