UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2007 question paper

0460 GEOGRAPHY

0460/01   Paper 1, maximum raw mark 75

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.

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 October/November 2007 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

The features of the mark scheme

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

The mark 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.

Marking mechanics.

Point marking is used for sections (a) and (b) of each question, 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 (i.e. the candidate has 'just' achieved the mark).

Levels of response marking is used for section (c) of each question. Thus it is the quality of response which determines which level an answer is achieved rather than the quantity of statements contained within it. However once assigned to a level the mark achieved within that level is determined by the number of points made.

Levels 1 and 2 are distinguished by whether statements are simple (Level 1) or developed/elaborated (Level 2). A candidate can immediately enter Level 2 by making developed points without making any Level 1 statements. In order to achieve Level 3 a candidate must have already reached the top end of Level 2 – in addition his/her answer should have a clear example (for 6 marks), and if the answer is place specific as well (7 marks).

Where statements are assigned levels by the examiner this should be indicated by the use of L1, L2 and L3 next to the statements. A summary of the overall level and mark awarded should be written at the end of the answer. Ticks should not be used on answers which are marked using levels of response marking.

Summary:
Level 1 (1 to 4 marks):
1 simple statement (1 mark)
2 simple statements (2 marks)
3 simple statements (3 marks)
4 or more simple statements (4 marks)

Level 2 (3 to 5 marks):
1 developed statement (3 marks)
2 developed statements or 1 developed statement + 2 or more simple statements (4 marks)
3 or more developed statements or 2 developed statements + 2 or more simple statements (5 marks)

*Level 3 (*6 or 7 marks)
3 or more developed statements (or 2 developed statements + 2 or more simple statements) + named example (6 marks)
3 or more developed statements (or 2 developed statements + 2 or more simple statements) with at least one piece of place specific detail + named example (7 marks)

All answers, whether marked by point marking or levels, 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.

1 (a) (i) A person who migrates (in)to a country/comes into a country/place/area fr
one. 1 mark

(ii) A. New Zealand/rest of Africa/rest of Europe/and former
USSR/South Africa

B South East Asia/UK/Ireland 2 @ 1 mark [2]

(iii) Candidates can choose any area – accept generic reasons (any
pulls/pushes) and those specific to chosen area such as:
for work opportunities/better pay;
to improve quality of life/standard of living;
better provision of doctors/hospitals/healthcare etc.;
better chance of education for children;
to escape religious/political persecution/racial discrimination;
benefits from government;
better food supply/less chance of starvation;
natural disasters or example;
crime or example;
strong/growing economy;
Specified weather/climatic reasons;
war;
infrastructure/electricity/water/sanitation/transport;
family/friends;
proximity/ease of journey (e.g. New Zealand to Australia) etc. 3 @ 1 mark [3]

(iv) Accept any combination of positive and negative impacts of migration on the destination
cities.

Expect positive impacts relating to issues such as:
augmentation of skilled labour supply/e.g. foreign doctors;
may provide pool of cheap/unskilled labour/job vacancies filled;
multi-cultural society/cultural understanding;
provision of specialist amenities/e.g. restaurants/takeaways;
increased income from taxation etc.

Expect negative impacts relating to issues such as:
racial conflict;
pressure on employment;
pressure on housing/price of housing (or land) increases/growth of squatter settlements;
pressure on infrastructure/water/electricity/transport network etc.;
pressure on education/healthcare;
any valid type of pollution (if specified);
pressure on farmland resulting from urban expansion;
crime increase (if developed) etc. 4 @ 1 mark [4]

(b) (i) Ideas such as:
few forms of communication/areas are isolated;
steep terrain/building of settlements;
arid areas/lack of adequate water supply;
few areas where resources appear to be extracted/lack of employment;
thin/lack of soil cover/unable to grow crops/graze animals/produce food;
lack of woodland/forest/firewood/energy supplies/building materials.

$\qquad$ 3 @ 1 mark $\qquad$ [3]

(ii) Ideas such as:
around an oasis in a desert;
around rivers where they flow through arid areas;
mining settlement/production of oil;
growth of tourist resorts;
market towns;
route centres/junctions of major highways/gap towns;
towns of strategic importance;
new towns/government policy (specified);
dry area in otherwise marshy land;
valley in otherwise highland area etc.

$\qquad$ 5 @ 1 mark or development (or named examples) $\qquad$ [5]

(c) Levels marking

Level 1 (1–4 marks)
Statements including limited detail explaining high rates of population growth. (e.g. to send children out to work, because there is no contraception, because of their traditions, birth rate higher than death rate etc.)

Level 2 (3–5 marks)
More developed statements explaining high rates of population growth. (e.g. to send children out to work to earn money working in the towns, because contraception is not easily available in rural areas, because men are considered of higher status if they have more children etc.)

