UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2012 question paper

for the guidance of teachers

0680 ENVIRONMENTAL MANAGEMENT

0680/12 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 must be read in conjunction with the question papers and the report on the examination.

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General notes

Symbols used in Environmental Management mark schemes.

/ separates alternatives for a marking point – other valid ways of expressing the same idea are also credited

; separates points for the award of a mark

[3] indicates the number of marks available

[max 3] the number shows the maximum number of marks available for the question where there are more marking points than total marks available

[max 3] when part of the marks of a question must come from part of the mark scheme, this is indicated by non-bold marks showing the internal maxima for different parts of the question
these non-bold marks are also used to show marks for bands where banded mark schemes are used

italic indicates that this is information about the marking points and is not required to gain credit
italic text is also used for comments about alternatives that should be accepted, ignored or rejected

ora or reverse argument – shows that an argument from an alternative viewpoint will be credited

AW alternative wording, sometimes called 'or words to that effect' –
AW is used when there are many different ways of expressing the same idea

( ) the word / phrase in brackets is not required to gain marks but sets the context of the response for credit
e.g. (nuclear) waste – nuclear is not needed but if it was described as a domestic waste then no mark is awarded

<u>volcanic</u> underlined words – the answer must contain exactly this word

ecf error carried forward – if an incorrect answer is given to part of a question, and this answer is subsequently used by a candidate in later parts of the question, this indicates that the candidate's incorrect answer will be used as a starting point for marking the later parts of the question

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1 (a) (i) wind / Aeolian / AW; (ignore extras like mill) **[1]**

(ii) on a hill / e.q. / lack of buldings / open space / near the sea / AW; **[1]**

(iii) oil / gas / coal / fossil fuels; **[1]**

(iv) *waste*
is radioactive;
can cause cancer;
can cause mutations;
is costly to store;
remains for a long time;
difficult to dispose of;

ref. to explosions / use by terrorists; **[max 2]**

(b) (i) 50% of 7% = 3.5%;; if answer incorrect, credit correct working to max 1 **[2]**

(ii) walking;
cycling;
public transport;
car sharing;
ref. to insulation;
ref. to turning off relevant appliances (lights etc);
ref. solar panels / solar water heating;
recycling suitably qualified;
biofuels;
fuel cells;
ref. locally sourced products;

reject clean burn fuel **[max 3]**

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2 (a) (i) falls / decreases / AW.;
a further detail e.g. from a rate to a new rate, from a date to a date, by an amount, some comment on differing rate, e.g slow then fast, levelling off; **[2]**

(ii) rises;
whereas mortality rate falls / some detail such as from / until, from / to rate; **[2]**

(b) (i)

PUSH	**PULL**
A C D G J K L	B E F H I

10–12 for 4;
7–9 for 3;
5–8 for 2;
2–4 for 1; **[4]**

(iii) rural to urban / village to town / village to city;
urbanisation; (ignore suffixes) accept migration; **[2]**

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3 (a) (i) carbon dioxide; **[1]**

(ii) burning coal, oil and gas C and/or D
using aerosols A
growing rice B
burning refined petroleum E and/or D;; **[2]**

4 for 2
2 or 3 for 1
0 or 1 for 0

(iii) CFC; **[1]**

(iv) aerosols / sprays (ignore type); air conditioning; refrigerators; foam blowing agent; **[1]**

(b) (i) Lets in UV (light);
UV causes cancer;
sight problems;
mutation of ;
effects on amphibia;
sunburn / e.q.; **[3]**

(ii) named substitute (e.g. HCFCs / HFCs reject Halons / use atomiser);
(bans on / fines for / laws against) use of CFCs;
ref. Montreal protocol reject unqualified protocol; **[2]**

4 (a) (i) 1320–800 = (520);
520/800 (× 100) = 65%; allow ecf **[2]**

(ii) more money for local people;
more jobs;
more money for government;
ref. to development use to which money put (e.g. education, health care, housing / infrastructure / raised standard of living etc.);
more foreign exchange ($,£,**€**;)
AVP; **[3]**

(b) (i) ref. to:
educational aspect;
support of conservation;
detail of conservation;
decreases chance of extinction;
jobs / money culture aspect for local people; **[3]**

(ii) ref. dangers of any / all of Big 5;
ref. damage to crops / infrastructure;
ref. eating of cattle / e.q.;
ref. completion with cattle / e.q.;
ref. bushmeat / e.q. / use in medicine / ivory / rhino horn;
loss of tribal lands; **[2]**

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5 (a) (i) 1974; **[1]**

(ii) overfishing / pollution / increased demand / increased human population / improved fishing technology / fish migration / ref. climate change / e.q.; **[1]**

(iii) quotas / net hole / mesh size / restricted seasons / restricted zones / fines / licenses strategies to reduce pollution / restriction young fish catch **[3]**

(b) (i) correct plot for 2;
plot mostly correct for 1;
sectors identified by labelling or key; **[3]**

(ii) double hulls;
more oil by pipeline;
laws against cleaning tanks out; **[2]**

6 (a) (i) 1950–1960 **[1]**

(ii) 5 years **[1]**

(b) (i) Y **[1]**

(ii) points to suit choice in **(b)(i)**: (ecf principle)
Y:
narrow part;
so valley sides act as walls;
greatest head of water;
greatest force;
better than Z because fewer people will live at Y;
better X since flow not high here;

Z: (if given in **(b)(i)**
Near people who need power:
Take advantage of full flow of river;
Control river / reduce flooding;
AVP;

X: (if given in **(b)(i)**
Point about high so power of flow;
Gives more energy / e.q.;
Away from people so reduced disturbance;
AVP **[4]**

(c) water based;
typhoid / cholera;
water bred; (accept water-related (insect) vector) **[3]**

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