UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2010 question paper for the guidance of teachers

0680 ENVIRONMENTAL MANAGEMENT

0680/41

Paper 41 (Alternative to Coursework), maximum raw mark 60

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.

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

CIE is publishing the mark schemes for the May/June 2010 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

Page 2		ge 2	Mark Scheme: Teachers' version	Syllabus	Paper				
			IGCSE – May/June 2010	0680	41				
1	(a)		ome products used for food/personal use; timber used for building; no spare products for export/eq; not profitable/not of high value; [2]						
	(b)	can nati	country gains foreign exchange/revenue/eq; can be used to pay for imports; sensible reference to balance of payments/controlling national budget/debt/company profits; helps government spending on infrastructure/eq; maintains/ creates jobs; [2]						
	(c)	(i)	20 plants on each row (+/-1); even spacing;						
		(ii) orientation; labelled axes (both, minimum yield/density); plots;;							
		(iii) allow correct figure from drawn graph; (58–62 usually)							
		(iv)	no increase in yield compared to 70 thousand; so prowork for no return/eq; more work to harvest; more expe		profitable; more [2]				
	(d)	(i)	as planting density increases reduction of soil erosion increases/eq; not much change soil erosion between 60–80 planting density/eq;						
		(ii)	50 or 60 max yield (per Ha)/profit compared to planting yields/eq;	g costs; nutrients	retained to help [2]				
		(iii)	removal of topsoil/eq;		[1]				
		(iv)	removal of plant cover; overcropping; loss of root binding; reference to lack of interception/described; infiltration/soil saturation; removal of topsoil/fertile layer; surfact run-off; erosion by water; wind; reference to flooding; [4]						
	(e)	(i)	only two densities sampled; two pineapples not represe measured;	entative/eq; only d	iameter [2]				
		(ii)	suitable table, rows/columns for 25 items of data; der headings;	nsities/field numbe	er; and diameter [3]				
		(iii)	more measurements for each pineapple to see change several densities sampled to see pattern/could be presented.		pe of growth/eq; [2]				
2	(a)	(i)	4000;;		[2]				
		(ii)	so government could gain more revenue form HEP scheme;	/eq; people woul	d not object to [1]				

source of energy;

(b) generate <u>more</u> power/electricity; unlikely to dry out/eq; allow one of – does not release carbon dioxide/so does not contribute to greenhouse effect/ low running costs/renewable

[2]

Page 3			wark Scheme: Teachers Version	Syllabus	Paper			
			IGCSE – May/June 2010	0680	41			
(c)	so r	numbers of people fishing can be known/controlled; to prevent overfishing/eq; [2]						
(d)	(i)	No, averages similar; for nitrate; and phosphate; idea that most read average (0.2 difference); reference to figures;						
	(ii)	Sample point 1: nitrate/55; much higher than the others; a measuring error material occurred; ignore this reading as it's the only one not in close agreement/eq;						
	(iii)	to m	ake it more reliable;		[1]			
(e)	_	gal bloom; blocks out light so plants die; bacteria multiply; use up oxygen; fish die ference to eutrophication; [3						
(f)	(i)	after	rall bromacil passes through soil to water; 50 m in 6 r 180 days/eq; enters the water; from both fields ence;	-				
	(ii)	P – \$	S cross and T tick;		[1]			
	(iii)	•	en with a larger soil barrier) bromacil entered the lage bromacil might do to water; not worth taking the		not know what [2]			
(a)	(i)	adva	antage must be a statement amplified in candidate's	own words;	[1]			
	(ii)	disa	dvantage must be a statement amplified in candidat	e's own words;	[1]			
	(iii)	disa	dvantage must be a statement amplified in candidat	e's own words;	[1]			
(b)	(i)	non	polluting/oxygen not a greenhouse gas/eq/uses ren	ewable energy;	[1]			
	(ii)	jobs	<i>ivour</i> : could develop aluminium processing industries; raises standard of living; not polluting; transport by se own bauxite later if price rises; AVP;					
		muc	inst: too much electricity used so not enough for the money/company will make most money; counderal years/other things to spend money on; AVP;					
		MAX	4 for an argument only in favour or against		[5]			

Mark Scheme: Teachers' version

Syllabus

Paper

Page 3

3