General Certificate of Education
Ordinary Level

Confidential

Mark Scheme

UNIVERSITY *of* CAMBRIDGE
International Examinations

QUESTION PAPER PREPARATION SECTION

PROVISIONAL MARK SCHEME SHEET

Subject No. 0460/01 / 2217/01   Nov 2006

The features of the marking scheme

Each question carries 25 marks. Candidates cannot earn above the maximum marks available within each sub section.

The marking scheme attempts to give guidance about the requirements of each answer and lists a number of responses which will earn marks along with the general principles to be applied when marking each question. It should be noted that candidates can earn marks if their answers are phrased differently provided they convey the same meaning as those in the mark scheme. THE CANDIDATES DO NOT NEED TO USE THE SAME WORDING TO EARN MARKS.

The notation `etc` at the end of an answer in the mark scheme signifies that there may well be other correct responses or examples that can be given credit. Providing the statement is true, relevant to the question asked and not repetition of a previous point made credit should be given.

A point made within one sub-section which is an answer to the question set in a different sub-section should not be given credit as each sub-section asks different questions which require independent answers.

The mark scheme uses semi colons (;) to separate marks and diagonals to separate alternative answers.

During coordination the mark scheme is modified to add points agreed after discussion or to delete any points not allowed. All examiners should ensure that their modified schemes is fully up-to-date before marking begins.

Marking mechanics.

Point marking is used throughout the paper, although marks are available in specified questions for development of appropriate points. Ticks should be used to clearly indicate the wording on a script where a mark has been allowed. Where a development point has been allowed the letter `D` should be placed adjacent to the tick. The number of ticks should always be equal to the total number of marks awarded, the mark for each sub-section should be added up and placed in the margin at the end of the sub-section. The total mark for the entire question should be added and transferred to the front of the script.

Where a candidate makes a point which is not quite sufficient for credit an upturned `V` insert symbol should be used. If after careful consideration a mark is awarded which gives `benefit of doubt` to the candidate the letter `J` should be placed adjacent to the tick (ie the candidate has `just` achieved the mark).

All answers should have signs of having been assessed by the examiner. Crosses are acceptable to signify wrong answers and a red line accompanied by the letters `I/R` should be used to indicate those which are irrelevant.

PROVISIONAL MARK SCHEME SHEET

Subject No. 0460/01 / 2217/01   November 2006

Question 1

a) i)   Mozambique

                    1 mark   (1)

ii)   22 per 1000 (1 mark);
        Evidence that candidate knows that the figure is calculated by
        subtracting DR from BR (2nd mark)

                    2 @ 1 mark   (2)

iii)   A. Sudan

        B. Botswana

                    2 @ 1 mark   (2)

iv)   Ideally answer should be comparative, however be prepared to link
      points from separate accounts. Ideas such as:
         better quality health care in USA;
         more likely to be preventative measures in USA/vaccination;
         better diet/food supply in USA/less likelihood of starvation;
         better sanitation in USA;
         AIDS is more of a problem in Botswana

                    3 @ 1 mark or development   (3)

b)   i)   Credit reasons such as:
        improved access to contraceptives;
        education about birth control;
        education about adverse impacts of large families;
        mechanization of agriculture;
        compulsary schooling;
        pension schemes set up;
        reduction in IMR/no need to have so many children;
        government policy;
        secularization/religion less of a control over decision making;
        changing attitudes towards women;
        women wanting a career before children;
        increasing desire for material possessions   etc

              5 @ 1 mark or development   (5)

ii)   Credit references **only** to natural growth rates not BR and/or DR seen
in isolation. Credit development for reference to statistics. Ideas such as:
        generally small increase between 1900 and 1950;
        less than 3 or 4 per 1000;
        fluctuated between 1900 and 1950;
        some years between 1900 and 1950 saw decrease/1905/1920
            /1935;
        much more rapid increase from 1950 onwards;
        up to 30 per 1000;
        rate of increase decreased especially from 1980 onwards;
        to about 14 per 1000   etc

              5 @ 1 mark or development   (5)

c) Accept a wide variety of strategies to increase and/or decrease growth rates. Candidates should refer to at least one example which they have studied, with **one** example mark reserved but two possible if two good contrasting examples are used.

