UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the November 2005 question paper

0453 Development Studies

0453/04   Paper 4

Maximum mark 35

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 initially instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began. Any substantial changes to the mark scheme that arose from these discussions will be recorded in the published *Report on the Examination*.

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 minimum marks in these components needed for various grades were previously published with these mark schemes, but are now instead included in the Report on the Examination for this session.

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

CIE is publishing the mark schemes for the November 2005 question papers for most IGCSE and GCE Advanced Level syllabuses.

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International Examinations

1 (a) (i) Any 2 of:
- bauxite smelter
- pulp and paper mill
- opencast mine/quarry
- extraction of timber
- HEP/electricity generation
- railway

2 @ 1 mark **[2]**

(ii) Ideas such as:
- soil erosion
- run off/loss of soil minerals
- silt deposited in lake
- lake/river polluted
- visual intrusion
- atmospheric pollution
- loss of trees/forest
- destruction of habitat
- impact on food chain etc.

3 @ 1 mark **[3]**

(b) (i) Simple statement = 1 mark
e.g. to find out about the effects of industry in Santa Anatalia (1)

2nd mark for developing the idea
e.g. to find out what the impacts of industry were in Santa Anatalia and
to see which impacts people were most worried about (2) **[2]**

(ii) Simple statement = 1 mark
e.g. choose 50 people/homes at random

2nd mark for a more precise indication of how a random sample could
have been selected
e.g. hand out questionnaires to 50 people randomly approached in the
street; use a random number tables/draw names from a hat to select
homes to which to deliver questionnaires (2) **[2]**

(iii) Simple statement = 1 mark

e.g. use a 1 to 5 scale

2nd mark for a more precise indication of how the 1 to 5 scale works

e.g. each problem is given a score from 1 to 5, those problems about
which people were more concerned were given higher scores (2) **[2]**

(iv) No mark for 'yes' or 'no'. Marks to be allocated for reasoning

Could argue that it is well designed as it:
- is quick/easy to complete
- does not require extended written responses
- collects information about age and gender as well as opinions
- uses simple numerical technique to assess concern/which is easy
- to present/analyse etc.

Could argue that it is badly designed as it:
- asks questions which may offend (e.g. age)
- may be difficult for respondents to understand how the numerical scale works
- uses words/phrases which may be hard to understand
- unsuitable age scale etc.

Candidates can score up to three marks on justification of 'yes' or 'no' or it is possible to score 2 + 1 by giving a balanced response   **[3]**

(v) Ideas such as:
- proximity of homes to the industries/those living close by may have greater concerns
- age of respondent/older people may be more concerned if they feel it is destroying the area where they have lived for many years
- health of respondent/healthy people may be less concerned than those in poor health/suffering asthma
- people with young children who could be at risk may be more concerned than single people
- people who benefit financially (e.g. employees) as a result of the industry may be less concerned than those who do not
- people with strong views about environmental destruction will be more worried than those who are less aware/more educated people are therefore likely to be more worried etc.   **[3]**

2. (a) Levels of response marking

Level 1 (1 to 3 marks)

Simple statements which briefly describe how the research enquiry could be carried out

(e.g. use questionnaires, graph the results, write about the findings, get secondary data, look in newspapers etc.)

N.B. Do not credit simple copy of boxes in sequence of enquiry diagram.

Level 2 (4 to 6 marks)

More developed statements which describe how the enquiry could be carried out

(e.g. ask a sample of the towns population to complete a questionnaire about how the pulp and paper mill effects them, draw bar graphs to show pollution levels in different parts of the lake/draw line graphs to show how levels of air pollution vary over time, test the levels of pollution in the water using testing kits; obtain old and new maps of the area to work out the rates of deforestation caused by the use of the wood in the pulp and paper mill, use newspaper articles about problems caused by the industries, present a report to the local authority etc.)

Level 3 (7 to 9 marks)

A comprehensive account which includes more developed statements (level 2) and covers at least three of the boxes in the sequence of enquiry diagram (e.g. identification of enquiry question/hypotheses/collection of data/ presentation and analysis) **[9]**

(b) The problems which can be credited are likely to be similar for each example and include ideas such as:
- many residents are unlikely to be cooperative/may not answer questions
- many residents may not reveal/do not know answers to all questions
- residents may not trust researchers/be suspicious
- residents may not tell the truth
- there could be hostility from local people
- residents may fear loss of their jobs and therefore not cooperate/residents may be threatened by employers
- the industries involved are unlikely to divulge information/may give biased information
- unlikely to achieve much by use of observation
- secondary data is likely to be limited/unavailable
- pollution of the air/water is difficult to measure without scientific equipment
- information collected about pollution based on questionnaires/interviews is subjective and not always reliable etc.

4 @ 1 mark but be prepared to credit appropriate development **[4]**

(c) 5 @ 1 mark for appropriate suggestions, crediting development
points as appropriate

Ideas such as:
- more restrictive regulations/laws/fines
- screening of industrial buildings to reduce noise/visual
- impact
- tighter monitoring of pollution levels
- insist on replanting of trees/restoration of quarries etc.
- recycling/treatment of toxins/effluent
- installation of more equipment to reduce pollution (e.g.
  desulphurization/scrubbers in chimneys etc.) **[5]**

[15]

[TOTAL 35 MARKS]