



## **GCSE**

### **Physical Education**

Unit **B451**: An Introduction to Physical Education

General Certificate of Secondary Education

**Mark Scheme for June 2017**

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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.

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**Annotations in scoris**

The following annotations are available:

<b>BP</b>		Blank Page – this annotation <b>must</b> be used on all blank pages within an answer booklet (structured or unstructured) and on each page of an additional object where there is no candidate response.
<b>?</b>	?	Unclear
<b>BOD</b>	BOD	Benefit of doubt
<b>X</b>	Cross	Incorrect
<b>L1</b>	L1	Level 1
<b>L2</b>	L2	Level 2
<b>L3</b>	L3	Level 3
<b>REP</b>	REP	Repeat
<b>✓</b>	Tick	Correct
<b>VG</b>	VG	Vague
<b>SEEN</b>	SEEN	Noted but no credit given
<b>S</b>	S	S (indicates 'sub max reached')
<b>EG</b>	EG	Example
<b>K</b>	K	Knowledge
<b>DEV</b>	DEV	Development

<b>Section A – Multiple choice</b>			
<b>Question Number</b>	<b>Expected Answer</b>	<b>Marks</b>	<b>Additional Guidance</b>
1	(a) Grilled chicken	[1]	
2	(d) A performance goal for a rugby player is to improve their passing and winning the league is their outcome goal	[1]	
3	(c) Stamina	[1]	
4	(d) Throwing and jumping are fundamental motor skills and are analysed using distance	[1]	
5	(d) It speeds up muscular contractions	[1]	
6	(b) Food calories that are eaten equal the amount of our daily energy requirements	[1]	
7	(c) 60 minutes five times per week	[1]	
8	(b) A volleyball player that is able to finish a training session without fatigue	[1]	
9	(c) Calling for a time-out in basketball to change tactics	[1]	
10	(c) Energy production in the body	[1]	
11	(a) Steroids are illegal drugs and increase the onset of fatigue in physical activity	[1]	
12	(d) Watching a role model participating in an athletics competition	[1]	
13	(c) Coaching effective tennis serves in a PE lesson	[1]	
14	(b) Exercises that work specific muscle groups at different stations	[1]	
15	(a) Measuring the level of participation in a range of physical activities	[1]	

Section B – Short Answer Questions			
Question Number	Expected Answer	Marks	Additional Guidance
16	<p><b>Four marks for four from:</b></p> <p><b>(Practical examples) Sub max three marks</b></p> <ol style="list-style-type: none"> <li>1. Shaking hands or thanking players/other officials or praising/ congratulating players/ other officials</li> <li>2. Not involved with arguments with the coaches/players/match officials or apologise if decision wrong</li> <li>3. Never swearing/be abusive to coaches/players/crowd/other officials or being polite when communicating with players/other officials</li> <li>4. Applying the rules of the game <u>fairly</u> (to both sides)</li> <li>5. Encouraging players to kick the ball out/pass ball back to opposition if someone is injured / stopping play for injury concerns (other than a head injury) or asking an injured player if they are ok</li> </ol> <p><b>(Importance) Sub max three marks</b></p> <ol style="list-style-type: none"> <li>6. Demonstrates sportsmanship</li> <li>7. Avoid the consequences/disciplined by FA (if decisions deemed unfair)</li> <li>8. Encourages respect / fair play or promotes kindness or gives (perceived) lack of bias</li> <li>9. Prevents injury or promotes safety / safe play</li> <li>10. Prevents aggression/ violence/ keeps players calm</li> <li>11. Makes game more fun/enjoyable or smoother/ flowing play or friendly</li> <li>12. Being a role model/sets an example or maintains reputation of the sport</li> </ol>	[4]	<p>Both practical example descriptions and importance of etiquette must be covered for full marks</p> <p>Accept other relevant examples as equivalents</p> <p>Pt 4 – must include fairness in application or rules. Do not accept merely the application of rules eg: giving a correct offside decision</p>

