



**General Certificate of Education (A-level)
June 2012**

Physical Education

PHED1

(Specification 2580)

**Unit 1: Opportunities for and the effects of
leading a healthy and active lifestyle**

Post-Stand

Mark Scheme

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all examiners participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for standardisation each examiner analyses a number of students' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, examiners encounter unusual answers which have not been raised they are required to refer these to the Principal Examiner.

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Section A

Question	Answer	Marks	Commentary									
1 (a) (i)	A. Fitness – cope/meet everyday demands of the environment <u>and</u> health – complete social, mental and physical well-being	1	<u>Both</u> phrases required 2/3 terms for health									
1 (a) (ii)	A. Can be unhealthy/get cold/flu/injury/ and unable to train/fitness declines B. Can be unhealthy but able to train and fitness can still improve	2	Need to link <u>decreased</u> fitness because of ill-health Need to link <u>increased</u> fitness despite ill-health									
1 (b)	<table border="1"> <thead> <tr> <th>Movement description</th> <th>Main agonist</th> <th>Joint action</th> </tr> </thead> <tbody> <tr> <td>Shoulder A-C</td> <td>A. Pectorals /(anterior) Deltoids</td> <td>B. Horizontal flexion/ horizontal adduction</td> </tr> <tr> <td>Elbow B-D</td> <td>C. Biceps (brachii)</td> <td>D. Flexion</td> </tr> </tbody> </table>	Movement description	Main agonist	Joint action	Shoulder A-C	A. Pectorals /(anterior) Deltoids	B. Horizontal flexion/ horizontal adduction	Elbow B-D	C. Biceps (brachii)	D. Flexion	4	A. Either term – Accept pectoralis major – NOT pecs or delts B. Not just flexion – Accept horizontal hyper-extension to flexion C. Accept biceps D. Accept extension to flexion
Movement description	Main agonist	Joint action										
Shoulder A-C	A. Pectorals /(anterior) Deltoids	B. Horizontal flexion/ horizontal adduction										
Elbow B-D	C. Biceps (brachii)	D. Flexion										
1 (c)	A. Detected by chemoreceptors (in carotid arteries/aortic arch/medulla) B. Nerve impulses/message to <u>respiratory control centre in/medulla</u> of brain C. Nervous output to breathing muscles/via Phrenic/ sympathetic nerve D. Increased rate of contraction of diaphragm and intercostal muscles	3	A. Equiv of detected required B. Equiv of messages/ information required – Do NOT accept RCC C. Equiv of connection to breathing muscles – Do NOT accept SNS D. Increased/equiv required									
1 (d)	A. Alveolar/muscle <u>and</u> capillary membranes identified B. Requires thin membranes/one cell thick C. Requires short distance between membranes/moist/(semi) permeable/ short diffusion pathway	2	Sub max 1 mark B. Eq of thin required C. Eq of short required									

2 (a) (i)	A. Agility/balance/co-ordination/reaction time	1	First two answers only
2 (a) (ii)	A. Strength/power/speed/flexibility	1	First two answers only
2 (b) (i)	A. C	1	Accept first answer only
2 (b) (ii)	A. (Thick) <u>Elastic</u> walls B. (Small) <u>lumen</u> C. (Smooth) <u>muscle</u> layer D. Carrying blood <u>away</u> from the heart/ to tissues/muscles E. Cushion and smooth out/recoil/pulse/ withstand pumping action/pressure/ velocity from heart	3	Required terms for A, B and C D. 'Carry oxygenated blood' is incorrect because not completely true, but 'carry oxygenated blood away' is correct because direction given
2 (c) (i)	A. In muscle B. Stores/supplies/carries oxygen	2	Required term is muscle
2 (c) (ii)	A. Increase in (blood/body) temperature B. Increase in blood carbon dioxide concentration (pCO ₂) C. Increase in blood acidity/increase in hydrogen ions/decrease in pH D. Bohr shift E. Resulting in less saturation/reduced affinity of haemoglobin with oxygen F. An increase in oxygen release/ oxyhaemoglobin dissociation to muscles/muscles receive more O ₂	4	Sub max 3 marks A. Increase/eq required B. Increase/eq required C. Increase/eq required D. Required term Sub max 2 marks

