

**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

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Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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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<sub>2</sub> 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]**