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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

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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 CO_2 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]

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