CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the October/November 2015 series

0680 ENVIRONMENTAL MANAGEMENT

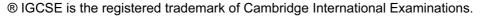
0680/11 Paper 1, maximum raw mark 60

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 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 2015 series for most Cambridge IGCSE[®], Cambridge International A and AS Level components and some Cambridge O Level components.





1	(a)	oxy car	ogen gen bon dioxide	ro1
		ınr	ree correct for two marks. One or two correct for one mark.	[2]
	(b)	(i)	correct plot (with error margin of half a square above); burning gas and burning oil correct in the key; key of plot matches the plot chosen;	[3]
		(ii)	deforestation/eq.; reduces trees taking in carbon dioxide/photosynthesis; OR urbanisation/increase in use of machines in farming;	
			carbon dioxide-emitting activities described such as burning of fossil fuels; Allow other correct examples.	[2]
		(iii)	the gas traps additional heat radiating from Earth's surface/causes greenhouse effect/this causes warming of atmosphere/global warming; which might lead to climate change;	
			Up to three correct consequence(s) of climate change for the environment: e.g. sea level rise; ice cap melting; weather pattern changes;	[3]
2	(a)	(i)	photosynthesis water light/eq.	
			Three correct for two marks. Two or one correct for one mark.	[2]
		(ii)	fertilisers: it adds nutrients/minerals/a named mineral to soil (to increase growth);	
			pesticides: to remove pests, which eat fruit/roots/transmit disease/compete with/parasitise the crop;	[2]
	(b)		5/1.75 × 100; .9/2.86%;	[2]

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Syllabus

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Paper 11

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(c)	a fa mig	wer: ir price means grower can receive more money*/a sensible sugges tht do for them if more money not stated/having money in advance d next year's crop/guaranteed market for coffee;		
		er: ect buying means guaranteed/stable source of coffee/gives the buy ing/protected from coffee price fluctuations;	er an edge v	when
	shop owner: more people will buy this coffee/will sell more of this coffee/improves reputation/mmoney (from higher volume of sales)*;			
	customer: feels good/doing duty, knowing that a person is getting a fair price;			
	Allc	ow * only once.		[4
(a)	(i)	explanation in terms of:		
		(right angles/vertically at the Equator)/oblique at the poles; direct/concentrated rays at the Equator/indirect at poles; less area at the Equator than poles; less atmosphere to go through at the Equator than poles; ref. to no sunlight at poles for long periods;		[2
	(ii)	the temperature is expected to be consistent, but it actually varies the land is colder than expected/the sea is warmer than expected; warmer in (north) Atlantic/or Pacific than expected; colder in N America/SE Eurasia than expected/warmer in NW Euref. (ocean) currents; correct ref. to the different heat absorption of land vs. water/eq.;		rpected;
		Max. two marks for description or for explanations.		[3
(b)	(i)	wind; tidal; wave; HEP; geothermal; biomass; nuclear;		[2

[3]

(ii) (local) solar panels; (local) wind turbines;

on houses or other correct ref. to where installed;

with government cash subsidy/grant/government pay for;

(fossil-fuel powered) generator;

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4 (a) near coasts/eq.;

(mainly) above and below the tropics/above Tropic of Cancer and below the Equator; temperate waters;

bigger area north of the Equator/more fisheries south of the Equator/in Pacific Ocean;

- ref. to cold currents/high oxygen/ref. to meeting of warm and cold currents;
- ref. upwelling of nutrients;
- ref. continental shelf;
- ref. lack of thermocline/eq.;
- ref. shallow water;
- ref. light penetration;
- ref. photosynthesis;
- ref. plankton;
- ref. where humans are/important part of income/way of life;

Allow one mark for a comprehensive list of where they all are/only one at the Equator.

- (b) (i) using a resource in way which does not stop it being used in the future/development that meets the needs of the present without compromising the ability of future generations to meet their own needs;
 - (ii) description of how close data is to 70%/large percentage/agree/disagree qualified, e.g., to a great extent/strongly/because not quite what book says; data is 60 (overfished) + 6 (depleted) = 66% is unsustainable;

$$ORA (2 + 9 + 23 = 34\% \text{ is sustainable})$$
 [2]

(iii) net types;

size;

mesh size;

quotas;

restricted area;

closed/restricted season;

conservation laws/monitoring/licence;

education of fishermen about conservation:

Allow another mark for developing any point.

[3]

[4]

[1]

5	(a)	(i)	north/south but slower than the Eurasian plate/towards the Eurasian plate;	[1]
		(ii)	plates (always) move; (collisions of plate) cause a build up of pressure; due to friction/eq.; resulting in shaking;	[2]
	(b)	(i)	6 to 50 000/49 994;	[1]
		(ii)	time of day it occurs; location, qualified (e.g. different population density); might be followed by tsunami;	
			preparedness/earthquake-resistant buildings/what to do in an earthquake; Allow up to two examples for two marks.	[3]
	(c)		are: more time to escape; // can evacuate;	
		OR	A for earthquakes.	[3]
6	(a)	(i)	climatic: temperature/humidity/wind/light;	
			soil: salinity/water/pH/nutrients;	
			non-human: predators/producers/consumers/competitors;	
			12 items correct for four marks. 9–11 items correct for three marks. 6–8 items correct two marks. 3–5 items correct items for one mark.	for [4]
		(ii)	One mark per example. e.g. deforestation; farming; polluting; draining; burning of fossil fuels; etc.	[2]

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(b) (i) cause:

e.g. removal of vegetation/overgrazing/over-cultivation/clearance of slopes/poor irrigation;

explanation:

e.g. soil has no cover/no roots to bind soil/no barrier to wind/increases run-off/other relevant explanation; [2]

(ii) tree planting;

terracing;

contour ploughing;

wind breaks; etc.

description of how this helps for the second mark;

[2]

[Total: 60]