



GCSE

## Physical Education

General Certificate of Secondary Education

Unit **B453**: Developing Knowledge in Physical Education

### Mark Scheme for June 2013

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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.

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## Annotations

?	?	Unclear
BOD	BOD	Benefit of doubt
Cross	Cross	Incorrect
L1	L1	Level 1
L2	L2	Level 2
L3	L3	Level 3
REP	REP	Repeat
✓	Tick	Correct
VG	VG	Vague
SEEN	SEEN	Noted but no credit given
S	S	S (indicates 'sub max reached')
EG	EG	Example
K	K	Knowledge
DEV	DEV	Development

- Sub-maxes are indicated with **S**; the guidance section of the mark scheme shows which questions these are relevant to.
- K** and **DEV** used instead of ticks on question 25 to indicate where knowledge or development points from the indicative content have been made.
- On question 25, one K or DEV does not necessarily equate to one mark being awarded; the marking is based on a levels of response mark scheme which awards a level and mark holistically based upon the quality of the response overall against the levels descriptors.

## Section A: Multiple Choice Text

Question		Answer	Marks	Guidance
1		C	1	
2		A	1	
3		A	1	
4		D	1	
5		B	1	
6		D	1	
7		D	1	
8		B	1	
9		D	1	
10		A	1	
11		A	1	
12		C	1	
13		B	1	
14		C	1	
15		D	1	
		Total	15	

## Section B: Short Answer Questions

Question		Answer	Marks	Guidance
16		<p><b>3 marks for 3 from:</b></p> <ol style="list-style-type: none"> <li>1. Exam courses/qualifications</li> <li>2. Through PE lessons/(National) curriculum/teaching about healthy lifestyle</li> <li>3. Through extra-curricular activities/sports days/school teams/variety of activities/fixtures</li> <li>4. Through links with external clubs or agents or coaches</li> <li>5. School trips (to appropriate venues)</li> <li>6. Running health awareness programmes/campaigns/posters/leaflets/assemblies</li> <li>7. Through PSHE/Biology/other relevant lessons/cross curricular initiatives/teaching impact of unhealthy lifestyle</li> <li>8. Healthy food (in canteen)/provide water fountains</li> <li>9. Encourage active playtimes</li> <li>10. Use role models/teachers/significant performers</li> <li>11. Making facilities/equipment available for community use.</li> </ol>	3	<ul style="list-style-type: none"> <li>• Do not accept lessons on its own</li> <li>• Fun lessons = vg.</li> </ul>

Question		Answer	Marks	Guidance
17		<p><b>4 marks for 4 from:</b></p> <ol style="list-style-type: none"> <li>1. Shin pads in football/hockey etc</li> <li>2. Leg guards in cricket/hockey goalkeeper etc</li> <li>3. Helmets in cricket/hockey/cycling/ water polo hats etc</li> <li>4. Cricket box/protector</li> <li>5. Body armour/shoulder pads in martial arts/back brace for horse riding/hockey goalkeeper etc</li> <li>6. Kickers in hockey goalkeeper etc</li> <li>7. Mouth guard in rugby</li> <li>8. Facemasks in hockey</li> <li>9. Elbow/knee pads in mountain biking</li> <li>10. Goggles for Swimming or skiing</li> <li>11. Gloves for horse riding/boxing.</li> </ol>	4	<ul style="list-style-type: none"> <li>• Accept any relevant examples for personal protective equipment</li> <li>• Each example <u>must be linked to an activity</u> eg helmet for cricket</li> <li>• Do not accept helmet for cricket and helmet for hockey (must be different equipment)</li> <li>• Do not accept footwear</li> <li>• Do not accept clothing (on its own)</li> <li>• Do not accept strapping</li> <li>• Do not accept high viz vest</li> <li>• Do not accept stop button on jogging machine (not personal).</li> </ul>

