

Cambridge Assessment International Education

Cambridge International General Certificate of Secondary Education

PHYSICAL EDUCATION 0413/11 Paper 1 October/November 2017 MARK SCHEME

MARK SCHEME
Maximum Mark: 80

Published

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	Marks	
	1	

Question	Answer	Marks
1	intrinsic / extrinsic / knowledge of performance / knowledge of results;	1
	Accept visual / verbal feedback.	

Question	Answer	Marks
2	have essential human needs / food / clothing / shelter / have friendship / support / have some value in society / able to mix with others;	1

Question	Answer	Marks
3	certain sports have age restrictions / older people often take part in less physically demanding activities / younger people more influenced by fashion and peer pressure / younger people are more influenced by body image, which can affect the choice of activity / younger people need support from adults / socio-economic factors / young children reliant on parents to fund activities / younger people are more likely to take part in activities that have a higher level of excitement or danger / older people are often less able to cope with high intensity / endurance activities / muscle deterioration due to age / older people often use physical activities as a health aid / people in 20–40s often have less time due to family and work commitments so take part in activities that take less time;	1
	Accept other valid examples.	

Question	Answer	Marks
4	a pep talk from your coach / pressure from coach / the warm up before an event / working towards a goal or target / bright lights / noise from a crowd / friendly or hostile watching / importance of game or activity / quality of opposition / large audience / intimidation from opposition;	1

Question	Answer	Marks
5	protein;	1

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Question	Answer	Marks
6	the maximum volume of oxygen that a performer is able to use (in one minute for every kilogram of body weight);	1

Question	Answer	Marks
7	improves confidence to complete the skill;	2
	more able to recognise game situations;	
	more able to respond to game situations / more familiar with skill requirements;	
	may allow for mistakes to be made without affecting game situations;	
	allows feedback to take place;	
	increases the speed / accuracy of the skill / allows mastering of a skill;	

Question	Answer	Marks
8	injury: cuts / grazes / concussion / dislocations / bruises / fractures / sprains / winding etc.;	2
	treatment: for soft tissue injuries – rest / ice / compression / elevation;	
	for winding – sit down leaning forward / massage / encourage steady breathing;	
	for concussion – rest / prevent from sleeping / seek medical advice;	
	for cuts – elevate limb / apply pressure to cut;	
	for dislocations / fractures - rest / immobilise / support limb / seek medical support;	
	Treatment must be suitable for injury given.	

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0110/11	PUBLISHED	
Question	Answer	Marks
9	find a time and place where you will not be interrupted;	3
	relax using various techniques such as deep breathing;	
	focus on the activity / avoid thinking about other factors / focus on personal goals;	
	imagine yourself being successful in the activity;	
	think about the various actions needed in the activity;	
	remember a successful previous performance;	
	picture the playing environment / crowd / noise;	

Question	Answer	Marks
10	One mark for each benefit. Benefits must match the exercise and exercises and benefits must be different.	3
	For example:	
	jogging – increases heart rate / increases blood flow / warms up muscles;	
	stretches – loosens joints / improves flexibility / reduces risk of injury;	
	sprint starts – skills practice / accustomed to environment;	
	treading water – accustomed to temperature / increases heart rate / loosens muscles;	

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Question	Answer	Marks
11	good sportsmanship / competes and plays fairly;	4
	plays by the rules;	
	being able to motivate and encourage others to perform;	
	is a highly motivated performer / has a high self-esteem / is confident;	
	works hard;	
	performs at a high standard / is successful;	
	sets a trend for others to follow in their sport;	
	conducts themselves in a way that encourages others to achieve high standards in their sporting and private life;	
	contribution to community;	
	is accessible so seen frequently in the media;	
	take part in a popular activity or an activity that is growing in popularity;	
	may represent a particular group / gender / ethnic group / disability;	
	able to cope with stress / pressure from media;	

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0413/11	PUBLISHED October	2017
Question	Answer	Marks
12(a)	shape and support, for example ribs provide shape for the upper body;	2
	movement, for example allows muscle to attach to bone / biceps pull on the lower arm to create movement at the elbow;	
	protection, for example the brain is protected by the skull / cranium;	
	blood production, for example blood is produced in the marrow of long bones such as the femur;	
	Allow one mark for two functions without any examples. Accept mineral storage, for example of calcium.	
12(b)(i)	fast twitch;	1
12(b)(ii)	contract quickly / fast;	2
	white in colour / limited blood supply;	
	tires quickly / easily;	
	allows all-out / explosive effort;	
	provides power / maximum force (for a short period);	
	are thick(er);	
	do not use oxygen;	
	Allow ECF if wrong fibre type in (b)(i).	

