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UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2010 question paper for the guidance of teachers

0680 ENVIRONMENTAL MANAGEMENT

0680/12

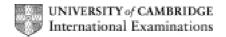
Paper 1, maximum raw mark 60

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.

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1	(a)	(i)	C;	[1]
		(ii)	A peat; B time and pressure; C time and pressure;	[3]
	(b)	(i)	miners collapse of tunnel; fire due to gases from coal; poisoning from coal gases/silicosis; breathing problems; flooding; environment spoil pollutes ground and water around mine; carbon dioxide/owtte when burnt; landscape destruction/visual pollution (open cast);	[max 2]
	(b)	(ii)	wind; hep; geothermal; nuclear; tidal; wave; biofuels;	[max 2]
2	(a)	(i)	N and S of tropics/equator; Africa; S Asia; W S America; AVP (relevant countries named);	[max 2]
		(ii)	sun; vapour; evaporation; condenses; clouds; rain; snow (owtte); sea/ocean; half each/round down	[max 4]
	(b)	(i)	Peru	[1]
		(ii)	Peru	[1]
		(iii)	quotas/seasons/net size; relevant explanation;	[2]

Mark Scheme: Teachers' version IGCSE – October/November 2010

Page 2

Syllabus 0680 Paper 12

3	(a)	(i)	(abs = 18) + (reflection = 32) = 50%; earth abs = 100–50 % = 50%;	[2]
		(ii)	carbon dioxide; methane; water vapour;	[max 2]
	(b)	(i)	diagram showing IR radiation leaving Earth surface; but being scattered or in some way not allowed to leave b	by gh gases; [2]
		(ii)	walk/cycle/reduce car use; public transport/take more people for less money per hea car sharing;	d;
			use biofuels in cars; carbon neutral (idea);	[4]
4	(a)	(i)	A: ammonia/ammonium; B: nitrate;	[2]
		(ii)	carbon dioxide;	
			water; any relevant minerals other than N;;	[max 2]
	(b)	(i)	fertilisers – get into water/rivers/streams; cause algal growth; algae die;	
			rot and use up oxygen;	
			fish suffocate; eutrophication;	[max 2]
			pesticides – get into food chains;	

Mark Scheme: Teachers' version

IGCSE - October/November 2010

Page 3

get amplified (owtte);

(ii) biological control; example given;

kill or harm those at top of chain; kills harmless/valuable species; (idea of poisoning humans for ONE) Syllabus

0680

Paper

12

[max 2]

[max 2]

principle described (e.g. predator/parasite/disease introduced);

5	(a)	(i)	500–600 million;	[1]
		(ii)	12000/300; = 40;	[2]
	(b)	(i)	SOIL: loss/erosion/depletion of nutrients/fertility lost; WATER: polluted/named pollutant/increasing scarcity; VEGETATION: loss/removal/killing;	[3]
		(ii)	better educated women; have less children; pension schemes; mean think do not need so many children for old age; decreased infant mortality; means do not have more to insure against death up to 2 for each	[4]
6	(a)	(i)	C; A; B;	[0]
		(::\		[3]
		(ii)	weathering;	[1]
	(b)	(i)	(water) erosion;	[1]
		(ii)	A: tree planting/afforestation; B: terracing; C: contour ploughing; D: shelter belt; 1/2 each round down	[2]
		(iii)	removal of trees stops them taking in CO ₂ ; in photosynthesis; farm machinery; gives out CO ₂ burning fossil fuels;	[max 3]

Mark Scheme: Teachers' version IGCSE – October/November 2010

Page 4

Syllabus 0680 Paper 12