UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2006 question paper

0680 ENVIRONMENTAL MANAGEMENT

0680/04   Paper 4 (Alternative to Coursework), maximum raw mark 60

This mark scheme is published as an aid to teachers and students, 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.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

The grade thresholds for various grades are published in the report on the examination for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses.

* CIE will not enter into discussions or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the October/November 2006 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

1 **(a)** **(i)** theft; attack by wild animals/carnivores/predators; spotting/prevent diseases; lost/st~~
prevent overgrazing; AVP;; e.g. need milking/stop eating crops

   (ii) 700/140 ; =5 (maloti);

(b) 35 – 70/5 – 10% (1/20 – 1/10);

   (ii) 3 valid Q's about benefits of learning;;; layout (minimum one question with appropriate layout
e.g. yes/no or more than two responses or line for written answer – all to be appropriate to Q); [4]

   (iii) method points – interview equal no's; of boys in/not in project; same ages; fair sample idea;
analysis points – compare data; to find % unemployment/eq; AVP; [3]

   (iv) boys get skilled/non manual jobs; so more govt tax; less poverty; social unrest; crime; ref to
improving economy of country; reduce unemployment; AVP;; A gender arguments [2]

2 **(a** **(i)** June and July; [1]

   (ii) October/November – February/March; [1]

(b) better nutrition; Such as more carbohydrates for energy; protein for muscle; become physically fit/eq;
more motivated to help themselves/family/community/eq; more skilled at the work/eq; AVP; [3]

   (ii) accurate description of each activity;;; [3]

   (iii) 1.2 x 50 = 60; 60/60; = 1;
A two marks for consequential error if first line incorrect [3]

   (iv) 6 (days); [1]

(c) **(i)** shading above/in both sets of rocks; [1]

   (ii) removes danger to animals/people; more land to graze; grazing not split up; less risk of
overgrazing; do not need to move animals as often/eq; prevent (more) erosion; ref to more
fertile soil; AVP;; [2]

   (iii) root binding; soil protected/interception; less risk of surface water;
tree (roots) absorb more rainfall; [3]

   (iv) only cut branches; only cut/fell some trees in any year; give time to regrow; AVP; e.g.
replanting [2]

(d) four valid advantages;;; [4]

(e) **(i)** wind not turbulent/reduced windspeed at P/tree blocks/reduces wind/eq; [1]

   (ii) lighting; cooking; work on crafts; heating; TV/radio; AVP;; [2]

(f) both axes labelled (must have m/s); orientation; scale+plots;;
A one error per plot [4]

   (ii) site A increase, fall then increase/eq;
site B fall, increase, fall increase again/eq;
allow A higher than B on Tuesday for 1 mk [2]

   (iii) B; higher wind speeds; more consistent/eq; use of figures such as range/average site A has
one highest day – accept A if justified;; [3]

3 **(a)** 1 planting – same no of seeds; area; time; climate; soil type;
2 harvest – same time; method;
3 record – weigh all beans/no of bags; use log/tally/write down; checked by someone else/eq;
AVP;; and 1 mk for replication idea [max 6]

(b) genes might escape to other species; by pollination; could upset balance of nature; not a local plant
so may not survive; cost of GM; cost of buying new GM seed each year; fear/suspicion of GM crops;