www.dynamicpapers.com

CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the October/November 2014 series

0680 ENVIRONMENTAL MANAGEMENT

0680/42 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.

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 2014 series for most Cambridge IGCSE®, Cambridge International A and AS Level components and some Cambridge O Level components.

® IGCSE is the registered trademark of Cambridge International Examinations.

CAMBRIDGE
International Examinations

www.dynamicpapers.com

1 (a) (i) more jobs; raised standard of living; earn more foreign exchange; government can invest more in infrastructure; [2]

(b) (i) 3000 – 100 = 2900/100 × 100 = 2900%;; [2]

(ii) population growing; so more food needed; not enough jobs; AVP; [2]

(c) (i) to be able to compare three methods / eq.; [1]

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

(iii) the numbers steadily decrease for both villages; decrease is steeper for village B / converse; [2]

(iv) harvesting in rotation at two week intervals is not enough for Piangua to replace themselves / eq.; Piangua can increase in numbers if left for two months; rotation will work if time is longer than two weeks but not longer than 2 months; AVP; [2]

(v) use same methods / sampling plots; collect and measure smaller Piangua; return to Piangua to another site / not near plots in mangrove swamp; carry out for 26 weeks or sixth months for method three; [4]

(vi) mark out harvesting areas across mangrove swamp; harvest each area at an agreed interval (more than two weeks); make sure everyone agrees to the plan; take sample measurements several times a year; prevent other villages harvesting areas; set a quota; [3]

(d) (i) dealers want to make a profit; people will not pay much at market / eq.; plenty more people prepared to collect at this pay; [2]

(ii) insects spread malaria / Dengue / other valid disease; insects become infected by biting infected human; then pass it on; ref. to female mosquitoes; [2]

(e) (i) 21, 7, 99; [1]

(ii) collectors do not measure every one; hope to sell a few just undersize; collectors make mistakes; [2]

(iii) more than one bag increases reliability; [1]

(iv) prevents too many young piangua being collected; allows them to reach maturity / breeding age / eq.; [2]

© Cambridge International Examinations 2014

www.dynamicpapers.com

2 (a) (i) $0.6 \times 2600 / 100 = 15.6$
$25 - 15.6 = 9.4$;; [2]

(ii) ref. to temperature inversion; cold air above warm air; so cannot rise; ref. to air pressure differences; air trapped / cannot escape; pollutants come from industries / vehicles / eq.; [3]

(iii) size / area of boards / tape; time of exposure; same distance off ground; face in the same direction; AVP; [1]

(iv) table drawn; with suitable headings;; data filled in correctly; [4]

(v) 7.5, 4.5; [1]

(vi) 40%; allow e.c.f. from part **(v)** [1]

(vii) reduce number of buses; change to biofuel / cleaner fuel; less cars by any means; tolls / congestion charge / eq.; new / more efficient buses; ref. to catalytic converters; allow cycle lanes / eq.; [3]

(b) (i) 26, 53, 49, 51; [1]

(ii) highest pollution with lowest rainfall / converse; steady rainfall and steady pollution last 9 months; use of figures to support point; [2]

(iii) highest January – March, lowest October – December; [1]

(iv) rainfall clears / cleans the air; so less pollutants inhaled during the day; may be below level needed to cause illness in last 9 months / can be tolerated; use of table figures to support arguments;; [3]

(c) (i) three further questions, such as:
How many times do you get ill in a year?; Which months are you most ill?; Do you or your children get ill more frequently?; Have any adults died of acute respiratory illness?; Has any child died of acute respiratory illness?;
layout; [4]

(ii) use the same questionnaire at regular intervals / specified interval; select sample of population the same way each time; further detail; same number of people; if more / less adults / children ill then pollution is less / more; [2]

AVP = Alternative Valid Point.

[Total: 60]

© Cambridge International Examinations 2014