Section B – Short Answer Questions			
Question Number	Expected Answer	Marks	Additional Guidance
17	<p><b>Five marks for five from:</b></p> <p><b>(Spinning description) Sub max four marks</b></p> <ol style="list-style-type: none"> <li>1. <u>Indoor/static/exercise</u> bike/cycling workout/session</li> <li>2. Warm up/steady up-tempo phase/s or done to music</li> <li>3. Sprints/climbs or change your body position</li> <li>4. Cool down</li> <li>5. Individual chooses the resistance or it can be a variation between high and low intensity or intervals or you can constantly adjust amount of resistance (throughout the session)</li> </ol> <p><b>(Benefits) Sub max four marks</b></p> <ol style="list-style-type: none"> <li>6. Increases cardiovascular fitness / endurance / stamina</li> <li>7. Increases muscular endurance / (leg) strength</li> <li>8. Burns calories or to control weight or for body image or toning</li> <li>9. Progress at your own pace/work hard at own level or can be non-competitive</li> <li>10. Low impact workout</li> <li>11. Social/meeting/making friends</li> <li>12. No safety equipment required (helmet)</li> <li>13. Usually led by an instructor/motivation</li> <li>14. Reduces stress or psychological benefits or makes you happier/more confident or for mental health</li> <li>15. (Relatively) little skill required or easy to do</li> </ol>	[5]	<p>Both spinning description and benefits must be covered for full marks</p> <p>(Benefits)</p> <p>Do not accept:</p> <ul style="list-style-type: none"> <li>• to keep fit or to be healthy (in question)</li> </ul> <p>Accept:</p> <ul style="list-style-type: none"> <li>• (pt 6) – increase in tidal volume/stroke volume or decrease in resting HR or any other long-term physiological benefits</li> <li>• Give marks (sub max 4) for benefits even if description is incorrect</li> </ul>

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Question Number	Expected Answer	Marks	Additional Guidance
18	<p><b>Four marks for four from:</b></p> <ol style="list-style-type: none"> <li>Efficient/economic/effortless - no wasted energy during linked movements in routine</li> <li>Pre-determined – gymnast knows the order of their routine before they start</li> <li>Aesthetic - routine looks good/pleasing to the eye</li> <li>Creative – routine involves new techniques/a newly learned balance</li> <li>Successful/effective – No faults (falling over) within performance/good scores from judges/good technique when performing (a skill / dive forward roll etc)</li> <li>Consistent – performs the sequence (well) every time/lands without falling over every time</li> <li>Well learned – new technique of cartwheel is not forgotten</li> <li>Confident – gymnast demonstrates confidence when executing somersault</li> <li>Coordinated/timing – gymnast (successfully) links different moves together</li> <li>Speed – gymnast performs tumbling routine quickly</li> </ol>	[4]	<p>Do not accept <u>control or fluency</u>.</p> <p>No gymnast application = no mark awarded for description</p> <p>Accept practical example only if the characteristic is identified and described</p>
19	<p><b>Six marks for six from:</b></p> <ol style="list-style-type: none"> <li>(To speed up) remove or get rid of/ reduces lactic acid or waste products</li> <li>Prevent blood pooling</li> <li>Prevent feeling tired or fatigued or to recover quicker</li> <li><b>Gradually</b> decrease heart rate/blood pressure/maintain blood pressure</li> <li><b>Gradually</b> decrease body temperature</li> <li><b>Gradually</b> decrease breathing rate</li> <li>To stop you feeling dizzy or faint or sick</li> <li>Psychological benefits or makes you calm down or lowers anxiety.</li> </ol>	[6]	<p>Do not accept:</p> <ul style="list-style-type: none"> <li>• reduces risk of injury or muscle soreness / stiffness / cramp</li> <li>• prevents build-up of lactic acid</li> <li>• reduce level of adrenaline = vg</li> </ul>

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Question Number	Expected Answer	Marks	Additional Guidance
20	<p><b>Three marks for three from:</b></p> <ol style="list-style-type: none"> <li>1. Choosing the <b>type</b> of activity to be undertaken</li> <li>2. Choosing the <b>equipment / clothing</b> for the activity</li> <li>3. Choosing to <b>carry out</b> the activity safely or to the <b>level of our ability</b> or choosing appropriate rest intervals or not to go out onto the water in challenging conditions (Kayaking)</li> <li>4. Choosing the <b>location/venue</b> or the suitable <b>time/space</b> to pitch a tent for the night (Hillwalking/campcraft) or choosing a suitable slope/run to match your ability (Skiing)</li> <li>5. Choosing <b>effective methods/techniques/routes</b> e.g. Working out the best route to take (Orienteering)</li> <li>6. Deciding whether to <b>ask for help</b> or to follow advice or deciding when to ask for more slack in rope (Rock-climbing)</li> <li>7. Choosing to take into account <b>weather conditions</b> e.g. not climbing if raining</li> </ol>	[3]	<p>Accept different decision making within the same activity</p> <p>Accept other relevant examples as equivalents linked to outdoor and adventure activities i.e. no team games</p> <ul style="list-style-type: none"> <li>• Do I wear a helmet in climbing? = BOD pt 2</li> </ul> <p>Accept cycling and swimming as outdoor activities</p>

