UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2010 question paper for the guidance of teachers

0680 ENVIRONMENTAL MANAGEMENT

0680/13 Paper 1, maximum raw mark 60

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UNIVERSITY of CAMBRIDGE
International Examinations

1 (a) (i) C; [1]

(ii) A peat;
B time and pressure;
C time and pressure; [3]

(b) (i) **miners**
collapse of tunnel;
fire due to gases from coal;
poisoning from coal gases/silicosis;
breathing problems;
flooding; [max 2]

environment
spoil pollutes ground and water around mine;
carbon dioxide/owtte when burnt;
landscape destruction/visual pollution (open cast); [max 2]

(b) (ii) wind;
hep;
geothermal;
nuclear;
tidal;
wave;
biofuels; [max 2]

2 (a) (i) N and S of tropics/equator;
Africa;
S Asia;
W S America;
AVP (relevant countries named); [max 2]

(ii) sun;
vapour;
evaporation;
condenses;
clouds;
rain;
snow (owtte);
sea/ocean; half each/round down [max 4]

(b) (i) Peru [1]

(ii) Peru [1]

(iii) quotas/seasons/net size;
relevant explanation; [2]

3 (a) (i) (abs = 18) + (reflection = 32) = 50%;
earth abs = 100–50 % = 50% ; [2]

(ii) carbon dioxide;
methane;
water vapour; [max 2]

(b) (i) diagram showing IR radiation leaving Earth surface;
but being scattered or in some way not allowed to leave by gh gases; [2]

(ii) walk/cycle/reduce car use;
public transport/take more people for less money per head;
car sharing;
use biofuels in cars;
carbon neutral (idea); [4]

4 (a) (i) A: ammonia/ammonium;
B: nitrate; [2]

(ii) carbon dioxide;
water;
any relevant minerals other than N;; [max 2]

(b) (i) fertilisers – get into water/rivers/streams;
cause algal growth;
algae die;
rot and use up oxygen;
fish suffocate;
eutrophication; [max 2]

pesticides – get into food chains;
get amplified (owtte);
kill or harm those at top of chain;
kills harmless/valuable species;
(idea of poisoning humans for ONE) [max 2]

(ii) biological control;
example given;
principle described (e.g. predator/parasite/disease introduced); [max 2]

5 (a) (i) 500–600 million; [1]

(ii) 12000/300; = 40; [2]

(b) (i) SOIL: loss/erosion/depletion of nutrients/fertility lost;
WATER: polluted/named pollutant/increasing scarcity;
VEGETATION: loss/removal/killing; [3]

(ii) better educated women; have less children;
pension schemes; mean think do not need so many children for old age;
decreased infant mortality; means do not have more to insure against death
up to 2 for each [4]

6 (a) (i) C;
A;
B; [3]

(ii) weathering; [1]

(b) (i) (water) erosion; [1]

(ii) A: tree planting/afforestation;
B: terracing;
C: contour ploughing;
D: shelter belt; 1/2 each round down [2]

(iii) removal of trees stops them taking in CO_2;
in photosynthesis;
farm machinery;
gives out CO_2 burning fossil fuels; [max 3]