



PHYSICAL EDUCATION

0413/11

Paper 1

May/June 2018

MARK SCHEME

Maximum Mark: 80

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.

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This document consists of **18** printed pages.

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	<i>Answers must contain comparison between both types of skill.</i> an open skill is affected by the environment / external factors but a closed skill is not / in open skills movements may vary but a closed skill is the same each time / open skills are adapted or modified to achieve an outcome but a closed skill is always the same / open skills require decision-making but closed skills do not;	1

Question	Answer	Marks
2	prevents constipation / cleans the gut / helps prevent bowel cancer / bulk food so do not over eat / fills you up / helps digestive process;	1

Question	Answer	Marks
3	finances / access to facilities / support from family / influence of peers / team mates / sports taught in school / government influence on the curriculum where you live / other social commitments / restrictions of different social groups, e.g. females;	1

Question	Answer	Marks
4	equipment should be stable / not be broken / of an appropriate weight / be easy to grip / hold / how many people are needed to lift the equipment / capability of lifter / lifters / correct lifting technique / the area / route is clear / safe;	1

Question	Answer	Marks
5	to make a lower weight category / lose weight / flush out / mask other drugs that may have been taken;	1

Question	Answer	Marks
6	to make a profit / increasing business / to gain money / to increase membership;	1

Question	Answer	Marks
7	<p><i>Examples may include:</i></p> <p>the skull – protects the brain; the ribs – protect the heart; – protect the lungs; the pelvis – protects the abdomen;</p>	2

Question	Answer	Marks
8	<p>to make the sport appear more exciting; to ensure a result can be achieved; to make a match fit into the time available for a programme; to change the structure of a game to allow advertising breaks / attract sponsorship; to gain a bigger audience / more paying customers; to make it easier to understand;</p>	2

Question	Answer	Marks
9	<p>increase awareness / participation levels in the local community; improve facilities; provide coaching; provide competitions; provide support / focal point for the local community; improve skills / raise standards of performance; provide low-cost opportunities;</p>	3

Question	Answer	Marks
10	<p><i>One mark for naming a type of muscle fibre.</i></p> <p>slow twitch / fast twitch;</p> <p><i>Accept other recognised classifications of types of muscle fibre.</i></p> <p><i>Benefits must match the named type of muscle fibre.</i></p> <p><i>e.g. for fast twitch:</i> produce powerful / strong contractions / large force; provides explosive movement; able to move quickly; provide strength; provide power;</p> <p><i>Accept examples, e.g. speed to beat a player.</i></p> <p><i>e.g. for slow twitch:</i> able to perform over a long period; do not tire easily; increased muscular endurance; better posture;</p> <p><i>Accept examples, e.g. able to last the whole game.</i></p>	3

Question	Answer	Marks
11	intimidated by opposition / lack of confidence in own ability / standard of competition; crowd / people watching; noise / bright lights; unable to sleep / lack of sleep the night before performing; poor diet before / in preparation for event; a lack of focus; over-training and being physically tired; anxiety-induced illness / pressure to win / nervousness; media intrusion / press being present; ‘rabbit in headlights’ effects; unfamiliarity with surroundings; <i>Accept other valid suggestions.</i>	4

Question	Answer	Marks
12(a)	intrinsic motivation comes from within / motivation you give to yourself; <i>Examples could include:</i> take pride in performance / pride in winning / wanting to improve / achieve a personal goal / to meet a challenge / personal challenge / wanting to take part in an activity for enjoyment / fun;	2

Question	Answer	Marks
12(b)	ensure the type of feedback is appropriate to the age of the performer / language used is appropriate; ensure information is given in small chunks; feedback should be to the point / specific; feedback should be positive / identify strengths; feedback should identify areas of weakness; feedback should be given quickly after the skill has been performed; time should be given for the performer to consider comments and reflect / time for practice; feedback should give an indication of the next steps; use simple instructions; use of demonstrations / use of video;	3

