UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2011 question paper for the guidance of teachers

0680 ENVIRONMENTAL MANAGEMENT

0680/43 Paper 4 (Alternative to Coursework), 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.

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1 (a) (i) rain gauge; [1]

(ii) labelled axes;; plots;; [4]

(iii) high rainfall associated with low yield/converse/eq;
yields go up after high rainfall;
yields go down after below average rainfall;
ref to figures for two years in context;
(any two) [2]

(iv) 75(%);; [2]

(v) 880; 1.0; [2]

(b) (i) relying on only two crops;
risk of crop failure;
drop in price;
only mango can be used as food by farmer;
(any two) [2]

(ii) More food;
less risk of all crops failing;
some fuel gained;
(any one) [1]

(iii) different crops need different nutrients;
crops can be rotated;
good nutrition;
more value of production;
land very unlikely to be degraded;
green manures possible;
AVP e.g. soil exhaustion;
(any three) [3]

(iv) old trees may give less cloves/die;
new trees take time to be productive/eq;
help to maintain supply of cloves;
(any one) [1]

2 (a) (i) at random/eq; [1]

(ii) snapper;
only smaller fish left/eq; [2]

(iii) experimental error;
immigration of longer/larger/older fish;
faster growth rate in fishing zone;
(any one) [1]

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(iv) same size net;
further detail e.g. size/shape of holes;
fish for same time;
same depth;
AVP e.g. same season;
(any two) [2]

(v) repeat the sampling;
more time/stated time;
repeat around another island; [3]

(b) (i) (1) 4 *3 2 6 5 (7)*
(5 correct 2 marks;; 3/4 correct 1 mark; less than 3 correct no mark.) [2]

(ii) table layout suitable;
suitable titles e.g. fish length (cm)/fish species/snapper/jacks/wrasse (any order);
average length (cm); [3]

(iii) less mature fish left to breed;
so less very small fish to grow in future;
ref to changes in food chain; [3]

3 (a) (i) more tourism/eq; [1]

(ii) collect seed;
make compost of forest leaves/eq;
plant in pots;
water;
shelter from sun/wind;
AVP;
(any four) [4]

(iii) in gaps in 'old forest';
on edges of/in clove plantations to see if they survive;
record height of trees;
how many living trees remain/ numbers of living/dead trees;
(any two) [2]

(b) (i) one road drawn;
three paths;
(must be in sensible locations) [2]

(ii) reasonable improvements such as toilets; accommodation; telephone/internet; food imports for tourists; (any three)
good reason for each ;;; (any three) [6]

(c) (i) three questions, at least two linked to idea of 'tourist suggestions' e.g. more informed guides/interpretation boards/hides for observation/AVP;;;
layout; [4]

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(ii) add up each response option;
find % for each response option/eq; [2]

(d) (i) more mats made for sale to tourists;
more cooking needed for tourists;
more colourful mats get higher prices/eq;
(any two) [2]

(ii) earn more money from mats;
more jobs;
as a cash crop;
AVP;
(any two) [2]

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