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**PHYSICAL EDUCATION**

**0413/11**

Paper 1

**October/November 2018**

MARK SCHEME

Maximum Mark: 80

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**Published**

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the October/November 2018 series for most Cambridge IGCSE™, Cambridge International A and AS Level components and some Cambridge O Level components.

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This document consists of **17** printed pages.

**PUBLISHED****Generic Marking Principles**

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

**GENERIC MARKING PRINCIPLE 1:**

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

**GENERIC MARKING PRINCIPLE 2:**

Marks awarded are always **whole marks** (not half marks, or other fractions).

**GENERIC MARKING PRINCIPLE 3:**

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

**GENERIC MARKING PRINCIPLE 4:**

Rules must be applied consistently e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

**GENERIC MARKING PRINCIPLE 5:**

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

**GENERIC MARKING PRINCIPLE 6:**

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

Question	Answer	Marks
1	running / walking / jumping / skipping / throwing / catching / hitting a ball; <i>Accept relevant examples.</i>	1

Question	Answer	Marks
2	weakness / dizziness / unable to carry on / muscle cramp / increased thirst / palpitations / confusion / fainting / thicker blood / dehydration / headache;	1

Question	Answer	Marks
3	<b>any voluntary activity</b> a person might do <b>during leisure time</b> ; <i>Responses must describe at least one of the bold parts of the statement.</i> <i>Accept alternative wording, e.g. leisure activity / hobby.</i>	1

Question	Answer	Marks
4	increased participation / more and better facilities available / schools have a wider range of facilities available / more groups can use facilities / enables greater development of facilities / reduces the costs for community and schools / schools can have access to a wider curriculum / easy access to external clubs for students / easy to access for the community;	1

Question	Answer	Marks
5	back support belts / chalk / joint straps and support / lifting hooks / stands of weights / good fitting clothes that do not restrict movement / appropriate footwear with solid sole / gloves;	1

Question	Answer	Marks
6	a drive / influence that causes someone to do something / the act or process of giving someone a reason for doing something / the desire to be successful / determines how much effort a person makes;  <i>Accept alternative wording.</i>	1

Question	Answer	Marks
7	hamstring(s); quadricep(s);	2

Question	Answer	Marks
8	impact with the ground / hard surface; impact with another person; impact with object / sharp object; overstretching; sudden / twisting movement; friction / rubbing of footwear / clothing; inadequate clothing / body protection; environment (hot or cold, wet or dry); not following instructions / not following rules / incorrect / inappropriate technique;	2

Question	Answer	Marks
9	haemophilia;  iron deficiency / decrease in red blood cells;  lack of energy / unable to sustain a high level of performance / tires more quickly;	3

<b>Question</b>	<b>Answer</b>	<b>Marks</b>
10	availability of land / suitability of land; cost of land / budget available; being close to / within a community / population levels / access; position of other similar facilities; needs of the community / interest in participation; transport links / public transport available / road network; relationship to natural resources / appropriate environment / climate; <i>Accept other relevant factors.</i>	<b>3</b>

Question	Answer	Marks
11	<p>1 mark for each of 2 appropriate injuries. 1 mark for each of 2 appropriate treatments. Treatments must be appropriate and different.</p> <p><i>Examples may include:</i> injury – torn ligament, e.g. cruciate ligament tear; treatment – immobilise / seek hospital treatment;</p> <p>injury – ligament sprain (where the ligament is overstretched but not torn); treatment – rest / ice / compression / elevation;</p> <p>injury – cartilage tear; treatment – rest / hospital treatment;</p> <p>injury – dislocation of the knee cap; treatment – immobilise / hospital treatment;</p> <p>injury – fractures of the knee cap / lower femur / upper tibia or fibula; treatment – immobilise / hospital treatment / use of cast;</p> <p>injury – cuts / grazes; treatment – apply pressure / clean wound / dress;</p> <p>injury – bruise; treatment – a component of RICE;</p> <p>injury – tendon tear; treatment – immobilise / surgery;</p> <p>injury – tendon strain; treatment – a component of RICE;</p>	4

