UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS International General Certificate of Secondary Education

WANN, PapaCambridge.com MARK SCHEME for the October/November 2011 question paper

for the guidance of teachers

0413 PHYSICAL EDUCATION

0413/13

Paper 1, maximum raw mark 80

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.

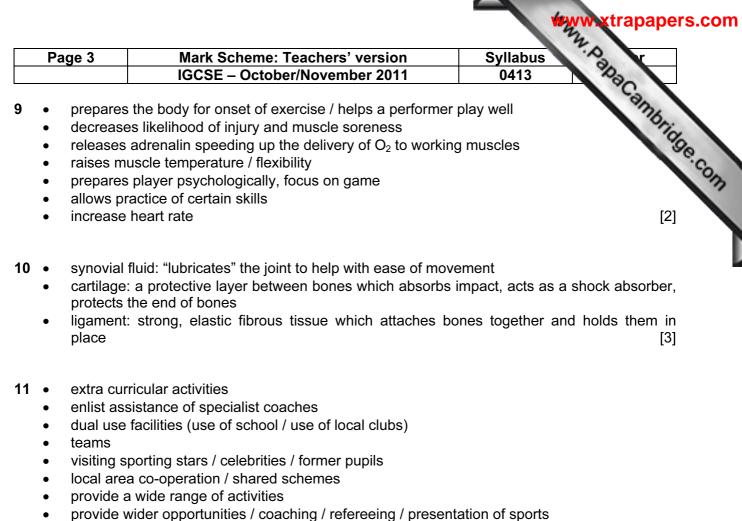
Mark schemes must be read in conjunction with the question papers and the report on the examination.

Cambridge will not enter into discussions or correspondence in connection with these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2011 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

Page 2	Mark Scheme: Teachers' version	Syllabus	A A
	IGCSE – October/November 2011	0413	Day 1
	Section A		trapape bacambrid
			oni
-	and support		
moverprotec			
•	production		[1]
e blood			L'.
 shorta 	ge of breath / reduced capacity to transport O ₂ / lung	cancer, damage to	the lungs
lower	ability to sustain effort		[1]
• ability	to cope with stress		
•	rol of emotions		
 feeling 	good about oneself		[1]
• cardio	vascular endurance		[1
	balance is the amount of food (calorie intake) required	to most daily onorm	/ noods
	d energy stored as fat	to meet daily energy	rieeus
	can become obese / lose weight		
•	overweight can lead to medical issues		
-	food could lead to weakness / tiredness / lethargy / red	uce performance	[2
• their a	ge / level of fitness / health		
	al interests		
•	circumstances / time available		
	es available		
• where	people live		
• peer p	ressure / family influence		
cost of	activities		[2]
• interna	I motivation		
	al drive for success and achievement		
 villpov 			
	te for oneself / love of sport / activity / satisfaction		[2
	· · · · · · · · · · · · · · · · · · ·		L—
	op taking part immediately, sit / lay down and take no fu		

- rest, stop taking part infinediately, sit / lay down and take no further part in the activity
 ice; place a cold compress on the injured area (intermittently removing to prevent frost bite. This will help reduce swelling and sped the recovery process.
- compression: holding or bandaging the injury will also help reduce swelling. Ensure compress is not too tight that blood circulation is affected
- elevation; support the limb at a raised level (i.e. above the heart). This reduces the flow of blood and swelling because it has to flow against gravity [2]

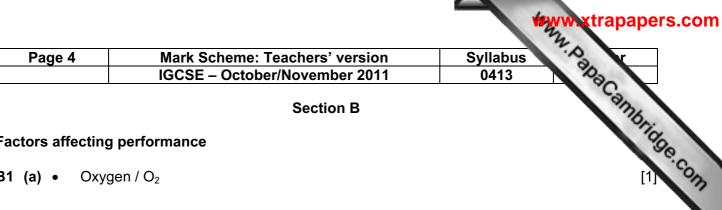


• •

depending on age provide more recreational activities

[3]

[Total: 20]



Section B

Factors affecting performance

- Oxygen / O₂ B1 (a) •
 - (b) Candidates must adequately describe two recognised forms of stretching activity which may improve flexibility during participation. Ballistic / dynamic / active / passive / static / isometric. Exemplar; sitting on the floor with legs outstretched and in a straight position. Reach as far forward as possible maintaining position for several seconds. Such an exercise stretches the hamstring. [2]