Question		Answer	Marks	Guidance
18		<p><b>6 marks for 6 from:</b></p> <ol style="list-style-type: none"> <li>1. Badges</li> <li>2. Eg getting a swimming badge for successfully swimming a particular distance</li> <li>3. Medals/cups/prizes/trophies/gain a title or recognition or fame</li> <li>4. Eg gaining a medal/cup for winning a cycle race Eg county champion in tennis</li> <li>5. Certificates</li> <li>6. Eg for following a healthy lifestyle programme at school</li> <li>7. Money/financial reward/gifts/sponsorship</li> <li>8. Eg if you give up smoking your parents will give you £100</li> <li>9. Praise</li> <li>10. Eg Your teacher praises you for taking up exercise</li> <li>11. Being accepted into a group/making friends</li> <li>12. Eg you now have friends you gained whilst attending the gym club</li> <li>13. Role models</li> <li>14. Eg watching a premier league football player and wanting to be like him</li> <li>15. Gaining a qualification</li> <li>16. Eg achieving a GCSE in PE, a coaching award in gymnastics.</li> </ol>	6	<ul style="list-style-type: none"> <li>• Must have a description as well as an example to award 2 marks</li> <li>• Eg a badge for swimming 50 metres = 2 marks</li> <li>• Eg a badge for swimming = 1 mark only.</li> </ul>

Question		Answer	Marks	Guidance
19		<p><b>4 marks for 4 from:</b></p> <p><b>1 mark sub max for named joint:</b> 1. Hinge/synovial hinge.</p> <p><b>3 marks sub max for the role of muscles in flexion at knee:</b></p> <p><b>2 marks sub max for quads</b></p> <p>2. Quads will help by stabilising/working against/opposes the hamstrings 3. Quads relax/lengthen 4. Quads are the antagonists.</p> <p><b>2 marks sub max for hams</b></p> <p>5. Hamstrings will bend the knee 6. Hamstrings will contract/shorten 7. Hamstrings are the agonists/the prime mover.</p>	4	<p>To gain full marks both quads and hams must be covered in the answer:</p> <p>Sub max of two marks for the quads</p> <p>Sub max of two marks for the hams</p> <ul style="list-style-type: none"> <li>• Do not accept flexing</li> <li>• Accept 'extend' for point 3 as eq to lengthen.</li> </ul>

Question		Answer	Marks	Guidance
20		<p><b>6 marks for 6 from:</b></p> <ol style="list-style-type: none"> <li>1. Knowledge of results</li> <li>2. Eg A gymnast finds out her score at the end of her routine</li> <li>3. Knowledge of performance</li> <li>4. Eg An athlete is told by his coach that his long jump techniques needs improving or a coach in football telling how well you played</li> <li>5. Intrinsic feedback – from within/kinesthesia/proprioception</li> <li>6. Eg a swimmer feels that his leg kick is going well</li> <li>7. Extrinsic feedback–from the environment</li> <li>8. Eg the coach gives feedback on technique</li> <li>9. Positive feedback – praise</li> <li>10. Eg your parents say well done for reaching the netball finals</li> <li>11. Negative feedback–criticism</li> <li>12. Eg your coach tells you off for losing the tennis match</li> <li>13. Continuous feedback–all the time</li> <li>14. Eg coaching during a trampolining routine</li> <li>15. Terminal feedback–at the end of the activity</li> <li>16. Eg teacher gives feedback on tennis technique at the end of the lesson.</li> </ol>	6	<ul style="list-style-type: none"> <li>• Sub max 3 marks for types and sub max 3 marks for practical examples</li> <li>• Accept video analysis as an example but only once</li> <li>• Accept peer analysis of an activity as an example but only once.</li> </ul>

