UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS International General Certificate of Secondary Education

# www.papacambridge.com MARK SCHEME for the May/June 2011 question paper

# for the guidance of teachers

# 0413 PHYSICAL EDUCATION

0413/12

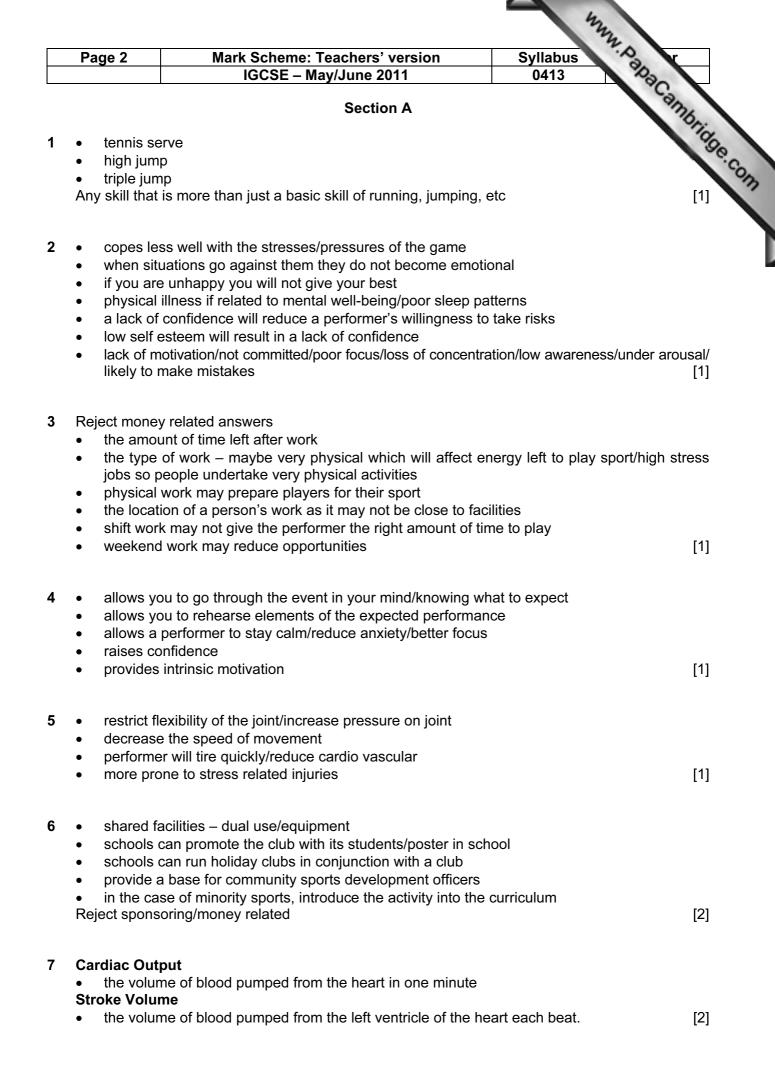
Paper 1, maximum raw mark 80

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.

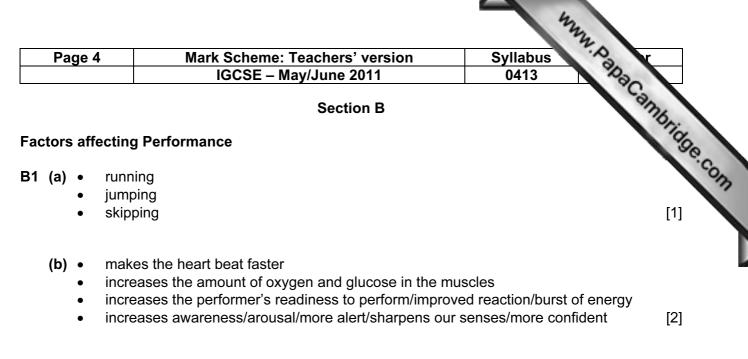
Cambridge is publishing the mark schemes for the May/June 2011 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.



P	age 3	Mark Scheme: Teachers' version	Syllabus Syllabus	Y
		IGCSE – May/June 2011	0413	2
B •	anaemia	- tiredness, unable to complete endurance events	Syllabus 0413 d be avoided ich reduces the amount of therefore, less oxygen of	an
•		hilia – inability to clot blood so contact sports should	d be avoided	'On:
•	excessiv	e blood clotting - reduction in the flow of blood whi	ich reduces the amount c	f ox
	•	muscles		
٠		mia - reduces the ability to produce haemoglobin,	therefore, less oxygen c	an reach
	muscles	te and the later of early and device and the device to the		
•		ia – white blood cells are damaged – tiredness, infe V – immune system affected – tiredness, muscle we		[0]
•	AID3/HI	v – ininiune system anected – tredness, muscle we	eakiiess	[2]
9.	links with	n schools		
•		e in local press, radio, etc		
•		osts/free transport/free trials		
٠		day activities		
•	•	specific classes/increase sports activities		
•		cial events/competition special facilities – crèche		
	coaches			[2]
·	00001103			[4]
10 •	to m	~ h		
10 •	ectomorp slight bui			
	long limb			
	tall			
•		eloped muscularly		[2]
5				[4]
11 •	ekill ie pr	eeded to lift the weights/has knowledge		
•		s should not use free weights until these skills have	ve heen developed/age r	estriction
-	beginner	3 SHOULD HOL USE HEE WEIGHLS UNTIL HESE SNIIS HAN	ve neell uevelupeu/aye l'	ธิอนามินไปไ

