MARK SCHEME for the October/November 2012 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 October/November 2012 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.



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Mark schemes will use these abbreviations:

- ; separates marking points
- / alternatives
- ® reject
- A accept (for answers correctly cued by the question)
- (I) ignore
- AW alternative wording (where responses vary more than usual)
- AVP additional valid point (where there are a variety of possible additional valid answers)
- <u>underline</u> actual word given must be used by candidate (grammatical variants excepted)
- D, L, T, Q quality of drawing / labelling / table / writing as indicated by mark scheme
- max indicates the maximum number of marks that can be given
- eq equivalent
- ORA or reverse argument
- IDEA OF where candidates are expected to make an argument which expresses a particular idea, but the ways in which they will do this will be many and varied

Page 3				Mark Scheme	Syllabus	Paper
				IGCSE – October/November 2012	0680	12
1	(a)	(i)	corre key;	ect plot;; (one mark for accurately placing each line	between the sect	ors) [3]
		(ii)	wate <i>two</i>	er vapour / methane / carbon dioxide / CFC; correct for 1 mark		[1]
	(b)	(i)	acid	rain;		[1]
		(ii)	NO _x SO ₂	: road / sea / air transport / power stations / industry : power stations / industry;	<i>ι</i> ;	[2]
		(iii)	road publ cycle walk car s insta pow scru deta use insu <i>indu</i> scru deta	I transport: ic transport; e; iing; share; all catalytic converter; <i>er stations:</i> bber / catalyst; il; of alternative energy; lation / eq in home; stry; bber / catalyst; il;		[3] [Total: 10]
2	(a)	(i)	<i>baux</i> only nut r <i>copp</i> in ol mair <i>gold</i> in ol in al	<i>kite</i> in old rocks; not in all old rocks shown; <i>ber</i> d and fold mountains / young rocks; nly in Americas; d and fold mountains / young rocks; l rocks shown;		
			<i>iron</i> only in al	ore in old rocks; I old rocks;		[4]
		(ii)	work tunn brea flood expl	kers have to endure high temperatures; el collapse / eq; thing problems / lung diseases; ds; osions;		[3]

	Page 4		Mark Scheme		Syllabus	Paper	
					GCSE – October/November 2012	0680	12
	(b)	advantages: disadvantages:		ges: htages:	foreign exchange; increase imports of wanted goods; any relevant impact of this on infrastructure environment via pollution;	e;	
					visual / noise / air; reference effect on tourism;		[3]
							[Total: 10]
3	(a)	(i)	ρορι	ulation:	group of organisms / animals / plants (of s	ame species) livi	ng together; [1]
			habi	tat:	where an organism lives;		[1]
			niche	e:	what an organism does in ecosystem (awa	ard example, e.g.	carnivore eq)[1]
			community:		group of populations in an area;		[1]
		(ii) deep roots; spreading rowaxy covering storage organises silvery hairs AVP;			ots; ng; ins (swollen stem); on surface;		[3]
	(b)	Α	They	∕ can lea	ad to more efficient use of existing farm land	d:	
		в	redu They	ced land / can be	d clearance / deforestation made to be pest resistant:		
		С	redu The	ced use / can be	of pesticide		
		ס	redu Thei	uced use	e of herbicide / better weed control	trols:	
		5	loss	of biodiv	versity due to competition		
		-	loss	of biodiv	versity		
		F	l hei loss	of biodiv	tion could lead to greater use of herbicides: versity		
			any	3 for ma	х 3		[3]
							[Total: 10]

Page 5			Mark Scheme	Paper				
			IGCSE – October/November 2012	0680	12			
4	(a) (i)) (i) 1.4 (billion km ³) × 0.03 or (1.4 × 3) / 100; = 0.04 / 0.042 (billion km ³); A any equivalent figure with appropriate units						
	(ii)	 (ii) water evaporates from the sea; condenses to form clouds; falls to land in precipitation; re enters atmosphere in transpiration; from plants; goes back to sea in runoff; any three in correct context 						
	(b) (i)	100 both	100 (in centre column) and 20% (in last column); <i>both correct for 1 mark</i>					
	(ii)	C / p good OR A / b good	bie graph; d reason; (e.g. discontinuous data, easy comparison par chart: d reason; (e.g. discontinuous data, easy comparison	ns can be made) ns can be made)	[2]			
	(iii)	<i>bilha</i> wate drair	arzia: er-based; nage;					
		<i>typh</i> wate wate	<i>oid:</i> er-borne; er treatment;					
		<i>chol</i> wate wate	<i>era:</i> er-borne; er treatment;					
		<i>mala</i> wate drair	aria: er-bred; nage / vector eradication;					
		marl	ks for any pair in correct context (no mark for diseas	se)	[2]			
					[Total: 10]			
5	(a) (i)	light chlo <i>A eit</i>	; rophyll; ther order		[2]			
	(ii)	mine (fron	erals / named relevant mineral; n the) soil;		[2]			
	(iii)	trees	s \rightarrow insects \rightarrow mice \rightarrow foxes;;; (note direction of arr	ows – if wrong, -1) [3]			

Page 6			Mark Scheme	Syllabus	Paper
			IGCSE – October/November 2012	0680	12
(b)	mor less less soil dec hab	ned e.g.;	[3]		
					[Total: 10]
6 (a)	(i)	5001	km; A 450-550		[1]
	(ii)	flood irriga HEP drou	d control; ation; o; ight avoidance;		[3]
	(iii)	(wate loss clear more grea	er based) diseases increase; of farmland / villages eq / archaeological sites; rer water downstream; e algal growth; iter costs of water treatment;		[2]
(b)	(i)	fish; oil; tidal trans	/ wave power; sport;		[2]
	(ii)	<i>fish:</i> over colla	fishing; apse of food chains;		
		<i>oil:</i> pollu one	ution; consequence described;		
		<i>tidal</i> char char	/ <i>wave power:</i> nges water currents / eq; nged sediment deposition / affects bird-life / affects f	ïsh;	
		<i>trans</i> caus one	sport: ses oil pollution / pollution by plastic waste; consequence described;		[2]
					[Total: 10]