3 (a)	<p>A. Receives information/feedback from senses/Short Term Sensory Store B. Selective attention filters information C. Compares/identifies characteristics of information to/from Long Term Memory stores/DCR process D. Decisions made/thinking/problem-solving/working memory E. Receives information/motor programme/sub-routines concerning actions from Long Term Memory F. Initiates/runs motor programme/sub-routines sends to effector</p>	3	<p>Accept abbreviations Accept correct annotated diagrams B. Selective attention/eq is a required term C. Idea of perception by comparison to LTM E. Idea of LTM as store of movements that go into STM</p>
3 (b)	<p>A. Open skill – involves different/ changing environment/need to make decisions about how to adapt skill/eg open play situation/passing B. Closed skill – involves same environment/few decisions about how to perform skill, just when to perform/ eg dead ball situation/set piece</p>	2	<p>A. Must be from a team game Must have correct example of skill for mark B. Must have correct example of skill for mark</p>
3 (c) (i)	<p>A. Movement time – the time taken from the initiation/start of the movement/ pass to finish/completion of movement/pass B. Reaction time – the time taken to decide a response/type of pass to a given stimulus/time taken from the onset of the stimulus to the start of the movement/pass/response</p>	2	<p>A. Can be answered either from definition of movement time or what's involved in game B. Can be answered either from definition of reaction time or what's involved in game</p>
3 (c) (ii)	<p>A. Choice Reaction Time – numerous stimuli and/or responses <u>and</u> Simple Reaction Time – one stimulus and one possible response B. Games – open skills need CRT mainly/predominate/many choices/decisions/few SRT skills/moments</p>	2	<p>A. Require explanation of/difference between both between terms for mark B. Idea that games skills require decision/choice of actions</p>
3 (c) (iii)	<p>A. Concentration/pay attention/selective attention/focus on cues B. Relevant practice/overlearning C. Be at optimum arousal level/ increased arousal/alertness D. (Temporal/spatial) anticipation/predict actions/trying to identify cues earlier E. Mental rehearsal F. Improve movement time/improve fitness/improve reaction time G. Intensity of stimulus/a warning signal</p>	3	<p>B. Not just practice – needs contextualising – relevant/ specific E. Accept imagery/visualisation</p>

<p>4 (a)</p>	<p>A. Consistent/repeatable success/very few mistakes/maximum certainty B. Efficiency/minimisation of time C. Coordination/controlled/fluent/flowing/smooth D. Adaptable E. Minimal outlay of energy/appears effortless F. Aesthetically pleasing G. Goal oriented behaviour/predetermined/intention matches outcome/precise/accurate/correct</p>	<p>3</p>	
<p>4 (b)</p>	<p>A. Skills learnt in one activity affects/influence/impact/eq in another B. Positive – enhances/helps/aids the learning of a new skill/egs C. Negative – hinders learning of new skill D. Zero – has no effect on learning of new skill E. Retroactive – current practice enhances learning of previously learned skill F. Proactive – current practice enhances learning of skill yet to be learned G. Bilateral – practise on limb on one side of body improves other side</p>	<p>3</p>	<p>Sub max 1 mark – require clear definition of transfer which doesn't include an example of transfer Accept 'enhanced and worsens' Any examples must be about skills, NOT sports, and must be explained B. Not has positive affect C. Not has positive affect D. Not has zero affect</p>
<p>4 (c) (i)</p>	<p>A. Schema – set of 'rules'/relationships to help us make decisions about movement patterns B. Following/during movement/action C. Sensory consequences D. eg feedback information concerning performance/Knowledge of performance/kinesthesia/intrinsic feedback/how it felt E. Response/movement outcome F. Comparison of actual and intended outcome/feedback/knowledge of results/what happened</p>	<p>4</p>	<p>C. Required term D. NOT KP E. Required term F. NOT KR</p>

4 (c) (ii)	A. Vary practised conditions by changing initial conditions/ appropriate example B. Realistic/specific practice to activity C. Build up set of response specifications/movement requirements/outcomes practised D. eg weight of implement/flight of ball E. Frequent/lots feedback F. Teach fundamental/simple skills before sport specific skills	2	
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<p>5 (a)</p>	<p>Similarities</p> <p>A. Both voluntary/choice/free will B. Both social/friendship groups C. Both develop skills/suitable eqs D. Both develop health/fitness E. Both can be creative/expressive F. Both self-officiating/few pre-set rules G. Both informal learning/not taught/assessed H. Both non-serious end product/intrinsic rewards/fun</p> <p>Differences (based on recreation)</p> <p>I. Adults = recreation and children = play J. Recreation = time free from work and children don't work K. Recreation organised/some pre-set/modified rules/etc and play is spontaneous/eq L. Adults escape reality/stress relief/Cathartic and children model/master reality</p>	<p>4</p>	<p>A. NOT leisure time B. NOT non-competitive</p> <p>F. NOT no rules</p> <p>Sub max 3 marks Accept reverse</p>
<p>5 (b) (i)</p>	<p>A. Business run by Local Authority/Council B. For local community use/anyone C. Trading at set prices/pre-set budget/no need for profit D. Subsidised by tax/grants E. Managed by LA employees/some aspects run privately/PFI/PPI F. Facilities not as good as private sector G. Can be 'pay as you go'/not necessarily subscription-based/subsidised use/more affordable fees than private facilities</p>	<p>3</p>	<p>A. Key term is Local Authority/Council – NOT government</p> <p>C. NOT profit-loss basis</p> <p>D. Accept government funding</p>

<p>5 (b) (ii)</p>	<p>A. Public sector forced to account more for the use of local taxes B. Consider best value <u>for money</u>/ improve efficiency of provision/ resources/funds/experiences they offer C. Use of <u>private sector methods</u> to achieve/eg better facilities/more classes D. Find out what local people want and expect/quality of life/community choice/consult E. Set standards and deliver services to match those standards/compare F. Measure success/compete G. Review expectations/challenge</p>	<p>2</p>	
<p>5 (c)</p>	<p>A. Advertising/publicity/role models B. Reduced costs/entry fees/ equipment/hire fees C. Taster/sampling sessions/fun days D. More inner city facilities E. Session run at suitable times/crèches F. School extra-curricular sessions</p>	<p>3</p>	