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Question	Answer	Marks
12(c)	larger stroke volume / greater volume of blood pumped in each heart beat / more blood per beat;	3
	requires fewer beats to achieve the blood supply to muscles;	
	cardiac output increases so more blood is pumped in one minute;	
	cardiac muscle increases in size;	
	cardiac muscle increases in strength;	
	muscles become better at extracting oxygen from the blood so demands less blood to be pumped;	
12(d)(i)	the range of movement at a joint / be able to stretch;	1
12(d)(ii)	Any sport can be used as long as the example explains the benefits of being able to reach or extend.	1
	For example:	
	a hurdler is able to extend their lead leg to clear the hurdle;	
	in providing a powerful, propelling kick in breaststroke;	
12(d)(iii)	sit and reach test;	3
	subject sits with straight legs and feet flat against sit and reach box or bench;	
	if a bench is used a ruler is placed with 15 cm extending over the end of the bench and zero towards the subject;	
	subject reaches forward with both arms extended as far as possible along the box / ruler;	
	at full stretch the position must be controlled for the score to be recorded;	
	the best score from 3 attempts is compared to normative data tables;	
	Accept other suitable tests.	

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Question	Answer	Marks
12(e)(i)	to win (a medal / reward);	2
	to speed recovery from injury and be able to take part;	
	to aid recovery from heats / rounds;	
	financial rewards / funding;	
	assumption that other competitors are also taking drugs;	
	pressure from coaches / some governing bodies;	
	gain media attention / sponsorship;	
	Accept references to specific drug effects with reasons, e.g. to increase muscle mass, to reduce anxiety etc.	
12(e)(ii)	high levels of testing in and out of season;	3
	better quality testing / monitoring;	
	banning performers if they are caught / risk of disqualification;	
	use of blood passports;	
	better education for athletes about the long-term effects of drugs;	
	publicise examples of actions taken against other athletes who have been found to have taken drugs;	
	loss of medals / records / titles / sponsorship;	
12(e)(iii)	to lose weight / play sports with weight restrictions / mask other drugs;	1

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Question	Answer	Marks
12(f)(i)	No mark for a named sport. If four principles are named but no description is given award one mark max. Each appropriate principle and a description for one mark.	4
	For example in Netball target for a goal attacker should be:	
	specific – to improve shooting percentage by 20%;	
	measurable – find existing shooting percentage in training or in previous games and compare once target has been set;	
	agreed – the shooter and coach will agree what is achievable based on previous performances;	
	realistic – ensure that the targets set are not too difficult or easy, if the performer achieves 90% shot success an increase of 20% would be difficult etc.;	
	time phased – the target will be reviewed half-way through the season and reset if needed;	
	exciting – shooting from different positions in relation to the post to add variety and challenge;	
	recorded – record shots taken / scored so that coach and player can review progress;	
12(f)(ii)	training time could be wasted / lack focus;	2
	lack of direction could be de-motivating;	
	difficult to know if progress is being made;	
	reduces the strength of the coach / performers relationship;	
	lack of interest / stops performing;	

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October/Nover	nbe	
2	201	7

Question	Answer	Marks
13(a)	able to accept decisions without overreacting / able to control emotions;	2
	able to accept losing / failure;	
	be positive when situations are difficult in a game / keep going;	
	feel they have the ability to do well / have confidence / are motivated;	
	are able to focus;	
	more likely to be able to co-operate in team sports;	
	can cope with stress, e.g. taking a penalty in football;	
	able to make good decisions during the performance;	
13(b)	long-distance running requires a lot of energy;	2
	pasta is high in carbohydrates;	
	carbohydrates provide an energy source;	
	the store of glycogen in muscles and the liver is increased;	
	glycogen is the most efficient energy source;	
	when the body runs out of glycogen it uses fat as an energy source and the body has to work 'harder' to use fat / eq.;	

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Question	Answer	Marks
13(c)(i)	Activity must be outdoor and adventurous, e.g. canoeing, hill walking, campcraft/hostelling, horse riding, orienteering, rock climbing, rowing, sailing, skiing, snowboarding, windsurfing etc.	2
	For example:	
	in hill walking	
	safety equipment: water-proof clothing / warm clothing / suitable footwear / map / compass / GPS / torch / whistle / first-aid kit / water-proof rucksack / emergency rations;	
	Reason must relate to the item. One mark for each reason.	
13(c)(ii)	For example in hill walking:	2
	reassure the injured person;	
	leader should keep calm;	
	ensure area is safe;	
	assess injury / provide appropriate treatment;	
	ensure injured person is kept warm / sheltered;	
	leave injured person with at least two members of the group;	
	establish location;	
	phone / contact emergency services / provide information relating to injury;	
	lead the rest of the group off the hills;	