- beginners should not use free weights until these skills have been developed/age restriction for weight
- when free weights are used a spotter is needed in case control is lost/supervision
- injury can occur if technique is poor
- performers should not lift the maximum possible weight/identify a safe level
- safety equipment, gloves, belts should be used/in good condition/safety flooring/bolts secure [2] Reject warm up/cool down
- **12** informing the media tells the public what is happening in the world of sport tells the public about fixtures, results specialist publications
  - educating creating greater understanding of sports through analysis, replays, past players providing an insight into the game, specialist programmes, documentaries
  - entertaining the presentation of sports needs to be entertaining so that it engages people even if they are not directly involved e.g. watching other countries play in the world cup
  - advertising most of the revenue for top sports comes through advertising; the commercial interests of sports are often dependent on the media. Large sports companies use sports events and stars to promote their products. [3]

[Total: 20]



(c) Examples of a joint – joint between the plates in the cranium

### Facial bones Pelvic girdle

- prevents movement
- acts as a shock absorber
- protects vital organs

## (d)

type of drug	type of activity that would use this substance	effect	dangers
steroid	strength/power related activity such as weight lifting, sprinting	rapid increase in strength, able to train for longer	heart disease, high blood pressure, infertility/aggressive/ kidney, liver disease
diuretic	sports that have weight categories	increase the amount of water excreted. Flushes other drugs out of the system	muscle weakness, dehydration, loss of sodium and potassium salts.

[4]

[2]

(e) (i) • movement around an axis/circular movement

[1]

- (ii) Mark will be given for naming a joint and situation and not the activity:
  - shoulder joint activities include: the serving action in tennis, bowling action in cricket
    hip joint
    - hurdling in athletics, breaststroke leg action
  - neck/pivot joint heading ball in football
  - elbow/hinge chest pass in basketball, breaststroke in swimming ankle (binge)
  - ankle/hinge kicking the ball
  - wrist golfer will break the wrist during the back swing

[3]

		www.	Papa
Page 5	Mark Scheme: Teachers' version	Syllabus	2
·	IGCSE – May/June 2011	0413	No.
	fast twitch fibres slow twitch fibres		Sambridge.com
(ii) Fast	t twitch fibres		aço
• •	allow powerful contractions/explosive strength		-013
•	allow fast contractions		
•	provide intense contractions over a short period of	time/burst of energy	
•	provide energy during anaerobic exercise		
•	needed for short bursts of power/speed such as sp	rinting and weightlif	ting

Slow twitch fibres

- contract more slowly but with less power
- do not tire quickly
- suit long distance/endurance events
- allow aerobic exercise
- higher levels of slow twitch fibres in the muscle does not allow a performer to sprint easier
- slower production of lactic acid

[6]

- (g) One mark for name and one mark for application to the named sport. If answer does not relate to the sport only give one mark.
  - specific needs to identify a specific skill in the identified sport e.g. basketball able to perform a jump shot
  - measurable be able to measure the amount of progress basketball able to score 3/10 in training
  - accepted the targets are agreed with the coach and player does not have to be applied
  - realistic is the target possible to achieve the performer can set shoot with a high degree of accuracy
  - time related set a realistic amount of time. Depending on the amount of time available to train
  - exciting yes, training should be challenging does not have to be applied
  - recorded easy to record the number of jump shots scored at each training session to monitor progress

[Total: 25]

		Syllabus Syllabus
Page 6	Mark Scheme: Teachers' version	Syllabus r
	IGCSE – May/June 2011	0413
ealth, Saf 2 (a) • • •	ety and Training can become distracted from the task/able to focus can become over-aggressive/cautioned/sent off/out of fail to achieve the standard of performance that they no opposition players may use this fact to their advantage	ormally achieve

(b) No mark for naming an activity that could include: sailing, water skiing, swimming

Safety arrangements must relate to the activity. Could include: checking equipment; wearing safety equipment; supervision levels; qualifications of instructors; standard of performers in relation to the activity, referee (water polo) [2]

- (c) 1 mark for the explanation of how they occur and 1 mark for one description of a component on RICE
  - No mark for simply stating RICE
  - the ligament at the joint gets torn
  - sudden twisting movement
  - change of direction
  - rest sit down and do not attempt to play on
  - cool the joint by placing ice on the swelling
  - compression use a crepe bandage to stop swelling
  - elevate joint to reduce swelling

[2]