Level 3 (6 or 7 marks)
Uses named example at any scale (e.g. Swaziland). Comprehensive and accurate statements including some place specific reference. (e.g. to send children out to work to earn money working in the towns like Mbabane, because contraception is not easily available in rural areas, because men are considered of higher status if they have more children, polygamy is allowed – even the king has many wives etc.) [7]

[Total: 25]

2 (a) (i) Housing which is owned by the people who live in it.   1 mark

   (ii) A.   Brickfields

         B.   St. Peter's   2 @ 1 mark   [2]

   (b) (i) Ideas such as:
            detached houses;
            modern houses;
            off street parking/garages/drives;
            large houses/expensive houses/plenty of space/open space/gardens;
            cul-de-sacs;
            low street density;
            varied housing designs etc.   2 @ 1 mark   [2]

       (ii) Advantages such as:
            modern design;
            contain all amenities/electricity/water;
            brick built or implication;
            space to park cars;
            availability of local services or example(s);
            relatively low cost * ;
            gardens/space/close to open space/play areas;
            no air pollution as there are no nearby factories;
            close to workplaces in urban fringe;
            good public transport access/main road access to CBD etc.

            Disadvantages such as:
            High cost of rent/to buy * (only credit once);
            Many deprived families living there or implication;
            Close proximity to neighbours/noise implication;
            No off-street parking;
            Crowded houses;
            High cost of getting to workplaces/shops in CBD/inner city;
            Crime rates high (if developed) etc.
                                2 + 2 marks on each of advantages/disadvantages   [4]

      (iii) Ideas such as:
            straight streets;
            gridiron pattern;
            high street density;
            narrow streets;
            terraced housing/joined together;
            old/victorian housing;
            front doors adjacent to street/no front gardens/no drives;
            brick built;
            low cost houses
            identically designed houses;
            houses with chimneys etc.

            MAX 3 marks on each of street layout/housing characteristics

                                                                   4 @ 1mark   [4]

    (iv) Ideas such as:
        older houses add character/retain culture/image;
        old houses are often large/well constructed;
        reduce idea of 'dead heart';
        convenient residential location close to workplaces/CBD
        social advantages of improved housing rather than flats
        people have lived there for many years;
        cannot afford to move;
        community spirit;
        area has convenient corner shops/pubs etc.
        cheaper option for local authority;
        to restrict outward expansion;
        disruption caused by demolition;
        problems caused by new land uses etc.   5 @ 1 mark   **[5]**

(c) Levels marking

    Level 1 (1–4 marks)
    Statements including limited detail on problems likely to occur in rural-urban fringe (e.g. traffic congestion, loss of farmland, atmospheric pollution, growth of squatter settlements).

    Level 2 (3–5 marks)
    More developed statements on problems likely to occur in rural-urban fringe (e.g. traffic congestion as many people who live in new developments commute to work in CBD, loss of farmland due to new housing developments/road construction, atmospheric pollution from increased traffic, growth of squatter settlements where disease spreads rapidly etc.)

    Level 3 (6 or 7 marks)
    Uses named example (e.g. Nottingham).
    Comprehensive and accurate statements including some place specific reference (e.g. traffic congestion on radial roads into city as many people who live in villages like Burton Joyce commute to work in the city, loss of farmland around Papplewick village due to new housing developments, atmospheric pollution from increased traffic along A60 etc.)   **[7]**

[Total: 25]

3 (a) (i) North East   1 mark

  (ii) X   (Sand) spit

     Y   (Natural) arch   2 @ 1 mark   [2]

  (iii) Ideas such as:
     There are hard/soft rocks (or examples) outcropping/rocks of different resistance;
     rocks at right angles to coast;
     discordant coastline;
     bays formed in soft rocks/Headlands hard rocks;
     differential erosion occurs;
     soft rocks worn more rapidly/hard rocks worn less rapidly etc.   3 @ 1 mark   [3]

  (iv) Ideas such as:
     onshore winds blow;
     wind picks up/blows/carries particles of sand;
     from beaches/estuaries;
     particularly at low tide;
     deposited when wind speed drops;
     initially deposited around an obstruction/stone/plant;
     gradual accumulation;
     changes in wind direction change shape of dunes etc.   4 @ 1 mark   [4]

(b) (i) Ideas such as:
     7–9 km in length;
     oriented SSW to NNE (accept SW/NE);
     formed of shingle and pebbles;
     almost straight/slight curve;
     stretching between sea and lagoon (freshwater lake)/barrier between fresh and salt
     water.   3 @ 1 mark   [3]

  (ii) Ideas such as:
     longshore drift occurring South – North (SW-NE);
     swash moves materials at oblique angle;
     backwash at right angle;
     materials move in zig-zag fashion;
     causes sand bar to gradually extend further across former bay;
     change of shape of coastline;
     eventually extends all way across/increases in length;
     blocks off Start stream's route to sea;
     formation of lagoon;
     sedimentation reduces size of lagoon;
     growth of salt marsh vegetation etc.   5 @ 1 mark   [5]

(c) Levels marking

Level 1 (1–4 marks)
Statements including limited detail describing opportunities for people who live in coastal areas (e.g. fishing, tourism, ports etc.)