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Question Number	Expected Answer	Marks	Additional Guidance
21	<p><b>Six marks for six from:</b></p> <p><b>(Smoking)</b></p> <ol style="list-style-type: none"> <li>Decreased fitness /endurance levels/takes longer to complete physical activity/less energy or decreased performance levels or decrease in speed or training not so effective or can't take part for as long or tiredness or need lots of rests</li> <li>Unable to perform due to (related) health issues/illness/cancer/CHD/lung problems or high blood pressure</li> <li>Tar build-up or inflamed lung tissue</li> <li>Reduced lung capacity or reduced oxygen intake or less gaseous exchange or breathlessness/ difficult to breathe</li> <li>Increased (resting) heart rate</li> <li>Heart works harder during exercise</li> <li>(Presence of) carbon monoxide</li> <li>Decreased oxygen carrying capacity of the blood</li> <li>(Vaso) constriction / narrowing of blood vessels</li> <li>Less blood / oxygen getting to muscles</li> <li>Weaker / brittle bones</li> <li>More prone to injury</li> <li>Psychological effects / addiction or lower self-esteem/confidence/ negative thoughts</li> <li>Reduces concentration or lack of motivation or increase in lethargy</li> </ol>	[6]	<p>Unable to participate = too vague</p> <p>Accept other related diseases/conditions for point 2 eg stroke</p>

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Question Number	Expected Answer	Marks	Additional Guidance
22	<p><b>Three marks for three from:</b></p> <ol style="list-style-type: none"> <li>1. Physical <u>and</u> mental capacity</li> <li>2. Evaluating <u>and</u> improving</li> <li>3. Making (informed) <b>choices/decisions</b> about active/healthy lifestyles</li> </ol>	[3]	<p>Do not accept:</p> <ul style="list-style-type: none"> <li>• developing skills/techniques or decision making</li> <li>• healthy active lifestyles = Vg</li> </ul>
23	<p><b>Four marks for four from:</b></p> <p><b>(Blood pressure) Sub max three marks</b></p> <ol style="list-style-type: none"> <li>1. (General) To check for high/low blood pressure</li> <li>2. Ranges: Normal: 90/60 to 140/90/High: Higher than 140/90/Low: Under 90/60</li> <li>3. (General) A check to see if it's safe to exercise or more aware of the dangers or to assess how much exercise is appropriate</li> <li>4. HBP/ hypertension increases risk of heart attack / stroke / CHD or heart/ vascular problems/ blood clots</li> <li>5. HBP then need to avoid intense activity / overexertion</li> <li>6. LBP/ hypotension can cause fainting / dizziness / poor concentration</li> </ol> <p><b>(Health screening method) Sub max one mark</b></p> <ol style="list-style-type: none"> <li>1. Blood/ urine test</li> <li>2. Body mass index/BMI</li> <li>3. Cholesterol</li> <li>4. Glucose</li> <li>5. Heart rate</li> <li>6. Hydration</li> <li>7. Questionnaire/PARQ</li> <li>8. Skinfold measurement</li> <li>9. Family history</li> </ol>	[4]	<p>Do not accept blood pressure as other health screening method</p> <p>Both importance of blood pressure and other health screening method must be covered for full marks</p> <p>Only one mark sub max for other health screening method</p> <p>Only accept other health screening method in identified space on question paper</p> <p>HBP can lead to problems in your arteries and veins = pt 4 BOD</p>

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Question Number	Expected Answer	Marks	Additional Guidance
24	<p><b>Four marks for four from:</b></p> <ol style="list-style-type: none"> <li>1. To improve physical health or to prevent illness/less prone heart disease/other diseases or to stay/be healthy or to recover from illness or because of medical advice</li> <li>2. Live longer</li> <li>3. Components of physical fitness improving/keep fit</li> <li>4. Mental health/feel good/happy/positive feelings or have fun / enjoyment or to reduce stress</li> <li>5. Image/self-esteem/confident/feel good about yourself or improve your body image</li> <li>6. Sense of achievement or to learn new skills or to win competition</li> <li>7. Keep (physically) active/mobile or keep doing physical activities or good at an activity when younger or can help to cope with demands of everyday life or to recover from injury/ (physical) rehabilitation</li> <li>8. Not getting tired easily/offsets fatigue</li> <li>9. Inspired by role model eg 90 year old running 2015 London marathon</li> <li>10. Increased opportunity eg veterans teams/walking football</li> <li>11. As a job / career or to earn money/ reward</li> <li>12. To manage weight / weight control or to lose weight</li> <li>13. To act as a role model (for others)</li> </ol>	[4]	<p>Do not accept hobby or social reasons/making friends/meeting people</p> <ul style="list-style-type: none"> <li>• To relieve boredom = vg</li> </ul>