Question	Answer	Marks
12(a)	<p><i>No mark for naming the part.</i></p> <p>A – decision making – the performer will hear / see / feel information and base the output on this / the performer’s long-term memory will recall previous actions and respond accordingly;</p> <p>B – feedback – after the output the performer will see the if the actions were successful / (receive information from a coach) adjust actions based on success or failure of actions / identify strengths / identify weakness;</p> <p><i>Accept negative factors, e.g. poor feedback can result in mistakes being repeated.</i></p> <p><i>Accept alternative wording.</i></p>	<b>2</b>
12(b)	<p>what to do is fixed in the mind / concentrated on / focused on;</p> <p>allows the performer to feel positive / confident (as the image is one of success);</p> <p>allows a performer to break the skill down into parts;</p> <p>increases the level of arousal / get psyched up prior to event when high arousal is required, e.g. weight lifting;</p> <p>calms a performer / reduces stress / reduces anxiety / reduces tension so they feel they are in control;</p> <p>motivates a performer to perform well;</p>	<b>3</b>
12(c)	<p><i>1 mark for naming the muscle fibre type.</i></p> <p><i>Up to 2 marks for the reasons, which must match the fibre type.</i></p> <p><i>main type of muscle fibre:</i></p> <p>fast twitch;</p> <p><i>reasons:</i></p> <p>muscle fibres have fast contractions / allow good leg speed;</p> <p>contractions are stronger / more powerful / explosive / allows a strong drive phase / speed out of the blocks;</p> <p>anaerobic activity / short length of time to complete the event / allows an all-out effort for a short period of time;</p>	<b>3</b>



<b>Question</b>	<b>Answer</b>	<b>Marks</b>
12(d)	<p>pressure from a coach; media / crowd / peers etc.;</p> <p>performer thinks others are doing it so they would not be able to compete against them without taking drugs; wants to get a sponsor / contract / gain fame; wants to win large sums of money / trophies / rewards;</p> <p><i>Allow specific examples, e.g.:</i> to speed up reactions; to reduce / overcome fatigue / overcome tiredness; to mask pain; for muscular growth; to speed recovery from injury; to lose weight / to get into a certain category / masks signs of other drugs; reduce anxiety / lower heart rate / reduces stress;</p>	<b>3</b>
12(e)	<p>age; maturity; motivation; anxiety; arousal levels; facilities / equipment; environment; amount of time spent training; quality of teaching / coaching;</p>	<b>4</b>
12(f)(i)	<p>the ability to react to external factors / performing the right skill at the right time / it's the combination of decision-making, coordination and reaction time;</p>	<b>1</b>

<b>Question</b>	<b>Answer</b>	<b>Marks</b>
12(f)(ii)	<p><i>Physical activities and examples must be different.</i></p> <p><i>Must demonstrate the effect of poor timing, for example:</i></p> <p>cricket / tennis / baseball / badminton / table tennis – swinging the bat / racket too early / late and missing the ball;</p> <p>football – running into a position too early results in being in an offside position before pass is made;</p> <p>discus throwing – releasing the discus too early causes danger to others;</p> <p>rugby – releasing a pass too late results a forward pass;</p> <p><i>Accept other appropriate examples.</i></p>	<b>2</b>
12(f)(iii)	regular / repeating practice of the skill / repetitive drills;	<b>1</b>

Question	Answer	Marks
12(g)	<p><i>1 mark for naming up to three components of health-related fitness.</i></p> <p><i>1 mark for an appropriate explanation of each component in a named physical activity.</i></p> <p><i>For example in basketball:</i></p> <p>cardio-vascular endurance; able to recover to a defensive position after taking part in a fast break;</p> <p>body composition; being an ectomorphic body type giving a height advantage to rebound the ball;</p> <p>flexibility; having a good range of movement in the shoulder, which allows the player to stretch to be able to rebound the ball at the highest point;</p> <p>muscular endurance; being able to jump multiple times to rebound the ball without tiring;</p> <p>speed; able to run the length of the court quickly to be part of a fast break;</p> <p>stamina; have the energy to last the whole game and play in overtime;</p> <p>strength; able to successfully shoot a three-point shot;</p>	<b>6</b>

Question	Answer	Marks
13(a)	able to cope with stress; control emotions / not aggressive; feel good about yourself / have a positive outlook / have (self-)confidence / self-esteem / happier / (self-)motivated; have a good sense of own value;	<b>2</b>
13(b)	frequent colds / flu / minor illnesses / sickness; feeling of anxiety; tiredness / fatigue; loss of appetite; sleeping problems; muscle soreness / joint pain / overuse injuries, e.g. shin splints; demotivated to train / mood swings / boredom;	<b>2</b>
13(c)	protein – builds muscles / repairs tissue / can be used as an energy source / produces enzymes; fat – energy source / provides insulation / help maintain body temperature / provides protection; fibre – reduces the chances of constipation / keeps you regular / fills the gut so performers do not feel inclined to over eat / reduces the chances of bowel cancer / aids digestion;  <i>Benefits must be different.</i>	<b>3</b>