Level 2 (3–5 marks)
More developed statements describing opportunities for people who live in coastal areas (e.g. ports can be set up and people make a living from inshore/deep sea fishing, tourism industry can be established giving jobs in hotels, ports grow up and industries will be attracted there to use the raw materials imported/export finished products.)

Level 3 (6 or 7 marks)
Uses named example (e.g. Californian coast). Comprehensive and accurate statements including some place specific reference (e.g. ports like Monterrey have grown up and people make a living from inshore/deep sea fishing, tourism industry has been established in San Francisco giving jobs in the restaurants along the Old Fisherman's Wharf, Oakland is a major port dealing with container traffic from Japan, Hong Kong and China.) [7]

[Total: 25]

4 (a) (i) Louisiana   1 mark   [1]

(ii) Mississippi/Alabama/Louisiana   2 @ 1 mark   [2]

(iii) Ideas such as:
flooding of/damage to roads/highways/roads blocked by trees;
damage to port installations/harbours;
bridges destroyed;
no electricity for railways/railway damaged;
airports closed etc.   3 @ 1 mark   [3]

(iv) Ideas such as:
to prevent/fear of deaths/injury;
from flying debris/falling trees;
and from floodwaters/drowning;
and afterwards from standing water/sewage contamination/water borne disease;
difficulty of providing food supplies if they stayed in city;
unsafe to drink water supplies;
homes destroyed/inhabitable/little shelter available;
loss of energy supplies etc.

                                                            4 @ 1 mark   [4]

(b) (i) Ideas such as:

the area provides almost 20% (Loiusiana 16.1%) of The USAs oil/it is an importa
producing area;
may force up prices of oil/gasoline/petrol;
damage to rigs and production platforms;
storage facilities on land may be damaged;
damage to service bases;
loss of electricity prevents pumping along pipelines;
pipes/refineries damaged/production halted;
need to import more oil/US oil supplies reduced etc.   3 @ 1 mark   [3]

(ii) Ideas such as in MEDCs:
buildings are likely to be stronger;
therefore there is likely to be less destruction;
they are more likely to have finances to be able to rebuild/insurance cover;
and expertise/technology/equipment;
and not have to be so dependent on emergency international aid;
prediction/warning systems/monitoring more likely to be in place;
emergency services better prepared;
drills/planning for disaster/prepared/educated re. protection etc.
                                                                    5 @ 1 mark   [5]

(c) Levels marking

Level 1 (1–4 marks)
Statements including limited detail describing causes and/or effects impacts of a volcanic eruption, earthquake or drought (e.g. plates move, people killed, housing destroyed, roads and railways damaged etc.)

Level 2 (3–5 marks)
More developed statements describing causes and/or effects impacts of a volcanic eruption, earthquake or drought (e.g. plates converge and subduction occurs, people killed by hot lava/suffocation by toxic fumes, 61 deaths, housing buried by lava/layers of dust, communications disrupted by lava covering roads/railways, devastation of lumbering industry by destruction of forests etc.)

Level 3 (6–7 marks)
Uses named example (e.g. Mt St Helens volcanic eruption). Comprehensive and accurate statements including some place specific reference (e.g. Convergence of North American and Juan de Fuca plates, 61 deaths/suffocation by toxic fumes , logging camps destroyed, communications disrupted by floodwaters washing away roads/railway bridges, loss of fish in a hatchery on Toutle River etc.)   [7]

                                                                    [Total: 25]

5 (a) (i) North America/Europe/Australasia/Oceania   1 mark

    (ii) Ideas such as;
mainly in 'south'/south of Tropic of Cancer;
around Equator/between tropics;
Africa/southern Asia/South America   2 @ 1 mark   [2]

    (iii) A. Ideas such as:
drought;
flooding;
pests/crop or animal disease;
hurricanes/cyclones/typhoons;
infertile soils;
soil erosion by wind;
mountains/steep land;
volcanoes/earthquakes etc.