- (d) One mark for situation/example and two marks for the reasons
  - most of the time team players use aerobic respiration
  - players could not maintain long periods of anaerobic activities
  - most player movement around the pitch/court is relatively slow single paced positioning themselves, adjusting their position when the ball is some distance from them. This happens throughout the game.
  - during most team games there is a need to sprint/accelerate to chase a player/ball. If a player takes a shot in football, it is likely to be a maximal contraction which requires the anaerobic system

[3]

Page 7	Mark Scheme: Teachers' version	Syllabus 7.0 r	
	IGCSE – May/June 2011	0413	
•	ometric training holding a weight in a position, pushing against requiring strength when the body is stationary. otonic training press ups, pull ups, lifting weights etc – elements o	-302	0.50T
(ii) Ad	vantages of Isotonic Training		

- (e) (i) Isometric training
  - holding a weight in a position, pushing against an immoveable object, requiring strength when the body is stationary. Isotonic training
  - press ups, pull ups, lifting weights etc elements of movement
  - (ii) Advantages of Isotonic Training
    - strengthens the muscles throughout the range of movement
    - exercises can match a sport •
    - some exercises need little equipment
    - Advantages of Isometric training
    - develops static strength
    - they are quick to do
    - no expensive equipment is needed
    - exercises can be done anywhere/less likely to get injured
  - (iii) Jumping to rebound a ball in basketball, hitting a ball in tennis, any example when there is body movement in the action. [2]
- specificity ensure the training is endurance based, use of activities such as Fartlek (f) (i) • Training, Continuous Training
  - overload find ways of working harder increase the frequency of training, increase training runs each week, increase the intensity, run further in the same amount of time, increase the distance run.
  - progression establish a programme that gradually increases the distance run until the performer is running near to race distance.
  - reversibility to avoid reversibility training needs to be varied so the performer does not get bored.

FITT principles receive only 1 mark as a method of applying overload.

No mark for just naming the principles.

Mark awarded for naming/describing and applying to distance running (exception to the use of reversibility) [3]

(ii) • little progress will be made which could be the result of a loss of interest - credit given if not given in (i)

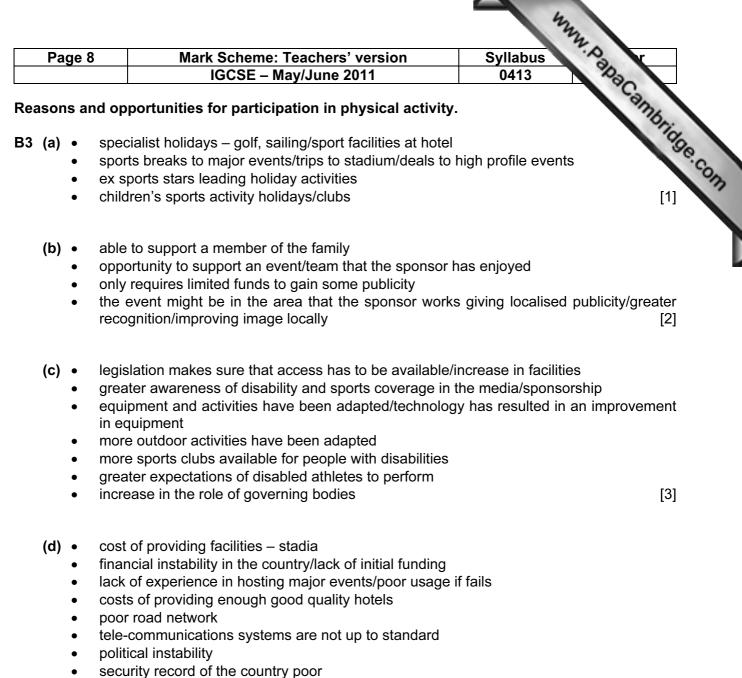
Overtraining will cause

- illness frequent colds
- tiredness
- loss of appetite
- stress related injury
- injuries that result from poor technique
- poor performance/inconsistent performance/fitness levels may be below the required level
- depression/lack of motivation
- poor quality training results in lack of preparation

[3]

[2]

[Total: 20]



- climate at the time of the tournaments creating difficulty hurricane season likely to cause disruption
- political conflict with other countries
- lack of basic resources to support tourists/space
- host nation unable to compete well in sport so less inclined/unable to use facilities afterwards [4]

Page 9	Mark Scheme: Teachers' version	Syllabus	S.
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- (e) gender - less opportunities for women, women often have family commiting cultural limitations on female participants
  - race/religion some ethnic groups have negative attitudes towards sport,
- Cambridge.com the government - politics affects the level of funding that results in providing facilities/coaches etc/influences the type of sport
  - stereotyping people's attitudes towards certain groups affects the level of opportunity
  - ability/disability attitudes towards people with disabilities can reduce opportunity, low self esteem of many people with disabilities reduces their wanting to be involved in sport
  - socio-economic status income will influence the type of activities that comunities might take part in, unemployment will reduce opportunity/time available to take part
  - school the range of sports provided by school, attitude towards sport in school/family and peer support
  - where you live geographical location will determine the range of facilities available, climatic conditions
  - lack of information/understanding/publicity/support from the media

[Total: 15]

[5]