1 mark can also be awarded for examples such yoga

(C) • helps prepare them to perform as they know what is to be achieved

- helps them feel in control and so less anxious about performance
- increases confidence when target has been achieved
- motivation to work hard and achieve

[3]

- (d) stimulants: speed up reaction and increase aggression. Mask pain. BUT can make an athlete train too hard, lead to HBP, heart, liver problems, strokes, addiction
 - narcotic analgesics: Kill pain so injuries do not affect performance as much. BUT addictive with unpleasant withdrawal symptoms, feeling less pain can make athlete train too hard, low blood pressure, constipation!
 - anabolic agents / steroids; increase muscle size and allow athletes to train harder for longer. BUT HBP, heart disease, infertility, cancer. Women may develop male characteristics.
 - peptide hormones: similar to anabolic steroids and blood doping (increased capacity to transport O₂) BUT can cause strokes and abnormal growth
 - diuretics: increased urination causing weight loss, can mask traces of other drugs in the body. BUT can cause cramp and dehydration

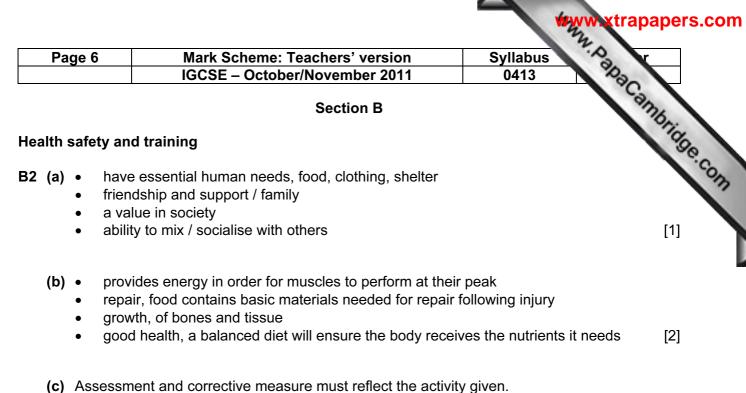
also accept Beta Blockers: reduce heart rate causes excessive tiredness / nausea / sleep disturbance [3]

- mesomorph: wide shoulders and narrow hips. Muscular body. Strong arms and thighs. (e) • Not much body fat. Suitable for powerful / explosive events. Decathlon, swimming, gymnastics.
 - ectomorph: narrow shoulders, hips and chest. Not much muscle or fat. Long, thin arms and legs. Suitable for activities such as long- distance running, high jump.
 - endomorph; wide hips with relatively narrow shoulders. Carry a lot of fat on body, arms and legs. Ankles and wrists relatively slim. Suitable for activities like wrestling, shot-putt.

(No mark awarded for body type, however correct name must be given to gain full marks) [4]

Page \$	5	Mark Scheme: Teachers' version	Syllabus	r
		IGCSE – October/November 2011	0413 23	
(f) •	ca	ly so much new information can be taken in / unde	Syllabus 0413 erstood at a time. Limite kill or movement mistakes will be made in th	ambrio
•		o much / complex information will lead to overload	vill or movement	1
•		monstrate / input a little at a time, break down the sk	kill or movement	
•		structions should be simple / easy to understand / r ages	mistakes will be made in tr	le early
•		tial learning goes into short term memory		
•		ow performer time to practice		
•		entually information will be stored in long term memo	ory	
•		vironment where practice takes place / no distraction		
•	ac	tivity is appropriate to the age / physique of performe	er	[6]
(g) (i)	•	cardiovascular endurance		[1]
(ii)	٠	males are generally more likely to take part in reg fitness raised	gular sport / activity and so	level of
	•	male physique (stride length) greater at this stage		
	•	male endurance more developed at this stage		[2]
(iii)	٠	regularly take part in whole body exercise, running	g, swimming or cycling	
(111)	•	keep heart rate between 60% and 80% of its maxing		
()		exercise for a minimum of 12 minutes to begin in	poropoing to 10 minutos op	fitness
(,	•	improves	icreasing to 40 minutes as	introot
(,	•	-	-	introot
(,		improves take part in a variety of training types; circuit, interv have an appropriate diet	-	introoc
(,	•	improves take part in a variety of training types; circuit, interv	-	[3]