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Question Number	Expected Answer	Marks	Additional Guidance
25*	<p><b>Six marks total.</b></p> <p><b>Levels descriptors</b></p> <p><u>Level 1 (1-2 marks)</u> Candidates describes only very superficially. Little or no attempt at explanation. 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><u>Level 2 (3-4 marks)</u> Candidates make some attempt at explanation with good knowledge and understanding. Material largely relevant. 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><u>Level 3 (5-6 marks)</u> Candidates make many explained and developed points. Candidate demonstrates excellent knowledge and understanding of the factors involved. Candidate gives relevant material that is clearly structured and using appropriate terminology and technical vocabulary. There are few if any errors in grammar, punctuation and spelling.</p>	[6]	<p>Differentiating between levels look for:</p> <p><b>Level 1:</b> Description rather than comparison/explanation Very narrow range of concepts with little or no development One mark given for correct naming of a concept Little or no reference to the different roles that concepts are applied Superficial or limited/incorrect examples</p> <p><b>Level 2:</b> Some comparison /explanation At least two different concepts with some development points At the top of this level a range of roles (at least two) included Mostly relevant practical examples</p> <p><b>Level 3:</b> Points are developed / expanded Clear comparison/explanations Different roles applied and at the top of this level all three roles (performer, coach and official) applied At least three different concepts included</p> <p><b>Always indicate the level at the end of the response.</b></p>

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Question Number	Expected Answer	Marks	Additional Guidance
	<p><b>Indicative content</b></p> <p><b>Competence</b></p> <ul style="list-style-type: none"> <li>• The relationship between skill, selection and application of skills, tactics and compositional ideas and the readiness of body and mind to cope with physical activity</li> <li>• To be able to do / carry out a physical activity to be able to cope with physical activity</li> <li>• To link skill / tactics / compositional ideas</li> <li>• Physical fitness to be able to participate</li> <li>• Mental fitness to be able to participate</li> </ul> <p><b>(Practical examples):</b></p> <ul style="list-style-type: none"> <li>• In hockey you need to learn how to stop and hit the ball effectively</li> <li>• In football to know when to concentrate on attacking and when to put your efforts into defending</li> <li>• In an exercise class as the trainer you need to show determination to finish the class</li> <li>• As a hockey umpire you have the speed to keep up with play</li> </ul> <p><b>Performance</b></p> <ul style="list-style-type: none"> <li>• Using physical competence and knowledge and understanding of physical activity</li> <li>• to produce effective outcomes when participating in physical activity to be effective in physical activity</li> <li>• To use physical competence and understanding to be effective</li> <li>• To be successful</li> </ul> <p><b>(Practical examples):</b></p> <ul style="list-style-type: none"> <li>• If you are in the school netball team then you would probably be able to run fast over a short distance and change direction well</li> <li>• As a coach you can demonstrate a serve effectively</li> <li>• As a rugby ref you can run to each phase of play around the pitch</li> </ul>		<p><b>Look for:</b></p> <p><b>K</b> = name of concept</p> <p><b>Dev</b> = development of a description</p> <p><b>Eg</b> for practical example for different roles:</p> <ul style="list-style-type: none"> <li>➢ Performer</li> <li>➢ Coach</li> <li>➢ Official</li> </ul>

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Question Number	Expected Answer	Marks	Additional Guidance
	<p><b>Creativity</b></p> <ul style="list-style-type: none"> <li>Exploring and experimenting with techniques, tactics and compositional ideas to produce efficient and effective outcomes</li> <li>Trying out / improvise / different / alternative/ changing / experiment /practising new things /moves / skills / techniques trying out new positions.</li> <li>Trying new tactics/strategies / new ways of communicating with players as an official / changes in coaching activities</li> <li>Using your imagination in movement/skills</li> <li>Effective end result</li> </ul> <p><b>(Practical examples):</b></p> <ul style="list-style-type: none"> <li>You might try different techniques in the long jump</li> <li>Trying out / new positions to view play as an official</li> <li>New ways of communicating with players as a coach</li> <li>Using your imagination/creativity in a new floor routine in gymnastics</li> <li>Using different defence strategies/formation in basketball</li> <li>An official talking to the players and explaining decisions</li> <li>The free kick routine devised results in a goal</li> </ul>		

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Question Number	Expected Answer	Marks	Additional Guidance
	<p><b>Healthy, active lifestyle</b></p> <ul style="list-style-type: none"> <li>• Understanding the positive contribution that regular, fit for purpose physical activity makes to the physical and mental health of the individual</li> <li>• Importance of health / to try to be healthier</li> <li>• Following a balanced diet</li> <li>• Importance of fitness / active lifestyle</li> <li>• Exercising regularly</li> </ul> <p><b>(Practical examples):</b></p> <ul style="list-style-type: none"> <li>• If you participate regularly in a team sport like volleyball you are more likely to be healthier/fitter</li> <li>• As a coach you keep healthy by eating 5 fruit and veg a day</li> <li>• An athlete / athletic official you will avoid unhealthy behaviour / avoid drinking alcohol/smoking</li> </ul>		

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