



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

ENVIRONMENTAL MANAGEMENT

0680/11

Paper 1

October/November 2016

MARK SCHEME

Maximum Mark: 60

Published

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This document consists of **7** printed pages.

Page 2	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark										
1(a)(i)	1960 to 1997: there is a general decline in level; 1997 to 2015: the level has increased;	2										
1(a)(ii)	(use of) CFC / eq; banned / replaced / reduced;	2										
1(a)(iii)	<table border="1"><thead><tr><th>number on graph</th><th>drawing letter</th></tr></thead><tbody><tr><td>1</td><td>B</td></tr><tr><td>2</td><td>C</td></tr><tr><td>3</td><td>A</td></tr><tr><td>4</td><td>D</td></tr></tbody></table> all 3 = 2, 2 / 1 = 1	number on graph	drawing letter	1	B	2	C	3	A	4	D	2
number on graph	drawing letter											
1	B											
2	C											
3	A											
4	D											
1(a)(iv)	protection against / screens out <u>UV</u> light; which can cause, cancer / cataracts / blindness / mutations;	2										
1(b)	<i>any 2 of:</i> factories usually emit the gases into the air high up / from (tall) chimneys; they then blow (in winds); to other countries; vehicles emit NO _x / SO ₂ / eq;	2										

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Question	Answer	Mark
2(a)(i)	$(9.3/9.4/9.5) - 7 = 2.3/2.4/2.5$ (billion);	1
2(a)(ii)	12.1 billion if 10% bigger; 9.9 billion if 10% smaller;	2
2(a)(iii)	<i>any 4 of:</i> habitat loss ; named example of habitat loss e.g. deforestation / wetland drainage; over hunting / fishing / farming / grazing; urbanization; exploitation of water resources; reduced biodiversity; increased named pollutant; effect of this pollutant described; AVP e.g. soil erosion, desertification;	4
2(b)	<i>any 3 of:</i> family planning / education; contraception; national policies / laws; one / two child / antinatalist / pronatalist / restricted number of children / incentives; improved health / standard of living; reduced need for large families; improved general education; focus on career / marry later / have a smaller family; control migration; border control / eq;	3

Page 4	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
3(a)(i)	2005;	1
3(a)(ii)	1.5 (ignore sign)	1
3(a)(iii)	<i>any 3 of:</i> agree / disagree / some support but not total; catch is lower than average when sea temperature is also low; catch is higher than average when sea temperature is also high; but catch high in when sea temperatures are low; quoted correct data to support argument;	3
3(b)	<i>any 3 of:</i> there is shallow water / continental shelf; increase light / photosynthesis (in shallow water); (increasing) phytoplankton / plants; for food for fish; currents meet (cold and warm); cold water holds more oxygen; nutrients / upwelling (where currents meet / cold currents); easy fishing (jn shallow water); more profit;	3
3(c)	<i>any 2 of:</i> quotas; mesh sizes; net size / shape; restricted zones; 'no fishing' times / closed season; moratorium on certain species; return of undersize fish to sea; AVP e.g. subsidies;	2

Page 5	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
4(a)	<i>any 4 of:</i> from dead organisms / trees / plants; on sea beds / swamps; covered (in sediments); compressed / pressure; reference to millions of years;	4
4(b)(i)	correct plot and key;	1
4(b)(ii)	Argentina;	1
4(b)(iii)	has the highest proportion / amount of shale gas to natural gas / would go from 12 AU to 812 AU / go up by 800 / increase by over 6000% (6566);	1
4(c)	<i>any 3 of:</i> encourage public transport; car pooling / car sharing; hybrid cars; walking / cycling ; insulation / turn off lights / don't leave appliances on stand-by; increase efficiency / decrease use; use of alternative sources of energy / named alternative;	3

Page 6	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
5(a)	it is the numbers / variety / eq; of different types / species / biological groups of organisms / living things / plants and animals;	2
5(b)(i)	$(3750 - 1600) = 2150$;	1
5(b)(ii)	both gone up / eq; reference to scale of increase (e.g. consumers increase relatively more / faster than producers / both go up about the same number);	2
5(b)(iii)	<i>any 3 of:</i> compete with (existing / native) (primary producers / plants); reduce their numbers / die; reduce food for consumers / less consumers; might have increased food for consumers / more consumers; change biodiversity; AVP e.g. toxins in aliens;	3
5(b)(iv)	<i>any 2 of:</i> ref. CITES / laws / conventions / licence; controls at ports; education / informing;	2

Page 7	Mark Scheme	Syllabus	Paper
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Question	Answer	Mark
6(a)(i)	11 °C / 22 – 33 °C;	1
6(a)(ii)	<i>any 4 of:</i> temperature: becomes cooler (from P to S) in Jan and warmer in June / ora; any manipulation (e.g. total fall is 5 °C or total rise is 6 °C); rainfall: becomes much less (from P to S); any manipulation (e.g. total reduction is 1890 mm / 18X); number of dry months rise (from P to S); by 11; max two for each	4
6(b)(i)	<i>any 2 of:</i> not enough rain / water (for plant growth) / only 450 mm; short growing season / dry for most of year / 9 month; too hot (for plant growth); too hot for the farmers / eq;	2
6(b)(ii)	reference to irrigation / drought resistant crops / change crops grown / greenhouses; allow valid ecf from 6(b)(i) ;	1
6(c)	advantage: biofuel cheaper than fossil fuels / reference to total CO₂ reduced / carbon neutral / increases fuel / sell it / renewable / renewable / employment; disadvantage: using land that could be used to grow food / reduces biodiversity / deforestation / habitat loss / introduce alien species;	2