                                                       3 @ 1 mark   [3]

        B. Ideas such as:
poor farming practices;
overgrazing;
exhaustion of soils/overcultivation;
wars/conflicts/political unrest destroys crops/takes away farm workers;
lack of investment in irrigation/fertilizers;
lack of agricultural technology;
production of non food crops/crops for export/cash crops;
concentration on secondary/tertiary sector/investment in urban areas not rural areas;
inflation/food prices high;
small plots of land/fragmentation/overpopulation/rapid population growth;
cannot afford to import crops etc.   4 @ 1 mark   [4]

  (b) (i) Outputs such as:
milk/blood;
manure;
crops;
goats/meat;
skins/fleeces.   3 @ 1 mark   [3]

    (ii) Ideas such as:
more food/milk;
thus in better health/less malnutrition/starvation;
and can therefore work harder;
greater surplus to sell;
greater income for family;
money for education of children;
access to qualifications/better job in future;
able to invest money in farm machinery;
manure helps crops to grow/for fuel/building blocks;
become independent of aid/provide for themselves etc.
                                             5 @ 1 mark or development   [5]

(c) Levels marking

Level 1 (1–4 marks)
Statements including limited describing a farming system. (e.g. soil, harvesting, cere crops)

Level 2 (3-5 marks)
More developed statements describing the chosen farming system. (e.g. deep, fertile soils, harvesting using combine harvester, cereal crops exported for bread making)

WITH NO CLEAR EXAMPLE OF A SPECIFIC FARMING SYSTEM = MAX L2 (5)

e.g. candidate just states 'large scale commercial farming' or 'small scale, subsistence farming'.

Level 3 (6 or 7 marks)
Uses named example (e.g. large scale cereal growing in Canadian Prairies). Comprehensive and accurate statements including correct reference to a named area, (e.g. wheat farming in the Canadian Prairies – deep, fertile soils, harvesting using combine harvester, cereal crops exported for bread making). [7]

[Total: 25]

6 (a) (i) Katse/Mohale 1 mark [1]

 (ii) South of Lesotho;
 west of Tsoelike Dam;
 south of Mohale Dam;
 close to/NW of Ntoahae Dam;
 on Senqunyane River;
 near to/on a tributary of the Senqu/Orange River etc. 2 @ 1 mark [2]

 (iii) Reasons such as:
 growth of industry;
 population growth/increased immigration;
 use of irrigation/water for commercial farming;
 developing supply infrastructure;
 growth of tourism etc. 3 @ 1 mark [3]

 (iv) Reasons such as:
 small population size/small domestic demand/little industry;
 high rainfall;
 due to mountain location;
 lots of rivers/reservoirs/dams/water sources;
 presence of water bearing rocks/aquifers;
 low temperatures/low evaporation rates etc. 4 @ 1 mark [4]

(b) (i) Advantages such as:-
it is renewable;
does not pollute (atmosphere)/cleaner than other forms of energy;
or produce solid waste;
low production/running costs;
will preserve supplies of fossil fuels;
does not contribute to global warming etc.   3 @ 1 mark   [3]

(ii) Positive effects such as:
income from sale of water/strengthen economy;
implication of having more income – e.g. investment in schools/hospitals etc.
provides work;
in construction/maintenance etc.;
multi-purpose;
fishing in lake;
dam may attract tourists;
electricity supplies/provide their energy;
which may attract manufacturing industry;
foreign investment attracted;
infrastructural development e.g. roads etc.;

Negative effects such as:
loss of land/no land left to grow crops/graze cattle;
increasing dependence on South Africa;
visual impact of dams;
loss of ecosystems/habitats;
relocation of settlements;
still water – malaria/bilharzia threat etc.
                          5 @ 1 mark or development   [5]

NB MAX of 3 on each of positive and negative effects.

(c) Levels marking

Level 1 (1–4 marks)
Statements including limited detail describing causes and effects of air or water pollution (e.g. kills people, makes it hard to breath, factory smoke etc.)

Level 2 (3–5 marks)
More developed statements describing causes and effects of air or water pollution (e.g. increased rates of lung cancer, asthmatics have difficulty breathing, factories producing smoke by burning fossil fuels etc.)

Level 3 (6 or 7 marks)
Uses named example (e.g. air pollution in Cubatao in Sao Paulo State, Brazil). Comprehensive and accurate statements including some place specific reference (e.g. Fumes from Latin America's biggest petrochemical complex; fumes from industries such as a fertiliser factory/a cement works/there are about 30 major industrial facilities in the vicinity; 473 tons a day of carbon monoxide; 182 tons a day of sulphur; 148 tons of polluted dust and particles; 41 tons of nitrogen oxide; the infant mortality rate is significantly higher than anywhere else in the country; about 8 per cent of all children born in the area suffer from abnormalities such as spinal problems and missing bones; 44% of the Vila Parisi population have some kind of lung disease; no local smoke control regulations; Air pollution, adjacent to a fertilizer plant, has devastated tree growth; resulting in severe erosion and flooding in the barrio of Villa Parisi.)   [7]

[Total: 25]