Expect reference to ideas such as:

financial incentives ;

legislation;

enforcement strategies

better hospitals/clinics/health care/more doctors;

sex education within schools;

distribution of contraceptives;

pension schemes etc

7 @ 1 mark or development of specific details in relation to selected countries.   (7)

TOTAL   25 marks

PROVISIONAL MARK SCHEME SHEET

Subject No. 0460/01 / 2217/01 November 2006

Question 2

   b) i) Settlement which has grown up around/spread out from a
            nucleus/central point.

<div align="center">

1 mark   (1)

</div>

   ii)   Ideas such as:
           Steep slope preventing expansion to east;
           Marshy land preventing expansion to west;
           Growth along main road etc
           It is long and thin = 1

<div align="center">

2 @ 1 mark   (2)

</div>

   iii)   Ideas such as:
           spread out/1 to 3 km away from each other;
           in lines/linear pattern;
           north – south;
           on/below 30 metres;
           both sides/east and west of river;
           at least a mile away from River Ancholme;
           closer together east of river
           along roads   etc

<div align="center">

3 @ 1 mark or development   (3)

</div>

   iv) Reasoning such as:
           spread out to serve farming communities;
            in lines/on roads for access/communications;
           away from river to avoid flooding;
            below 30 metres for shelter;
            water supply nearby etc

<div align="center">

4 @ 1 mark or development   (4)

</div>

c) i) Types of services such as:
   retail or example eg specialist shops/department stores;
   leisure or example eg cinema/theatre;
   educational or example eg school/university;
   medical or example eg hospital   etc

   3 @ 1 mark   (3)

ii)   Candidates need to describe and suggest reasons for the
      differences in the spheres of influence. Ideally answers should
      be comparative but be prepared to link statements from discrete
      accounts. MAXIMUM 3 for each of description/explanation.
      Ideas such as:
   King's Lynn has a larger sphere of influence;
   As the population of King's Lynn is larger;
   It will have higher order services;
   Holbeach has a more regular shaped sphere of influnce;
   King's Lynn's position close to the coast affects shape;
   Impact of competing market towns   etc

   5 @ 1 mark or development   (5)

d) Candidates need to refer to an example they have studied, for which **one mark is reserved** and should be awarded only if the correct function is identified. They can refer to any urban settlement in an LEDC or MEDC and any function can be identified. Credit reasons for the growth of the town, and specific references to reasons for the function.

Eg Liverpool is a port:
located on estuary of Mersey river;
deep water anchorage;
sheltered anchorage;
space for expansion of warehouse facilities;
opposite side of Atlantic to USA encouraged trade;
hinterland of industrial towns/cotton manufacturing;
well developed road/rail communications;
impact of Manchester Ship Canal   etc

7 @ 1 mark or development   (7)

TOTAL   25 marks

PROVISIONAL MARK SCHEME SHEET

Subject No. 0460/01 / 2217/01 November 2006

Question 3

e) i) Screes
                     1 mark   (1)

ii) **Weathering** involves breakdown of rock 'in situ'/rock is broken
     down physically or chemically as a result of atmospheric conditions.
     Erosion involves a moving agent/such as river/ice/waves/wind

                     2 @ 1 mark   (2)

iii) River erosion processes:
              corrasion – bed and banks worn away by materials carried
               by river;
              corrosion – chemical impact of river water on rocks;
              hydraulic action – weight/force of water dislodging
                  unconsolidated materials.

1 mark only for stating names of all three processes without ant
explanation.
                     3 @ 1 mark   (3)

b) i) Features should ideally be evident from photographic evidence
though some observations may be 'by implication'.. Ideas such
as:
bare rock surfaces;
rocks with joints;
lichens growing on rocks;
high land   etc

3 @ 1 mark   (3)

ii)   Candidates should describe the process of freeze-thaw
weathering. Credit written answers or information included as
part of labelled diagrams (do not double credit here). Expect
ideas such as:
freeze thaw weathering;
rain collects in cracks/joints;
temperature falls;
water freezes – expands;
stress on cracks/joints;
joints opened;
melting;
more water enters the joints/repetition   etc

