CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2

0680 ENVIRONMENTAL MANAGEMENT

0680/11 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.

Cambridge is publishing the mark schemes for the October/November 2013 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

1 (a) epicentre;

(b) (i) **Izmit:**
The Anatolian Plate;
(and the Eurasian plate) moved parallel to each other;
friction/eq;
quote speed of movement of plate from diagram;

Van:
Arabian;
(and Eurasian plates) moving toward each other;
forced movement of rock against rock;
subduction;
quote speed of movement of plate from diagram; [4]

(ii) 17 000/600;
= 28 (.3) [1]

(iii) difference in magnitude;
time of day in context;
Van early afternoon/eq, Izmit early hours of morning;
people at home/in bed/asleep/ora;
Izmit much longer ago;
buildings/rescue/aftercare, now better;
less/more technology qualified; [4]

[Total: 10]

2 (a) (i) **A** Malaysia
B Thailand
C Nigeria [1]

(ii) tropical/equatorial;
hot/eq;
wet/eq; [3]

(b) (i) **advantages:**
not GM;
substitute for crude oil/eq;
cost (cheaper) in comparison to oil etc.;
carbon dioxide emission reduction;
so none of the environmental problems/ named problem associated with GM crops;
creates jobs/eq;

disadvantages:
loss of forests/eq;
loss of habitat/biodiversity/eq;
loss of carbon sink/eq; [4]

(ii) set up park/reserve;
zoos' breeding;
put on IUCN/CITES list;
raise money through WWF/eq;
transpose/eq orang-utans to undisturbed areas;

3 (a) (i) India (much) bigger/eq;
figures to support e.g. any comparison of same age (at 0–4 33 million in India, 2 million UK);
India young population, UK ageing/eq;
UK 'more' adults/ora;
UK life expectancy longer/ora;
India more young/ora;
India birth rate higher/ora;
India death rate higher/ora; [4]

(ii) UK:
few young to support the old;
much money/taxes needed for elderly care/hospital/care home/eq;
decline in size;
unemployment;
inadequate size of workforce;

India:
care for many young expensive (education/health/maternity);
food supply problems with large population;
any environmental problem caused by large numbers; [4]

(b) family planning policy (e.g. involves stopping pregnancy with contraception, one child policy;
reduces number of young and size of population;
education argument;
incentive to have/not have children linked to correct problem;
encouraging/not encouraging migration linked to correct problem;
improved medical care for the young; [2]

[Total: 10]

4 (a) (i) idea that minerals come from the weathering;
of rock;

further mark for any detail of weathering
OR
up to all 3 for description of a weathering process;

mechanical:
freeze thaw:
water enters cracks;
freezes and expands;
causes further disintegration of rock;

thermal:
rock expands and contracts;
with temp changes;
outer layers of rock peel off;

hydraulic:
water entering cracks with force;
explosive weathering ensures;

chemical:
acids from living things;
dissolve rock;

acidic rainfall;
dissolves rock;

oxidation;
leads to formation of crumbly products; [3]

(ii) organic matter/humus;
from decomposition/decay;
of dead organisms/plants/animals/eq; [3]

(b) (i) **A** wind break/shelter belt;
B contour ploughing;
C terracing;

3 for 2, 2/1 for 1, 0 for 0 [2]

(ii) prevents soil erosion for all;

terracing:
flat platforms made on hillside;
slows runoff of water;
thus slowing soil erosion downhill;

contour ploughing:
plough perpendicular to slope/along contours (to form ruts);
which slow water runoff;
thus slowing soil erosion downhill;

wind breaks:
trees/shrubs planted in rows/wall/fence/eq;
to protect from;
soil erosion by wind;

allow up to 2 for good suggestions of how mixed croppin
ecf for A

5 (a) (i) both start in same place/near Andamans/tropics;
both move north eq;
both clockwise;

1991 landfall further east than 2007;
different shape of initial path in the two;
different extent of coverage of Bangladesh/eq;

(Note: max 2 for either) [3]

(ii) not much above sea level;
no vegetation to slow water;
idea of ground full of water already; [2]

(b) (i) for one mark ref. to:
length/strength/amount of land crossed/amount of sea crossed/differences in population in two areas affected;

for up to all three marks:
by 2007 (ora in every case):

education about what to do better;
better aftercare;
any example (food stores/water stores/medical teams);
better warning system / communication / eq;
better quality of buildings;
possible construction of shelters;
better evacuation plans;
planting of trees/other barriers; [3]

(ii) max one mark for a 'family ties' argument:
up to two marks for:

over crowding on mainland;
a push;

good soil from mud;
a pull; [2]

[Total: 10]

6 (a) (i) **P** Warm

N A Drift;
Gulf Stream;
Brazilian;
Mozambique;
AVP coming from tropics;;

Q Cold

Benguela;
Peruvian/Humboldt;
W Australian;
AVP coming from poles;; [2]

(ii) any two of:

Pacific NWest/East USA/Canada/N Europe waters/off Peru/off NW Africa/Around China, Japan;;
AVP other areas as seen; [2]

(b) (i) radar location;
sonar;
electrofishing;
large boats;
refrigeration;
big boat range;
satellite navigation;
better weather data;
huge nets;
(any 4 or 2/3 developed) [4]

(ii) quotas;
licences;
closed seasons;
restricted areas;
net limitations, type/size;
(any 2 or 1 developed) [2]

[Total: 10]