

CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the May/June 2015 series

0680 ENVIRONMENTAL MANAGEMENT

0680/13

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.

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- 1 (a) (i) predation:
tree shrew eating dung beetle / carrion fly;
- seed dispersal:
hornbill spreading seeds of fig /
tree shrew spreading seeds of fig /
elephant spreading seeds of fig /
Indian hornbill spreading seeds of giant lily;
- pollination:
fig wasp of fig /
carrion fly of giant lily or *Rafflesia*; [3]
- (ii) hornbill and elephant / hornbill and shrew / elephant and shrew / fig wasp and elephant /
shrew / hornbill; [1]
- (b) (i) rice; [1]
- (ii) barley AND wheat; [1]
- (iii) plant breeding;
detail;
- genetic engineering;
detail; [4]
- 2 (a) (i) A: precipitation;
B: evaporation;
C: transpiration; [3]
- (ii) built-on land does not allow infiltration / D;
so run-off / E is increased;
leads to flooding; [3]
- (b) (i) cholera and typhoid;
water-based
malaria;
- Four correct for two marks. Two or three correct for one mark.* [2]
- (ii) vector eradication;
ref. to snail as vector;
accept ref. to drugs; [2]
- 3 (a) (i) ozone / methane / water vapour / any rare gas named; [1]
- (ii) removes: photosynthesis;
returns: respiration / burning; [2]
- (b) (i) carbon dioxide concentration going up year-on-year; [1]

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- (ii) suggests more carbon dioxide given out than taken in;
ref. source of extra gas; [2]
- (iii) ref. seasons;
more photosynthesis than respiration in summer vice versa in winter; [2]
- (c) ref. carbon neutral/eq.;
explained that CO₂ given off is quickly taken back next growing season/eq.; [2]
- 4 (a) ref. pressure for both/ref. lots of time for both;
ref. marine creatures for oil, plants for coal; [2]
- (b) correct numbers in correct places;;
All four for two marks. Two or three for one mark. [2]
- (c) (i) coal down;
then any two of:
gas up;
nuclear up slightly;
oil down;
renewables up;
a correct quantitative statement; [3]
- (ii) H.E.P./wind/geothermal/biomass/solar/wave; [1]
- (iii) ref. pollution from fossil fuels;
ref. fossil fuels running out; [2]
- 5 (a) taiga south of tundra/ORA;
all in northern hemisphere;
both span whole of northern parts of Americas/Asia; [2]
- (b) all trees;
leaves on but winter/leaves not lost in winter;
saves energy;
needle leaves;
reduces water loss;
conical/branches slope down;
shed snow; [4]

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(c) (i) pasture, crops, buildings / roads, fuelwood, timber, mining, etc.;;

Four given for two marks. Two or three for one mark. [2]

(ii) too cold for agriculture;
not many humans as again too cold;

ORA [2]

6 (a) sedimentary; [1]

(b) (i) on surface v.s. underground;
comparison of danger to miners;
comparison of environmental effects;
comparison of costs; [4]

(ii) ref. specific pollution;
ref. spoil;
landscape effects; [3]

(iii) ref. landscaping, restoration, reclamation;
detail; [2]

[Total: 60]