4 @ 1 mark or development

NB Accept reference to processes involved in weathering of
Limestone.   (4)

iii)   Ideally this answer should be comparative, however accept ideas
expressed in two discrete accounts. Ideas such as:
tropical regions have higher temperatures;
and more rainfall;
which encourages more chemical weathering;
doubles with every rise of 10C;
encourages more biological weathering;
as there is far more plant growth;
more likelihood of tree roots in cracks;
more rapid release of CO2 from decay of plants   etc

5 @ 1 mark or development   (5)

c) Candidates should explain by reference to both the advantages and disadvantages of the scheme. Credit up to 6 MAXIMUM for advantages/disadvantages.

Expect advantages relating to issues such as:
Generation of electricity;
which may attract industrial development;
provision of water supplies;
creation of employment during construction phase;
potential for development of tourism/leisure facilities;
multiplier effect   etc

Expect disadvantages relating to issues such as:
Flooding of farmland;
Loss of natural river/valley;
Impact on species;
Loss of recreational area;
Visual impact   etc

7 @ 1 mark or development   (7)

TOTAL   25 marks

PROVISIONAL MARK SCHEME SHEET

Subject No. 0460/01 / 2217/01   Nov 2006

Question 4

a) i) 3C

<div align="center">

1 mark   (1)

</div>

ii)   Total amount is 1811mm (accept 1760 to 1860 mm);
      2nd mark for indication of need to add monthly figures

<div align="center">

2 @ 1 mark   (2)

</div>

iii) Characteristics should ideally be evident from Fig. 6a
      though some observations may be 'by implication'. Ideas such
      as:
      distinct layers;
      emergents;
      canopy;
      shrub layer;
      buttress roots;
      lianas/vines;
      adundant vegetation/thick forest;
      many different species/great variety etc

<div align="center">

3 @ 1 mark   (3)

</div>

iv) Candidates should explain how characteristics of natural
vegetation and climate are interlinked, rather than simply describing
those characteristics. Credit reference to any vegetation
characteristics not just those shown in Fig. 6a. Expect ideas such as:
      abundant vegetation due to hot/wet climate;
      evergreen due to lack of a cold season/limited seasonal change;
      drip tip leaves to repel heavy rain;
      emergents reach for sun;
      variety of species as growing conditions are ideal/hot/wet etc

<div align="center">

4 @ 1 mark or development   (4)

</div>

b) i) Evidence such as;

they have policies/practices which protect the global
environment;
eg they do not use former rainforest land for their beef;
their beef suppliers use well established cattle ranches;
eg they use rycycled paper etc

3 @ 1 mark or development   (3)

ii) Candidates should explain why there is concern over rainforest
destruction. Whilst there are various angles expect reference to ideas
such as:

loss of species;
impact on food chains/ecosystems;
possible future cures for disease;
increased run off;
soil erosion;
flooding;
pollution of rivers;
impact on tribes/cultures;
impact on oxygen/carbon dioxide balance;
global warming etc

5 @ 1 mark or development   (5)

c) Ideally this answer should be comparative, however be prepared to
link ideas from two discrete accounts. Expect reference to factors such
as:

latitude;
influence of overhead sun;
distance from oceans;
presence/absence of moderating influence of water body
wind direction/trade winds/doldrums;
lack of/presence of evaporation;
presence/absence of cloud cover;
air pressure etc

No MAXIMUM on any one factor, providing adequate development
of points.

7 @ 1 mark or development   (7)

TOTAL 25 marks

PROVISIONAL MARK SCHEME SHEET

Subject No. 0460/01 / 2217/01 November 2006

Question 5

f) i) 86/87%

> 1 mark (1)

ii) Ideas such as:
> many are employed in subsistence agriculture/grow there own food;
> as a result of large rural poulation;
> there is little manufacturing/industry/factories;
> as a result of lack of technology;
> service provision is limited;
> as a result of lack of money etc