Question	Answer	Marks
12(c)	<p><i>One mark for naming both muscles / muscle groups.</i></p> <p><i>Up to two marks for description, which can be for one or more movements.</i></p> <p>muscles: hamstrings AND quadriceps;</p> <p>example: flexion / bending knee; hamstrings = agonist / prime mover; quadriceps = antagonist; hamstrings are attached to the tibia and fibula; hamstring contracts / shortens and quadriceps relax / lengthen; the hamstring pulls the lower leg towards the pelvis;</p> <p>example: extension / straightening knee; quadriceps = agonist / prime mover; hamstrings = antagonist; quadriceps are attached to the tibia; quadriceps contract / shorten and hamstring relaxes / lengthens; the quadriceps pull the lower leg back to a straight / neutral position;</p>	3
12(d)	<p>to make competitions fair / prevents cheating;</p> <p>to protect the health of the athletes;</p> <p>to prevent young / impressionable athletes being influenced by coaches;</p> <p>to maintain the integrity and credibility of sport / maintain ethics of the sport / to prevent sporting achievement from being devalued;</p> <p>to be able to recognise natural talent;</p> <p>to prevent athletes from breaking laws;</p>	3

Question	Answer	Marks
12(e)	<p><i>Answer may relate to specific goal-setting principles or may be more general.</i></p> <p>specific – training is not always specific so time is wasted on unnecessary training / developing irrelevant skills; measurable – cannot measure if progress is being made; agreed – if there is no agreement with a coach they might not work collectively towards a common aim; realistic – setting goals that are too difficult may demotivate a performer; time-phased – if the training is over too short a period little progress will be made / if too long the performer will lose interest; exciting – if training is not exciting boredom will set in and the performer will not put in as much effort / may lack focus; recorded – if the results in competition / training are not recorded it becomes difficult to compare to previous results to see if they are ready for competition / if progress has been made; lack of motivation to perform well as there is little requirement to do well / reduction in effort; increase anxiety / loss of confidence if unsure of progress; performer may not improve; overtraining / injury may occur if working too hard;</p>	4
12(f)	<p><i>One mark for each fitness component applied to the named sport.</i></p> <p><i>For example in basketball:</i></p> <p>cardio-vascular endurance – has the ability to maintain a high level of performance when the game goes into overtime / last the full length of a game; body composition – being tall enables a performer to shoot over smaller players; flexibility – the ability to stretch to catch a high ball when rebounding the ball; muscular endurance – able to perform multiple jumps if needed to rebound the ball without becoming tired; speed – to be able to run into position to receive the ball before an opponent / be involved in a fast break; stamina – being able to continue to run a fast break late in the game; strength – being able to shoot the ball from outside the 3-point line / able to protect the ball when rebounding;</p> <p><i>If no examples are described allow one mark only for naming four components.</i></p>	4

Question	Answer	Marks
12(g)	<p><i>Must include both circulatory and respiratory system for full marks.</i></p> <p><i>Maximum three marks for a list of changes.</i></p> <p><i>Example changes with benefits may include:</i></p> <p>stronger cardiac muscle / increased stroke volume / cardiac output; as more blood is pumped by the heart to the muscles the muscles receive more oxygen and can work for longer;</p> <p>lower resting heart rate; the heart rate will take longer to reach maximum so less energy is needed to work as hard;</p> <p>more efficient gaseous exchange; increase in the oxygen available / carbon dioxide removed so oxygen debt builds more slowly;</p> <p>recovery rate increases; recover from exercise more quickly, which allows performers to repeat exercise;</p> <p>increase in vital capacity / tidal volume / respiratory muscles become stronger; allows more oxygen to be available so muscles will be able to work for longer and slow the build-up of lactic acid;</p> <p>oxygen debt tolerance increases; oxygen debt occurs more slowly as more oxygen can be breathed in per breath, performer can work for longer / performer can work for longer before the effects of lactic acid reduce performance / increase the duration of performance / delays fatigue;</p> <p>increased capillarisation; increases the supply of oxygen and blood flow / faster gaseous exchange so increased oxygen uptake and removal of carbon dioxide;</p> <p><i>Accept other relevant changes and benefits.</i></p>	6

