



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

ENVIRONMENTAL MANAGEMENT

0680/12

Paper 1

October/November 2016

MARK SCHEME

Maximum Mark: 60

Published

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Page 2	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
1(a)(i)	27; moist; low; spin; moisture; clouds; 6 correct = 3, 4/5 correct = 2, 2/3 correct = 1, 0/1 correct = 0	3
1(a)(ii)	correct plot (must be clearly above half-way between 1400 and 1450 but below 1450);	1
1(a)(iii)	<i>any 3 of:</i> better forecasting; better shelters available; better construction; better evacuation; better communication; better healthcare; less powerful cyclones some years;	3
1(b)(i)	drier weather than would be normal in an area;	1

Page 3	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
1(b)(ii)	<i>any 2 of:</i> dam building to conserve water / storing water; improve soil with compost; drought resistant strains; desalination plant; prediction; monitoring; drought awareness; local planning; reduction in water demand; water conservation; sink wells; import water;	2

Question	Answer	Mark
2(a)(i)	all arrows present and in the correct direction; phytoplankton and great blue heron shown; one correct route; phytoplankton → zooplankton → mosquito larvae → small fish → medium fish → large fish → great blue heron or phytoplankton → zooplankton → small fish → medium fish → large fish → great blue heron	3
2(a)(ii)	phytoplankton; mosquito larvae / small fish;	2

Page 4	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
2(b)(i)	<i>any 2 of:</i> much less wetland in 2015; losses mainly in North / around the big lake; South East; near cities;	2
2(b)(ii)	<i>any 3 of:</i> for farming; for settlements / urbanisation; for disease control / named disease / malaria; for peat; for their water;	3

Question	Answer	Mark
3(a)(i)	carbon dioxide and water vapour;	1
3(a)(ii)	carbon dioxide / water;	1
3(a)(iii)	trap, heat / infra-red / long-wave radiation leaving Earth; causes global temperature rise / global warming; this can change long term weather patterns;	3
3(b)(i)	(it is correct) because total is (power stations 21 + industry 17 + transport 14); = 52%. 50%;	2

Page 5	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
3(b)(ii)	<i>any 3 of:</i> catalytic converters; use public transport / example; cycle / walk; electric cars; car-pooling / eq; more economical cars qualified / eq;	3

Question	Answer	Mark
4(a)(i)	<i>any 2 of:</i> nearly all between the tropics / ORA / on both sides of equator; very little in North America; throughout some parts of Central America / Caribbean; northern regions of South America;	2
4(a)(ii)	<i>any 3 of:</i> the vector / mosquito; bites an infected person; picks up parasite / eq; when it bites again it is passed to another person;	3
4(a)(iii)	water-borne: typhoid / cholera; water-based: bilharzia;	2

Page 6	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
4(b)	<i>any 3 of:</i> drugs / vaccinations; named / treat the disease; vector control / avoidance; long sleeves, nets; vector eradication; insecticides / oil on water / draining; improved sanitation; prevents spread of bacteria; clean water supply / chlorination ; prevents spread of bacteria;	3

Question	Answer	Mark
5(a)	igneous – A magma – D metamorphic – B sedimentary – C sediment – E; 5 correct = 3, 3/4 correct = 2, 1/2 = 1	3
5(b)(i)	<i>any 3 of:</i> the land is cleared; then soil / rock is removed; coal now exposed; coal can be mined;	3

Page 7	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
5(b)(ii)	<i>any 4 of:</i> land smoothed off; hole refilled / create lake; top soil replaced; fertiliser added; trees etc. planted; land made to look like it was before; suitable habitat for wildlife;	4

Question	Answer	Mark
6(a)	<i>any 4 of:</i> mosses and lichens colonise; seeds dispersed into the area; dispersal method / eq; grow into plants which eventually die; these are pioneer plants; their remains form soil; this allowed bigger plants in; like trees and bushes; these outcompete the pioneers; for light / minerals / water;	4
6(b)(i)	<i>any 2 of:</i> fuel wood; farming; urbanisation; timber extraction;	2

Page 8	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
6(b)(ii)	<i>any 4 of:</i> reducing deforestation: more efficient use of timber; by recycling (paper / timber); alternative materials to timber; reducing soil erosion: tree planting ,terracing, contour ploughing, wind breaks, add organic matter; detail of chosen method;	4