> 3 @ 1 mark or development (3)

iii) A Primary
  B Tertiary
  C Secondary

All 3 correct = marks, 1 or 2 correct = 1 mark (2)

iv) Candidates should give reasons for their views – MAX 1 for simple description of likely changes. Expect ideas such as:
> Increased proportion of secondary/tertiary/decrease proportion of primary (MAX 1);
> further decline of plantations/growth of other forms of commercial agriculture;
> greater use of technology in farming;
> movement to the cities;
> growth of new manufacturing/industry/factories;
>> as a result of development of technology;
>> increase in service provision/schools/hospitals;
>> further tourist development etc

> 4 @ 1 mark or development (4)

b) i)   MAX 2 marks for description of changes, full marks can only
         be obtained by use of supporting examples and figures. Also
         MAX 2 for figures alone. Ideas such as:
    decrease in export of primary products;
    eg farm products down from 66 to 4%;
    increase in export of secondary products;
    eg electronics up from 3 to 30%

                 3 @ 1 mark   (3)

ii)   Ideas such as:
    cheap labour supply/low wages/can make goods cheaply;
    plenty of available workers/creation of jobs;
    potential workers are skilled/educated;
    large potential global market/high demand for electrical
         products;
    increased reputation for high quality;
    don`t require large amounts of raw materials/fuel;
    investment by multinational companies;
    production for export/foreign exchange   etc

                 3 @ 1 mark or development   (5)

c) Candidates should describe the impacts of economic growth on local people, positive and negative impacts are acceptable with no maximum mark on either. Ideas such as:

  more people in employment;
  higher/more regular wages;
  possibility of exploitation/low wages/poor working conditions;
  improvements in infrastructure;
  increased congestion;
  increased atmospheric/water/noise pollution;
  rising standard of living or specifics (eg housing/sanitation);
  improvement in public services or specifics (eg health care/education) ;
  greater demand for products of local industry;
  multiplier effect;
  rural to urban migration   etc

No MAXIMUM on any one factor, providing adequate development of points.

<div align="right">7 @ 1 mark or development   (7)</div>

TOTAL   25 marks

PROVISIONAL MARK SCHEME SHEET

Subject No. 0460/01 / 2217/01 November 2006

Question 6

g) i)   14.5C

<div align="center">1 mark   (1)</div>

ii)   Ideas such as:
temperatures have increased;
from 14C to 14.4C/by 0.4C/but fluctuated;

<div align="center">2 @ 1 mark   (2)</div>

iii)   There are three distinct stages of the explanation here:
heat from some passes through atmosphere;
bounces back from surface;
it is trapped by layer of gases

<div align="center">3 @ 1 mark   (3)</div>

iv) Ideas such as:
Human activities produce many of the gases which trap the heat;
eg carbon dioxide from burning fossil fuels/coal/oil;
in vehicles/power stations/factories (MAX2);
CFCs from fridges/packaging aerosols (MAX 2);
Methane from agriculture/cattle grazing/paddy fields
Deforestation reduces use of carbon dioxide by trees etc

<div align="center">4 @ 1 mark or development   (4)</div>

h) i) Ideas such as:
rising sea level;
threat of high/'king' tides;
all land is below 4.5 metres above sea level/low land;
the country consists of a series of islands/atolls   etc

3 @ 1 mark   (3)

iii)   Expect reference to ideas such as:
Tuvalu may be flooded but USA/Australia will not;
lives of people in Tuvalu are threatened;
long with their property/or examples;
and their livelihoods/or examples;
Australia/USA are partially responsible for the emissions;
as their economies depend on industry/transport etc

5 @ 1 mark or development   (5)

c) Candidates are likely to choose an area threatened by tourism, agriculture, mining or manufacturing industry. However be prepared to accept reference to any human activity which threatens the natural environment, in any country, and at any scale. Candidates need to refer to an example they have studied, for which **one mark is reserved.**

Eg opencast mining of asbestos at Thetford Mines in Quebec, Canada:
Visual impact/destruction of landscape;
Damage to habitats;
Impacts on food chain/ecosystem;
Noise pollution from mine;
Dust/atmospheric pollution;
Threat to species;
Increased traffic levels create noise/danger for wildlife;
Pollution of water courses;
Impact on aquatic life   etc

No MAXIMUM on any one aspect, providing adequate development of points.

7 @ 1 mark or development   (7)

TOTAL   25 marks