Question	Answer	Marks
13(a)	physical well-being; mental well-being; social well-being;	2
13(b)	prepares mentally – the short duration of a sprint event means a performer must be focused from the start; muscle injuries are more likely to occur when involved in high-intensity exercise / during fast contractions; a sprint event will place great pressure on muscles immediately; a sprinter will need to have greater flexibility immediately / flexibility may be a benefit a distance runner in the final sprint but joints would be warm at this stage; the sprinter will need an immediate response so heart rate must be raised to ensure that there is already an increase in blood flow to muscles;	2
13(c)	<i>One mark for description of how ice should be applied.</i> <i>One mark for each benefit.</i> <i>how to apply:</i> applied to the area when wrapped in a towel / eq. / remove after stated time / repeat process / ice should not be applied directly onto skin; <i>benefits:</i> reduces swelling; reduces pain / numbs; reduces blood flow to the injured area; <i>Accept speeds recovery.</i>	3

Question	Answer	Marks
13(d)	<p>temperature receptors in the skin detect changes in temperature and relay information to the brain / hypothalamus;</p> <p><i>when the body temperature rises:</i> the body sweats / sweat glands release water and salt onto the skin; the heat of the body causes the water to evaporate / which removes energy / cools the body; vasodilation takes place / blood flows nearer the surface of the skin; heat is lost through radiation; body hair lies flat to allow heat to escape;</p> <p><i>when the body temperature falls:</i> body hair stands up to trap body heat; shivering starts to create movement to warm the body; vasoconstriction occurs to reduce the flow of blood close to the surface of the skin / to reduce heat loss through the skin; the core body temperature is protected to allow essential organs to function;</p>	3
13(e)	<p><i>Answers must indicate the checks a group leader would make immediately before.</i></p> <p><i>Examples should be relevant to the chosen activity.</i></p> <p>weather conditions are suitable for activity; correct equipment available, e.g. ropes for rock climbing; all participants are wearing appropriate clothing / personal safety equipment / additional warm clothing / water-proof clothing / suitable footwear; check leader has first-aid kit; an appropriate number of experienced / qualified instructors are present; all participants have a supply of water / supply of energy foods / bars; telephones are charged / GPS is functioning / have a compass; everyone has access to a map as appropriate to activity; all of the group are well on the day of the activity / all medicines that are needed are present and secured; all safety instructions / emergency plan in case of injury / incident are discussed with the group; route / names of participants / contact information are left with a third party, as appropriate to the activity;</p> <p><i>Accept other checks that are appropriate to a specific activity.</i></p>	4

Question	Answer	Marks
13(f)	<p><i>One mark for naming each training method. Two marks for the benefits of each method of training. Examples must relate to a games player:</i></p> <p><i>Examples may include:</i></p> <p><i>fartlek training:</i> the change of pace can replicate the nature of play in a game, e.g. footballers need to change the intensity throughout the game when the need to sprint occurs; reduces overuse injuries by varying between high and low intensity activities, e.g. long rallies versus short points in tennis; develops both aerobic and anaerobic capability, which is needed during game play, e.g. to enable a player to last the whole game but have the ability for explosive action;</p> <p><i>weight training:</i> increase in muscular strength, e.g. needed for a rugby player to tackle an opponent; reduces the risk of injury in a game, e.g. a player is less likely to have muscle injuries as they can cope with forceful and sudden muscle contractions when a sudden change of pace takes place; may improve flexibility, e.g. to enable a basketball player to stretch and reach a rebound without losing control of the ball;</p> <p><i>plyometric training:</i> increase in explosive power, e.g. a defender in football can react more quickly to sprint towards the ball; increase in the ability to have intense bursts of energy, e.g. a volleyball player will be able to repeat high jumps to block the ball at the net; increase explosive strength, e.g. in the line-out a rugby forward will be able to jump vertically to take the ball;</p> <p><i>circuit training:</i> can be used to develop a variety / number of fitness components needed for a particular sport, e.g. shuttle runs to replicate demand of closing down a player; can place skills under pressure with skill-based stations / circuits can focus on specific weaknesses of the performer / the circuit can be performed at high intensity / game pace, e.g. to replicate dribbling a hockey ball at speed; the variety of exercises prevents boredom, e.g. reversibility can reduce the quality of performance if a player does not maintain the motivation to work hard in training;</p>	6