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<b>Question</b>	<b>Answer</b>	<b>Marks</b>
13(d)	<p><i>Responses should relate to outdoor and adventurous activities.</i></p> <p>group leader should complete a risk assessment / planning appropriate prior to the activity;</p> <p>have personal details of all members of the group, including health information;</p> <p>appropriate level for participants / ensure the activity is not too demanding / takes place at a venue suitable for beginners;</p> <p>have appropriate equipment / first-aid kit / ensure all participants know how to use safety equipment / provide preparation before activity, such as how to use harnesses / tie knots / use life preservers etc.</p> <p>ensure there are an appropriate number of instructors / safety boats / more instructors than usual so groups are small / suitably qualified staff present;</p> <p>ensure that participants know the safety procedures / understand the rules / know how to respond to changes in weather conditions;</p> <p>ensure sufficient additional clothing / food etc.;</p>	<b>3</b>

Question	Answer	Marks
13(e)	<p><i>3 marks max. for explaining lactic acid formation:</i></p> <p>lactic acid is formed during high-intensity work;</p> <p>lactic acid is formed during anaerobic activities / working above aerobic threshold;</p> <p>lactic acid is formed when the supply of oxygen to muscles is insufficient for the work they are required to do / when oxygen cannot reach the muscles quickly enough;</p> <p>without oxygen, glucose can only provide energy for a short period of time;</p> <p>as muscles continue to work the level of lactic acid builds up;</p> <p><i>3 marks max. for effects:</i></p> <p>causes muscle fatigue;</p> <p>may cause the performer to stop exercising;</p> <p>muscles become less efficient;</p> <p>muscle soreness / muscle ache / performer will feel pain;</p> <p>muscles need rest to recover;</p> <p>provides a source of energy for a short period of time;</p>	<b>4</b>

Question	Answer	Marks
13(f)	<p><i>1 mark for describing each of up to 4 changes that takes place.</i> <i>1 mark per explanation of how these enable a performer to maintain a steady pace.</i></p> <p>For example:</p> <p><i>changes:</i></p> <p>heart beat increases / stroke volume / cardiac output increases;</p> <p>increase in breathing rate / tidal volume / depth of breathing;</p> <p>vasodilation (of surface blood vessels) / skin becomes red;</p> <p>vasoconstriction (of blood flow to organs not in use);</p> <p>increase in sweating;</p> <p>glycogen stored in muscles and the liver is released;</p> <p>gaseous exchange increases;</p> <p><i>explanations:</i></p> <p>more oxygen delivered to the working muscles to enable muscles to work at a steady pace;</p> <p>helps with heat loss / helps body to maintain / regulate temperature;</p> <p>increased removal of carbon dioxide / waste products;</p> <p>able to get more oxygen into the body;</p> <p>slowing production of lactic acid;</p> <p>provides sufficient glucose to muscles;</p> <p>ensures the supply of oxygenated blood increases;</p>	6

Question	Answer	Marks
14(a)	<p>some facilities are specifically run by sports clubs, e.g. run by their members for their members;  the activity may not provide a profit for a private company / a local authority may be unable or unwilling to financially support the activity;  fill a gap in the provision of facilities;  to meet the need of a minority group;  lack of available qualified coaches;</p> <p><i>Accept reverse arguments where appropriate.</i></p>	<b>2</b>
14(b)	<p><i>Allow reverse arguments but do not credit opposites.</i></p> <p>increase / decrease in confidence;  increase / decrease pressure;  increase / decrease appointment for high-profile matches / can affect job(s);  raise / lower image / invade private lives;  causes them to stop / retire;  improves refereeing skills;</p>	<b>3</b>
14(c)	<p>establishes equality in sport / reduces discrimination;  gives disability sports greater media coverage / increase viewers / spectators;  develops a greater understanding / awareness of disability sports / promotes disability sport;  encourages sponsorship;  lottery funding / more government funding becomes available;  sports governing bodies include disability groups into their planning for the event;  more disabled people are motivated to take part / increased participation of disability performers / encouraged by role models;  more full-time athletes allows standards to improve;  improves access to high-quality facilities;  increases public acceptance of disabled performers being elite athletes;</p>	<b>4</b>



Question	Answer	Marks
14(d)	<p>in many sports, the involvement of men is more established / historic / greater participation / more popular with males;</p> <p>generally men's sport has more / bigger sponsorship deals;</p> <p>generally men's sport is stronger / quicker which may create more excitement / interest;</p> <p>greater demand for men's sport by the viewing public as generally more men watch more televised sports / larger fan base / more pay-to-view;</p> <p>men's sport usually has greater prize money / more publicity surrounds the event;</p> <p>the majority of sports coverage in the media is for team sports, which are often male dominated rather than individual sports when female coverage is often greater;</p> <p>the number of elite women's teams tend to be fewer so more men's teams are available for coverage;</p> <p>there are more male sports role models than female sports role models so they attract more attention for their sport;</p> <p>men's sporting achievements are more valued than female sporting achievements by some societies;</p> <p>certain countries do not allow / limit the sports that women take part in so little can be televised;</p>	<b>6</b>