

CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

MARK SCHEME FOR the November 2002 question papers

0670 NATURAL ECONOMY

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| 0670/1 | Paper 1 (Written), maximum raw mark 60 |
| 0670/2 | Paper 2 (Written), maximum raw mark 80 |
| 0670/4 | Paper 4 (Alternative to Coursework), maximum raw mark 60 |

These mark schemes are published as an aid to teachers and students, to indicate the requirements of the examination. They show the basis on which Examiners were initially instructed to award marks. They do 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*.

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

CIE is publishing the mark schemes for the November 2002 question papers for most IGCSE and GCE Advanced Subsidiary (AS) Level syllabuses.

0670/1 Natural Economy Paper 1
Final Mark Scheme.

Question 1.

Ai] Coal [1]

Aii] Oil or natural gas [1]

Aiii] $41+26+24$ [1 mark] = 91% [1mark] .

Accept correct energy sources as working; e.g. coal + oil + natural gas = 91% = 2 marks. [2]

Aiv] Likely answers are; fossil fuels will run out [1]

Fossil fuels pollute [1] [2]

Bi] Because the trees will grow again [1]

Bii] Because if fuelwood is used unsustainably it can lead to widespread deforestation, thus reducing supplies. [2]

Biii] Biogas or alcohol or sugar cane or bagasse or dung etc., [1]

C] Accept any sensible idea like; cheap/free

Easily available

No affordable alternative $2 \times 1 =$ [2]

D] Accept any pollution reducing strategy to a maximum of three marks if well developed; or a list of different ones; e.g.

Using renewable alternative energy sources; e.g.....

Restrictions / laws against pollution

Education / incentives etc., etc. [3]

Total [15]

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Question 2.

Ai] Credit any two sensible points e.g. 'mostly in Africa, South America and Asia would get the 2 marks. Also, credit reference to positioning of areas relative to the equator and the tropics. [2]

Aii] Expect things like; 'all malaria areas are between the 21 degree isotherms' [1 mark]. Therefore, presumably, the malarial parasite doesn't like temperatures below this [1mark] [2]

Bi] A disease transmitted by water[1] or that is caught from contaminated water[1] [2]

Bii] e.g. Malaria; mosquito carries small parasite [1]

Mosquito bites person with malaria / picks up parasite [1]

Passes it on when it bites someone else [1]

Or Bilharzia; worm lives in humans [1]

Eggs released into water via human faeces [1]

Larvae hatch and find a snail [1]

Worm penetrates through human skin [1] $3 \times 1 = [3]$

Biii] Explanation is not needed here; a simple list could get three marks e.g. better medical care [vaccination etc]

More water taps / clean water supplies / boil water before drinking

Education/ awareness, mosquito nets. $3 \times 1 = [3]$

C] Mark this entirely on the quality of the points made; they can choose any of the methods from biii]. E.g.' more water taps; where the water has been treated [1] people will not pick up so many diseases [1] thus saving on expensive medical care [1]

[3]

Total [15]

Question 3

Ai] 14 degrees centigrade. [1]

Aii] Allow any three sensible points:

Moving away from the equator;

January temperature falls [1]

July temperature rises [1]

Annual rainfall decreases [1]

Number of dry months increases [1] etc

3 x 1 = [3]

aiii] A = Equatorial B = Desert/ hot desert 2 x 1 = [2]

b] Most likely response is D; very low rainfall / long dry season, therefore farmers may need to irrigate land / cope with dry season. Must be reference to farming problem for the two marks [2]

ci] e.g. more carbon dioxide [1] and less oxygen [1], because trees take in carbon dioxide and give out oxygen [1]. Must be two changes in atmosphere for the 3 marks [3]

cii] Increase in global temperatures / global warming / greenhouse effect [1]

d] Because the problem of atmospheric pollution is international[1], as pollution generated in one country may be carried to others [1] e.g. acid rain [1] . Not much point in one country reducing pollution if others don't [1] [3]

Total [15]

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Question 4.

- Ai] Africa or South America [1]
Aii] Australia or New Zealand [1]
Aiii] Most [but not all] in the Northern Hemisphere [1] Largely outside the tropics [1]. Accept accurate reference to named areas. [2]

Bi] Life expectancy; the average number of years that a person can expect to live

Infant mortality; the numbers [per thousand] who die before reaching the age of one year.

2 × 1 = [2]

bii] Because birth rates are higher than death rates [1]. Death rates have fallen while birth rates remain high [1]; then credit any reasons for falling death rates and continuing high birth rates. [3]

biii] Population may grow more rapidly than food supply can be expanded [1]. Some areas might become overcrowded [1]. Overuse of resources [1] disease spreads more easily [1] etc.

[3]

c] Credit any sensible ideas , giving credit for examples[e.g. China]. Remember that governments may try to encourage growth. [e.g. Iran]

[3]

Question total [15]
Total for paper [60]