## UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

**International General Certificate of Secondary Education** 

## MARK SCHEME for the May/June 2011 question paper for the guidance of teachers

## 0680 ENVIRONMENTAL MANAGEMENT

0680/11

Paper 1, 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.

• 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.

	Page 2		<u>'</u>	Mark Scheme: Teachers' version Sylla		Paper			
				IGCSE – May/June 2011 068	80	11			
1	(a)	(i)	nitroge	en; oxygen;			[2]		
		(ii)	carbor	n dioxide			[1]		
		` ,							
	(b)	(i)	<b>A</b> lack	s detail/converse/owtte;			[1]		
		(ii)	2 of su	ılphur dioxide , NO <sub>x</sub> , carbon dioxide;					
		. ,	dissolv	ve in rain; omes acid;					
			which		[maː	x 3]			
		(iii)	tempe	rature inversion;					
		()	cold a	ir from below cannot rise;					
			pollutants cannot get into higher parts of atmosphere; therefore cannot be dispersed by wind;				[3]		
						[Total:	101		
						[Total.	.0]		
2	(a)	(i)	mantle	<b>;</b> ;			[1]		
	(ii)		hotter; softer; pliable; high density (A) heavier (ora in any case); named differences in						
		` ,	minerals;						
			(K) III	nien			[2]		
		(iii)	crust t	hinner under sea/eq;			[1]		
	(b)	/i\	discov	'Arv'					
	(b) (i)		discovery: visual search; idea developed; (e.g. remote places, diving);						
			geolog test dr						
			extrac	tion: Is drilled;					
			pumpi	ng/natural pressure differences;					
			pipes;				[4]		
		(ii)	double			[2]			
			deterg	ent/booms/biodegradation/burning;					
						[Total:	10]		
3	(a)	(i)	N cycl	e; <b>A</b> N₂/nitrogen;					
	` '	( )	j	B nitrogen fixation/nitrification;					
				<ul><li>C protein/amino acids/DNA/nucleic acid;</li><li>D denitrification;</li></ul>	3 all,	2-3 2, 1 1			
			C cycl	e <b>A</b> CO₂/carbon dioxide;					
			2 3,01	<b>B</b> photosynthesis;					
				<ul><li>C sugars/starch/named compound with starch;</li><li>D respiration/combustion/decomposition</li></ul>	3 all,	2-3 2, 1 1	[3]		
							_		

Mark Scheme: Teachers' version

**Syllabus** 

**Paper** 

Page 2

Page 3	3	Mark Sche	me: Teachers' vers	ion	Syllabus	Paper
		IGCSE	– May/June 2011		0680	11
(ii)	nitro	gen				[1]
(iii)	alga alga bact lowe	ophication; I bloom; e die; eria decompose the er oxygen; th of suitable organi	e dead algae; sm (i.e. any aerobe);	;		[2]
(b) (i)	bioa tiny a lead deat	sed from one trophic mplification; amount of applied g s to death/some su th of non-target spe (bees);	gets concentrated; b lethal effect (e.g. re	eproductive);		[2]
(ii)	using exar does evol	ogical control; g predator/parasite/ mple; s not pollute; ution of resistance a resistant strains;	/disease to reduce no avoided;	umbers;		[max 2]
						[Total: 10]
(a) (i)	Taig Trop Dese	oical Rainforest	3; 4; 2;			[3]
(ii)	3;					[1]
( )	,					
(b) (i)	wide waxy store succ spine redu all al	iced/no leaves;	ts; and then some disc	ussion of at l	east one of the	ກ (i.e. why this [3]
(ii)	· • · · · · · · · · · · · · · · · · · ·					
	eros wind soil l	l/water;				[3]

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[Total: 10]

Page 4		ļ.	Mark Scheme: Teachers' version	Syllabus	Paper
			IGCSE – May/June 2011 0		11
5	(a) (i)	strik	amount of HEAT energy; ing the Earth; i the sun;		[max 2]
	(ii)	beca at lo	w latitudes/eq less heat lost by scattering/reflection/ ause atmos path less/shorter/eq w latitudes a ray heats up less ground/ora; ve A or B allow 2 marks but only with explanation	absorption;	[max 4]
	(b) (i)		tricity :light; AND ting :heat;		[1]
	(ii)	foss	il fuels/named examples;		[1]
	(iii)		il fuels running out; sing pollution/named examples;		[2]
					[Total: 10]
6	(a) (i)		ect plots;; tion of labels for IAS 54 <i>and</i> Embrapa 16;		[3]
	(ii)		e recent varieties give bigger yield/ora; iscuss increasing (ORA) must be related to time)		[1]
	(iii)	•	t breeding/genetic engineering; selected for /eq higher yields;		[2]
	(b) (i)	USA			[1]
	(ii)	EU;			[1]
	(iii)		ause exporters and importers are both in North, ept Aus, which is 'north' and Argentina		
			ch is not enough to say s to n;		[2]
					[Total: 10]