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Question	Answer	Marks
13(d)	heart rate during the test: is lower / does not go as high / heart rate increases at a slower rate;	2
	heart rate during recovery: faster recovery / lower;	
13(e)(i)	Accept a named example of aerobic training.	1
	circuit training / fartlek training / continuous training / interval training;	
13(e)(ii)	Answers must explain how to achieve overload.	3
	overload can be achieved by:	
	increasing the amount of training done in a single session, e.g. a performer could increase the number of circuit-training sessions from 2 per week to 3 per week;	
	train for longer by increasing the length of time spent training, e.g. continuous training session increase the time spent running from 12 to 15 minutes;	
	reduce the time spent recovering between exercises, e.g. fartlek training reducing the time spent walking between the running part of the sessions;	
	increase the work done in a session by decreasing the amount of time spent training, e.g. interval training decrease the length of time spent running but increase the distance covered during the run;	
	increase the amount of exercise completed, e.g. continuous training complete 12 lengths of a swimming pool rather than 10;	
	Accept responses relating to increases in frequency, intensity, time and type (relating to intensity changes) of exercise.	

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October/Nover	nbe	
2	201	7

Question	Answer	Marks
13(f)	One mark awarded for each effect and one mark for a resulting benefit for a performer. Accept a repetition of the benefit for a performer providing it is appropriate to the effect. Accept examples when describing a benefit. Max. three marks for effects alone.	6
	Accept other links – examples of benefits and effects may include:	
	increase in muscle development (hypertrophy) / repair of torn muscle fibres to increase size / muscle bulk increases; able to lift heavier weights / generate higher force;	
	improves posture; which provides better stability and balance, e.g. in gymnastics the performer is able to hold a balanced position on a beam;	
	increase development of fast-twitch fibres; able to sprint faster;	
	increase development of slow-twitch fibres; ability to run for longer;	
	muscles become more flexible; which allows a greater ability to stretch, e.g. a goalkeeper would have a greater ability to reach a high ball;	
	muscle co-ordination improves; so movements are quicker / speed of reaction improves, e.g. a cricketer could react to catch a ball close to the wicket;	
	muscular endurance improves; fatigue slower and improve their ability to use oxygen, which reduces the rate of lactic acid build up, e.g. a performer would be able to last longer in an endurance event;	
	increased tolerance to lactic acid; a performer would be able to last longer in an endurance event;	
	increase in capillarisation / improved blood supply; reduces the onset of lactic acid build up, e.g. performer is able to perform for a longer period;	
	mitochondria increase; which increases the supply of energy to the muscle so the performer is able to perform for a longer period;	

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Question	Answer	Marks
14(a)	sports have become more fashionable resulting in greater demand;	2
	people have more time / funds to spend on playing;	
	increase in media coverage of sports has increased interest;	
	greater awareness of health factors;	
	increases in specific groups playing sport, e.g. disability groups, female participation, retired / older players;	
	meet the demand of a global event, e.g. Olympic Games;	
14(b)	meet the needs of a local community;	3
	low costs / free access to equipment / facilities;	
	easy to access as locally based;	
	develops greater community cohesion / interact with others;	
	some sports would not take place without voluntary organisations;	
	provide a safe and structured environment for young people to take part in sports / provide coaching opportunities;	
	provide opportunities for inner-city groups to participate in activities in rural areas;	
	provide opportunities for young people to be introduced to different sports / access competitions;	
	provide opportunities for young people to be involved in coaching / admin / officiating etc.;	
	provide qualified staff for instruction of activities / to improve skills;	

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Question	Answer	Marks
14(c)	costs of bidding for the games too high and money could be lost;	4
	cost of developing facilities too great / economic issues;	
	infrastructure poor and would require too much development;	
	little public support or interest in sports / little interest in many sports;	
	political instability / terrorism in the country / region;	
	security a concern / crime;	
	country would make little use of the facilities after the games;	
	not wanting the disruption that results from hosting the games;	
	fear of national failure / loss of reputation;	
	event may have a poor reputation;	

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October/November				
2	201	7		

Question	Answer	Marks
14(d)	greater social awareness and acceptance of disabilities;	6
	greater acceptance of performers with disabilities as elite athletes;	
	increase in media coverage of disability sports;	
	increased talent identification programmes / scholarships;	
	more countries have developed Paralympic sports;	
	ex-Paralympians have a greater role within the media / role models;	
	increases in the quality and quantity of coaches;	
	greater funding / sponsorship for elite athletes to train full time and travel;	
	elite athletes are fully professional;	
	more international competitions available;	
	legislation has ensured equal access to sports facilities / increase in facilities available / greater access to sports facilities causing greater participation, e.g. ramps and lifts at sports centres;	
	increasing link between Paralympic and able-bodied sports;	
	greater variety of sports adapted;	
	improvements in technology / prosthetic limbs;	

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