MARK SCHEME for the May/June 2014 series

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 should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the May/June 2014 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.



	Page 2			Mark Scheme	Syllabus	Paper
				IGCSE – May/June 2014	0680	12
1	(a)	(i)	com	ulation all one species; munity more than one; munity different species interact; nple to illustrate;		[3]
		(ii)	follov flat a	le rise; wed by steeper rise; at top: <i>components for one mark, all three for two marks.</i>		[2]
	(b)	(i)	dem	ographic transition model;		[1]
		(ii)	due <u>then</u>	h rate declines; to better medicine/food; birth rate birth rate declines in stage 3; to rise of birth control/better educated women;		[4]
2	(a)	(i)	CFC nitro			[2]
		(ii)	no ci	n air sits over cold air; irculation (stated or shown by suitable arrows); es/smoke trapped;		[2]
		(iii)	peop	ble ill, do not go to work/decline in tourism/cost of h	nealth care;	[1]
	(b)	(i)	whei disso	/NO _x ; n fuels burnt/volcanoes erupt; olve in/mix with/react with/combine with water (vaj as rain with low pH/which is named acid;	pour)/rain;	[3]
		(ii)	-	gases can be moved long distances/atmosphere is inds;	not a barrier to ga	as movement; [2]
3	(a)	(i)	(plat due drag	inental drift/plate movement; es move) apart; to magma (oozing out through cracks)/sea-floor sp ging/pulling plates apart; convection currents;	reading;	[3]
		(ii)	cons	structive/divergent;		[1]
	(b)	(i)	volca volca volca earth	ano predictable/people can be (warned/evacuated ano localised; anoes usually remote/low population areas; ano happens slowly, time to get out of its way; nquakes can be followed by tsunami; apt converse arguments.);	[3]

	Page 3	3	Mark Scheme	Syllabus	Paper
			IGCSE – May/June 2014	0680	12
	(ii)	desi coas furth prov ref. d (fund ref. l	dings stronger/earthquake resistant; ign detail; stal protection (against tsunamis); ner detail; vide stockpile of food/water; education/drills/training; d) work on predictive technology; better communications; shut down of gas supplies;		[3]
4	(a) (i)	acro ofter	nd S pole; oss both tropics; n on west coasts; ned country/region;		[2]
	(ii)		alination; ails;; (distillation, reverse osmosis)		
		-	ifers; ails;; (stored underground water, wells dug, pumping)	
		•	it in; ails;; (cost, bottled, pipeline, iceberg)		[3]
	(b) (i)	targe	ieved rate down to 11%; et was 11.5%; ieved 3 years early/by better than half;		
		alter	rnative: those with access in 2012 gone up 12%		[3]
	(ii)	• •	noid and cholera; ause caused by bacteria/microbes in water/water-b	orne;	[2]
5	(a) (i)	land lack decr decr erod lack runc lead	Intains subject to heavy rain; Islides; of trees causes soil erosion; reased interception of water; reased uptake of water by roots; ded soil silts up Bangladesh rivers; of trees allows more water from mountains dow off; I to flooding in Bangladesh; to any relevant economic consequence;	vn Bangladesh r	vers/increased
	(ii)	refoi sele dam	restation; ective logging; ns/levees/flood water storage/relief channels/drain soil erosion mediation measures;	age;	[3]

Page 4			Mark Scher	ne	Syllabus	Paper
			IGCSE – May/Ju		0680	12
	(b)	(i)	wood; fuel-wood/furniture/eq./paper; forest plants;			
		(ii)	medicines etc.; fruits/nuts; food; ref. CO ₂ absorption;			[2]
			in photosynthesis; reducing CO ₂ ; ref. O ₂ release; in photosynthesis;			
6	(a)	(i)	increasing O ₂ ;			[2]
U	(a)	(1)	A C Three correct for two marks, one o	r two correct for one	mark.	[2]
		(ii)	long/widespread/deep roots; to reach water deep down/over wi	de area;		
			succulence in stems/leaves (flesh) to store water;	y/big stems);		
			waxy cuticle; to conserve water;			
			stomata in pits; to conserve water;			
			stomata closed in day; to conserve water/decrease trans	biration;		
			spines; to stop animals taking water;			
			reduced leaves; reduces transpiration;			
			green stems; lost leaves reduces water loss;			
			short life cycle; so reproduced when water is availa	able;		[4]

Page 5	5	Mark Scheme	Syllabus	Paper
		IGCSE – May/June 2014	0680	12
(b) (i)		cold: row crops/farm; t houses/expensive;		[2]
(ii)	irriga	of water for plant growth (crops/pastures); ation unfeasible/difficult/expensive; salination linked to irrigation;		
	hot: incre	eases water loss from plants;		[2]
				[Total: 60]