Question		Answer	Marks	Guidance
21		<p><b>5 marks for 5 from:</b></p> <ol style="list-style-type: none"> <li>1. S = Specific—need to make the goal a particular target or eg to lose weight by 5 lbs</li> <li>2. M = Measurable—need to be able to measure the goal or to know how well you have done/to assess progress</li> <li>3. A = Achievable—must be within the capabilities of the individual/or A = Agreed—or eg you can agree your targets with your coach</li> <li>4. R = Realistic—must be within the capabilities of the individual/or attainable/or R=Recorded—goals should be written down/able to see your progress</li> <li>5. T = Time-phase/timed—goals should have a time given for completion</li> </ol> <p>Other valid points:</p> <ol style="list-style-type: none"> <li>6. Can motivate/encourage</li> <li>7. Can help to control stress or anxiety.</li> </ol>	5	<ul style="list-style-type: none"> <li>• No marks for identifying what SMART stands for with no explanation.</li> </ul>
22		<p><b>4 marks for 4 from:</b></p> <p><b>Sub max 3 marks for description:</b></p> <ol style="list-style-type: none"> <li>1. Often through overuse (of tendon)</li> <li>2. Tenderness/sensitivity (of tendons) increased/painful/sore (tendon)</li> <li>3. Swelling of area</li> <li>4. Rise in temperature (of surrounding connective tissue)/inflammation/redness</li> <li>5. Reduced movement/stiffness.</li> </ol> <p><b>Sub max 1 mark for avoidance strategy:</b></p> <ol style="list-style-type: none"> <li>6. Avoid repetitive movements or not doing too much at any one time or to rest or strengthen the muscles/tendons or to bandage/ice/anti-inflammatory painkillers/steroid injection or surgery (in extreme cases) or antibiotics (if infected)/appropriate footwear/appropriate equipment/correct technique/treatment.</li> </ol>	4	<ul style="list-style-type: none"> <li>• Accept treatments eg antibiotics as relevant to avoidance of tendonitis</li> <li>• Only one mark for an avoidance strategy – allow this even if it is not the first strategy given.</li> </ul>

Question		Answer	Marks	Guidance
23		<p><b>3 marks for 3 from:</b></p> <p><b>1 mark for:</b></p> <ol style="list-style-type: none"> <li>1. Occurs during exercise/occurs when lack of oxygen/during anaerobic exercise.</li> </ol> <p><b>2 marks for 2 from:</b></p> <ol style="list-style-type: none"> <li>2. Causes fatigue/tiredness</li> <li>3. Causes pain/discomfort/soreness/aching</li> <li>4. So more likely to stop or slow down</li> <li>5. Can decrease performance/leads to poor performance/makes you less effective.</li> </ol>	3	<ul style="list-style-type: none"> <li>• Do not accept cramp as an effect.</li> </ul>

Question		Answer	Marks	Guidance
24		<p><b>4 marks for 4 from:</b></p> <ol style="list-style-type: none"> <li>1. <b>Healthy Living programme</b> to encourage following healthy lifestyles aimed to tackle barriers of limited parental awareness of weight status and associated health risks/parental beliefs that a healthy lifestyle is too challenging/pressures on parents which undermine healthy food choices/a perception that there are limited opportunities for active lifestyles</li> <li>2. <b>5 A Day</b> message eating 5(+)fruit and veg each day</li> <li>3. <b>Walking to school</b>/use of bikes to get to school/simple message easy to understand/has little scientific standing but is known by many so very motivating</li> <li>4. <b>Top Tips for Top Mums</b> – advice to mothers encourages parents across the country to share tips and ideas with each other on how they get their children to eat more fruit and vegetables</li> <li>5. <b>Fruit and veg of different colours/rainbow foods</b> – provide a wide range of vitamins, minerals, fibre and healthy antioxidants, which can help to protect the body throughout life</li> <li>6. <b>Promotion of healthy diets and physical activity</b> – in the run-up to the 2012 Olympics/<b>2012 initiatives</b> for health and post-Olympics legacy drive for healthy living</li> <li>7. <b>Change4Life</b> healthy lifestyles – marketing initiative partnerships with commerce to appeal to young people/more motivating/attractive to young</li> <li>8. <b>Five Choices</b> – to help you stay healthy you should Not smoke/Do some regular physical activity/Eat a healthy diet/Try to lose weight if you are overweight or obese/Don't drink too much alcohol</li> <li>9. <b>30 minutes of moderate aerobic physical activity</b>, on most days.</li> </ol>	4	<p>An explanation more than just an identification of the initiative must be present for a mark to be given.</p> <p><b>Accept : Fit for Life</b> as an initiative and refer to point 7 for detail of explanation.</p> <p><b>Accept any other recognised government initiatives.</b></p>