[Total: 25]



- Example Rugby. Collision with rugby posts / ensures protectors are used. [2]
- (d) isotonic training; where the amount of weight moved or lifted remains constant throughout the movement. This is important as it relates to the way muscles contract when they are exercised. Isotonic training principle is that the weight is kept constant on both eccentric and concentric contraction for example during bicep curls. This type of training is used to improve strength, power and endurance
 - **isokinetic training**; this is where specialist equipment is needed as a result of the need to use weights to vary the effort as you work at a constant speed. Variable resistance machines provide such training. Isokinetic training can duplicate movements such as throwing and kicking
 - **isometric training**; this is where a contraction is held at a particular point. This can be useful for activities such as gymnastics where you need to hold a position for a period of time. In training you would hold the muscle in the required position for several seconds and repeat, here the length of the muscle stays the same while contracting [3]
- (e) (regular indicates that the question is refers to the long-term effects of exercise)
 - more red blood cells are produced
 - arteries get bigger and blood pressure decreases
 - more capillaries form around muscles
 - heart gets bigger, its walls thicken and blood is pumped more efficiently

[3]

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- (f) (no marks awarded for naming principle. At least two valid points to be made component in order to gain full marks) 1 mark for examples can be awarded
- Cambridge.com specificity: each performer should have a different programme suited to their ne Train correct areas of the body, no point a weightlifter running or a sprinter swimmin Train at the right level / intensity
 - progression: steadily increase the amount of training that is done. Only progress when the body has adapted to previous demands / allows the body to become better suited to a specific sport.
 - overload: work body harder than you normally would. Push beyond training thresholds. frequency / intensity / time.
 - reversibility; fitness level will improve with exercise but will go down when training stops. It takes longer to gain than to lose fitness
 - tedium avoidance: use different methods of training to give variety, interest and prevent boredom [4]
- (g) many and varied and feasible answers should be accepted.
 - impact with ground
 - impact with surroundings
 - impact with another person
 - impact with ball / equipment
 - sudden or twisting movements
 - environmental factors heat / cold wet / dry) must relate to an injury dehydration not accepted
 - lack of preparation (warm up / cool down) / poor technique / lack of focus / mental preparation
 - inadequate clothing / equipment / footwear
 - not following rules / instructions
 - over use injury

[5]

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[Total: 20]

		Syllabus
Page 8	Mark Scheme: Teachers' version	Syllabus
	IGCSE – October/November 2011	0413 Page
Unit 3 Reasons ar	nd opportunities for participation in physical activity	ambridge.com
B3 (a) •	FIFA World cup	-On
•	Olympic games	1
•	Commonwealth games	
•	Rugby / athletics world cup / championships	

[1]

[2]

[3]

Tour de France

- (b) sports are more competitive. They have rules, the aim is to win. Organised events and competitions / can have financial rewards.
 - physical recreation is not as serious. Competing with / against yourself so you can set . your own rules / boundaries / can be socially based. [1]
- indoor climbing walls (C) •
 - artificial / real snow ski slopes
 - park "trim-trails"
 - canal basins, water sports, canoeing
- (d) some sports are still considered predominantly male only / women's sports are seen as less important
 - women are often not allowed to compete with men even in sports where physical strength has no relevance
 - poorer media coverage
 - fewer spectators / following
 - less sponsorship
 - less prize money awarded
 - fewer role models as a result of
 - less media support
 - fewer women participate in sport / credit can be given if a reason for lower levels of participation [4]
- (e) reasons include:
 - geographical. terrain (skiing / climbing). coastal (sailing / surfing). altitude (running)
 - climatic: snow (skiing). •
 - financial: cost of equipment (polo / motor racing)
 - traditional: number of population taking part in nation's event. (skills pyramid)
 - cultural: traditional cultural sports, cricket in the commonwealth / tradition within communities
 - personal factors age / level of interest

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 pron crea of th can if se stad 	ater audience can see, hear and read about sport notes sport ates sports stars which can have a positive effect or ne sport inform and entertain een on television sports can attract sponsorship whi lia, training, coaches, players etc. / raise standards ease participation		

[Total: 15]