<p>6 (a) (i)</p>	<p>A. Played regularly/often/fixtures/leagues/regionally/nationally-based B. Written/complex rules/codification C. Standards of behaviour/etiquette/civilised/fair play/sportsmanship D. Highly structured/set times/number of players/boundaries/officials/kit/equipment E. Skill based/refined/complex/tactics developed F. Spectators as well as participants</p>	<p>3</p>	<p>E. Not just rules! D. Accept organised</p>
<p>6 (a) (ii)</p>	<p>A. Society becoming more civilised/better mannered/less violent/Acts of Parliament banned activities – mob football B. Upper/middle classes controlled society/social control (of working classes) C. Industrialisation – need for disciplined workforce/factory teams D. Era of social reform/philanthropists E. Role of church/Protestant work ethic/church teams/boys clubs F. Lack of space meant no room for popular recreations/urbanisation G. Administration needed as more clubs/national governing bodies/‘melting pot’ H. Transport and communication developed</p>	<p>3</p>	

Section B

<p>7</p>	<p>A. Active – stretched position held by performer’s own <u>agonist</u></p> <p>B. Passive – stretched position held by another body part/or position held by partner</p> <p>C. Static/PNF – stretched position held and <u>isometric</u> contraction applied</p> <p>D. Ballistic – bounce in and out of stretch</p> <p>E. Dynamic – stretch through specific sports movement</p> <p>F. Warm-up prior to stretching/begin slowly/stretching as part of a cool-down</p> <p>G. Make stretch sports specific</p> <p>H. Hold/repeat stretch for (30) seconds</p> <p>I. Never hold a painful stretch/danger of injury – no ballistic</p> <p>J. Balance/equalise stretches/agonists and antagonists</p> <p>K. Perform whole skill to gain feel/ appreciate flow/sequence/kinesthesia</p> <p>L. Depends on nature/type of skill – Complex or simple</p> <p>M. Use whole if skill complex/hard to break down/high organisation/discrete/simple – no need to break down</p> <p>N. Depends on stage of learning/ beginner/novice/experience</p> <p>O. Use whole if autonomous/cognitive stage</p> <p>P. Depends on safety/time</p> <p>Q. Only use whole if safe to do so/no chance of injury/short of time</p> <p>R. Depends of fitness</p> <p>S. Use whole if performer fit enough to manage repeating skill</p> <p>T. Depends on motivation</p> <p>U. Use whole if highly motivated because success not certain</p>	<p>12</p>	<p>A. Named and described</p> <p>B. Named and described</p> <p>C. Named and described</p> <p>D. Named and described</p> <p>E. Named and described</p> <p>G. Idea of stretch being specific for activity being performed</p> <p>H. Agonist and antagonist</p> <p>Credit explanation of why use of whole Stated factor Explanation of factor</p> <p>Explanation of factor Required term</p> <p>Safety concerned</p> <p>Explanation of factor</p> <p>Stated factor Explanation of factor – needs because Accept reverse – not whole if unfit</p> <p>Accept reverse – not whole if not motivated</p>
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Mark Scheme

Band Range	Band descriptors
10 – 12	<ul style="list-style-type: none"> • Addresses all aspects of question, demonstrating wide range of depth and knowledge • Expresses arguments clearly and concisely • Good use of examples to support answer • Few errors in their spelling, punctuation and grammar, and correct use of technical language
7 – 9	<ul style="list-style-type: none"> • Addresses most aspects of question, demonstrating clear level of depth and knowledge • Attempts to express arguments clearly and concisely • Uses examples to support answer • Few errors in their spelling, punctuation and grammar, and correct use of technical language, although sometimes inaccurately
4 – 6	<ul style="list-style-type: none"> • Addresses some aspects of question, but lacks sufficient depth and knowledge • Limited attempt to develop any arguments or discussions, normally vague or irrelevant • Attempts to use examples although not always relevant • Errors in spelling, punctuation and grammar, and limited use of technical language
1 – 3	<ul style="list-style-type: none"> • Addresses question with limited success • Little or no use of examples • Major errors in their spelling, punctuation and grammar, and little use of technical language

<i>Number of correct responses</i>	<i>Level achieved</i>	<i>Discriminator</i>	<i>Initial mark</i>	<i>Optional QWC/ coverage</i>	<i>Potential final mark</i>
13+	4	15+ items	11	+1	11 or 12
		13 or 14 items	10	+1	10 or 11
9-12	3	11 or 12 items	8	+1	8 or 9
		9 or 10 items	7	+1	7 or 8
5-8	2	7 or 8 items	5	+1	5 or 6
		5 or 6 items	4	+1	4 or 5
1-4	1	3 or 4 items	2	+1	2 or 3
		1 or 2 items	1	+1	1 or 2
0					0