Question	Answer	Marks	Guidance
	<p>10. minimum of two sessions of muscle-strengthening activities per week (not on consecutive days)</p> <p>11. Children and teenagers should get at <b>least one hour a day of moderate physical activity</b> can be achieved by a mixture of play/PE/games/dance/cycling/sports/ various outdoor activities or equivalent</p> <p>12. <b>School-based initiatives</b> – educate positive and negative effects/healthy eating and benefits of exercise/provide healthy foods</p> <p>13. <b>Use of role models</b> – eg Top sports people promoting exercise and healthy eating</p> <p>14. <b>5 x 60 initiative</b> – promotion of physical exercise and activity</p> <p>15. <b>Subsidising facilities/activities/equipment/ government grants or create/build facilities</b> – eg free swimming/ mother and toddler sessions.</p>		Pt15 provide facilities is too vague as an initiative (no marks)

Question		Answer	Marks	Guidance	
				Content	Levels of response
25*		<p><b>6 marks total.</b></p> <p><b>Indicative content</b></p> <p><b>Programme is relevant and should include the following principles or within the description the principles are recognised:</b></p> <p>(Overload)</p> <ul style="list-style-type: none"> <li>• Work harder than normal/puts body under stress/adaptation will follow/comes about by increasing frequency/intensity/duration</li> <li>• Eg Lifting heavier weights.</li> </ul> <p>(Specificity)</p> <ul style="list-style-type: none"> <li>• Training should be particular/relevant to needs (Do not accept specific on its own without explanation)/relevant energy system used/relevant muscle groups used</li> <li>• Eg choosing main muscle groups used in activity to train for strength.</li> </ul> <p>(Progression)</p> <ul style="list-style-type: none"> <li>• (Gradually) becomes more difficult/demanding/challenging/once adapted then more demands on body</li> <li>• Eg Doing more repetitions of sprints at each training session.</li> </ul> <p>(Reversibility)</p> <ul style="list-style-type: none"> <li>• Performance can deteriorate if training stops/decreases</li> </ul>	6	<p><b>Differentiating between levels look for:</b></p> <p><b>Level 1 (1-2 marks):</b></p> <ul style="list-style-type: none"> <li>• Superficial description</li> <li>• Some misunderstandings</li> <li>• Some omissions of principles</li> <li>• Few or no examples of training activities</li> </ul> <p><b>Level 2 (3-4 marks):</b></p> <ul style="list-style-type: none"> <li>• Description covers most or all of principles</li> <li>• Few misunderstandings</li> <li>• Examples given for at least one principle</li> </ul> <p><b>Level 3 (5-6 marks):</b></p> <ul style="list-style-type: none"> <li>• Full description of all principles</li> <li>• Very few inaccuracies</li> <li>• Examples for most/all principles</li> </ul>	<p><b>Levels marked question</b></p> <p><b>Level 1 (1-2 marks)</b> Candidates make only one or two valid points described only very superficially. Little or no attempt at linking principles with the programme. There is little or no use of technical vocabulary and sentences have limited coherence and structure. There is much irrelevant material. Errors in grammar, punctuation and spelling may be noticeable and intrusive.</p> <p><b>Level 2 (3-4 marks)</b> Candidates make some valid points with good knowledge and understanding. Some attempt at linking principles with the programme. There is some use of technical vocabulary and sentences for the most part are relevant and are coherent. There are occasional errors in grammar, punctuation and spelling.</p> <p><b>Level 3 (5-6 marks)</b> Candidates make many developed points. Candidate demonstrates excellent knowledge and understanding of the factors involved. <u>Clear links between all the principles and the programme.</u> Candidate gives relevant material that is clearly structured and uses appropriate terminology and technical vocabulary. There are few if any errors in grammar, punctuation and spelling.</p>

Question		Answer	Marks	Guidance	
				Content	Levels of response
		Eg If you stop or decrease the intensity of your sprinting you may become slower in the 100 meters.			
		<b>Total</b>	<b>45</b>		
		<b>Paper Total</b>	<b>60</b>		

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