Question	Answer	Marks
13(f)	<p><i>continuous training:</i> increases the performer's aerobic capacity / ability to sustain effort over time, e.g. a footballer can last the whole game without tiring; increases lactic acid tolerance, e.g. a football player is able to perform to a high standard if game goes to extra time; burns calories to maintain an appropriate body weight, e.g. appropriate to use to maintain weight in close season for most games players;</p> <p><i>interval training:</i> allows the distances a games player would run in a game to be broken down into smaller units, e.g. the intensity of training can be increased as there is recovery time for players; allows a player to increase the intensity of training, e.g. a basketball player would be able to train at game pace; can develop speed or endurance as both are needed by games players, e.g. a netball player can sprint to beat an opponent to the ball / a hockey player is able maintain a high tempo to the game without a reduction in the quality of passing;</p> <p><i>resistance training:</i> can be used to recover from injury, e.g. swimming for injured footballers as it helps to build or repair muscles / does not put joints under pressure; different exercises can replicate certain movements from a sport, e.g. lats pull down can help strengthen the shoulder to increase the power of a tennis serve; machine weights (scrum machine) allow targeting of specific muscle groups, e.g. develop power in the legs to enable a performer in rugby to push in the scrum;</p>	

Question	Answer	Marks
14(a)	<p><i>Examples may include:</i></p> <p>secretary – arranges meetings / keeps minutes of meetings / keeps club members informed of developments; treasurer – looks after the club's finances and manages bank accounts; chairperson / president – the top official in the club / represents the club at key meetings / chairs meetings; fixtures secretary – organises fixtures against other clubs / internal competitions / organise officials; membership secretary – deal with new members / advertise for new members; coach – provides individual / group instruction / coaches team / oversees the progress of players / selects team;</p> <p><i>Allow description of other relevant roles, e.g. a grounds keeper.</i></p>	2

Question	Answer	Marks
14(b)	intrudes into private life / less privacy; influence team selection / decisions; some managers may resort to cheating due to the pressure to win; create campaigns that result in managers being sacked / appointed; the media may provide support for a manager; time needed for media commitments / often contractual / no choice / have to hold interviews immediately after a game when situations can be emotionally charged; creates / increases pressure on managers; may leak information about tactics / players leaving / joining club; detailed analysis of team performance etc. that may negative; may raise reputation of the manager; allows access to matches to study opposition;	3

Question	Answer	Marks
14(c)	<p>scholarships – athletes can attend an education setting to have full-time education and high-quality sports coaching;</p> <p>talent ID programmes – schemes that identify performers with potential to receive high-quality coaching from a young age;</p> <p>sports governing bodies develop structures to allow progression;</p> <p>elite coaching camps to enable high-quality performers to train together / high-quality coaches / high-quality facilities;</p> <p>medical / scientific support ensure athletes get the best support to prevent injury / speed up recovery / inform diet to ensure the best nutrition for a sport / physiological support to maintain mental well-being;</p> <p>technical support ensure athletes have high-quality equipment and clothing;</p> <p>funding allows top athletes to play / perform full time / take part in appropriate competitions / travel to competitions / attend warm-weather and altitude-training camps;</p> <p>specialist training allows warm weather / altitude training to ensure training in best conditions;</p> <p>increase participation at foundation level to increase the chance of developing an elite performer;</p>	4

Question	Answer	Marks
14(d)	<p>more sports available for women / girls are taught a wider range of sports in school;</p> <p>some sports governing bodies have had to make provision for women;</p> <p>attitudes towards women taking part in sport has changed / attitude towards women in society has improved;</p> <p>recognition that certain events are not too strenuous for women;</p> <p>religions that previously prevented women from taking part in sports may be developing a more relaxed approach;</p> <p>legislation has created equal opportunities in some countries;</p> <p>increase in female role models encourages younger athletes to participate;</p> <p>more media coverage of women's sport;</p> <p>increase in funding / willingness to sponsor female athletes allows more full-time performers;</p> <p>increase in the number of female coaches / officials;</p> <p><i>Accept other valid suggestions.</i></p>	6