CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2

0460 GEOGRAPHY

0460/12 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, 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 2013 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

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The features of the marking scheme

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

The marking scheme attempts to give guidance about the requirem number of responses, which will earn marks along with the general marking each question.

It should be noted that candidates can earn marks if their answers 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.

Levels of response marking is used for section **(c)** of each question.
Thus it is the quality of the response that 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 L2 by making developed points without making any L1 statements. In order to achieve L3 a candidate must have already reached the top end of L2 – in addition his/her answer should have a clear example 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 that are marked using levels of response marking.

Summary:

Level 1 (1 to 3 marks):
1 simple statement (1 mark)
2 simple statements (2 marks)
3 simple statements (3 marks)

Level 2 (4 to 6 marks):
1 developed statement (4 marks)
2 developed statements (5 marks)
3 or more developed statements with example (6 marks)

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

1 (a) (i) The **movement from** one country/area/place/ **to** another

1 mark

(ii) A – Canada/USA
B – Brazil/Peru/Uruguay/Ecuador/Colombia/Guyana/Suri

2 @ 1 mark

(iii) Ideas such as:
Western Europe is positive/increases but Africa (north of the Equator) is (mainly) negative/decreases OR no change/there is in-migration in western Europe and out migration in Africa;

There are some positive exceptions within Africa;

MAX 2 for evidence of the contrast such as:

Example of a positive such as UK/France/Germany etc.;
Example of a negative such as Egypt or example of no change such as Libya/Chad etc.;
Exception of Nigeria/Benin/Liberia etc. which are positive

NB: Do not accept regions. Needs to compare.

3 @ 1 mark [3]

(iv) Push factors such as:
War/civil war/political instability/conflict/corrupt government;
Persecution (religious or political);
Natural disaster (or example to MAX 1);
Lack of work/low pay/poverty/poor working conditions;
Poor/bad health care/high levels of disease or examples;
Lack of education opportunities;
Lack of water/poor water supply;
Poor sanitation/hygiene;
Lack of food/famine/malnutrition;
Housing (needs to be developed in some way such as houses lack electricity/piped water etc./no electricity);
Crime (needs to be developed in some way such as to escape drug cartels) etc.

NB: Make sure the push factor is clear such as lack of food or poor sanitation or bad education

4 @ 1 mark [4]

(b) (i) Ideas such as:
any trend before 1970 described e.g. slow growth betwe
any trend after 1970 described e.g. rapid increase from 1
statistics for two years which support either of the tren
1910 and 2010 i.e. increase from 200 000 to 9.8 million.

NB. No tolerance on statistics. Units are needed.

1910	200 000
1920	400 000
1930	600 000
1940	600 000
1950	800 000
1960	1.8 million
1970	2 million
1980	4 million
1990	5.8 million
2000	9.4 million
2010	9.8 million

3 @ 1 mark [3]

(ii) Ideas such as:
(may be expressed as *pressure on/cost of/lack of/need more …)*
Competition for/lack of jobs/underemployment;
Poverty;
Crime (specified)/need for more police/security;
Traffic congestion/need for more public transport;
Air pollution/water pollution;
Pressure on health care services or examples;
Pressure on educational facilities or examples;
Insufficient housing/more homelessness/property is more expensive;
Growth of squatter settlements;
Pressure on water supplies/sanitation/untreated water;
Urban sprawl occurs;
Loss of natural vegetation;
Lack of food/food more expensive;
Lack of farmland;
Lack of electricity supplies/cost of supplying electricity;
Disease (specified);
Pressure on infrastructure;
Need to build more roads etc.

5 @ 1 mark or development [5]

(c) Levels marking

Level 1(1–3 marks)
Statements including limited detail explaining low rates of nat

Level 2 (4–6 marks)
Uses named example
More developed statements explaining low rates of populatio

Level 3 (7 marks)
Uses named example
Comprehensive and accurate statements including some place specific reference.

NB. Use of relevant statistics to back up simple statements (i.e. low birth rate of x per 1000) is L2. Do not allow answers relating to migration or population density. Not high birth rate or low death rate.

Suggested content:
- Reasons for low birth rate
- Reasons for high death rate
- Reason for birth rate and death rate similar etc. [7]

[Total: 25]

2 (a) (i) (A list/diagram to show) settlements arranged in size/importance/order or a list of settlements in order of size/importance or settlements arranged in levels/rank order.

1 mark [1]

(ii) – larger settlements have more services/more people mean more services/there is a positive relationship

– larger the population the less settlements/there is an inverse/negative relationship.

NB. Accept vice versa answers.

2 @ 1 mark [2]

(iii) Settlement is a city

Evidence such as:
High density of land use/high population density/lack of open space;
High rise buildings/tall buildings/large buildings (hotels/offices);
Large built up area/lots of buildings;
Main/wide road/motorway OR railway system/metro etc.

NB. If a candidate circles the wrong settlement – the whole answer = 0. If they circle more than one answer – the whole answer also = 0. If they do not circle an answer mark the evidence to a MAX 2.

3 @ 1 mark [3]

(b) (i) Ideas such as:
High rise buildings;
Large areas of glass/lots of windows;
Pedestrianised areas/walkways;
New/modern/hi tech buildings or materials;
Curved buildings;
Restaurant/shops/offices etc.

3 @ 1 mark

(ii) Ideas such as:
attracts visitors/tourists/customers;
job creation;
modernise/replace outdated buildings;
previous buildings were in disrepair/were an eyesore;
to separate people from traffic/safety;
to create economic growth/attract investment;
to use a brownfield site/re-use derelict land;
improve the image of the area/makes the area look more attractive etc.

The emphasis of the question is on why the redevelopment has taken place.

4 @ 1 mark [4]

(iii) Ideas such as:
low cost land;
plenty of space;
lots of land for car parks;
proximity to urban area for large numbers of customers/lots live nearby;
ease of access from surrounding rural areas/other cities;
easy access for delivery/lorries;
ring roads/by pass in close proximity/motorway;
away from congested area in CBD;
more pleasant/relaxed atmosphere/quieter/less atmospheric pollution etc.

NB. Accept reverse statements re: city – for example: land is expensive elsewhere or little space elsewhere in the city.

5 @ 1 mark or development [5]

(c) Levels marking

Level 1 (1–3 marks)
Statements including limited detail describing the types o settlement.

Level 2 (4–6 marks)
Uses named example
More developed statements describing the types of services

MAX 5 marks with no named or an inappropriate example. For example, a town or city is NOT an appropriate example so would be marked to MAX 5 for low order services.

Level 3 (7 marks)
Uses named example
More developed statements describing the types of services provided in a rural settlement including some place specific reference.

NB: Do not credit services that are only associated with towns and cities such as shopping malls, universities. If the example used is a tourist settlement, credit services that could be found in a tourist village or low order services that could also be found in a village.

Suggested content:
Low order services which could be shops, amenities, transport, infrastructure etc.

At L1 candidates could either suggest shops/school etc. or specify types e.g. primary school/newsagent shop – this is NOT L2 [7]

[Total: 25]

3 (a) (i) (Current/day to day/temporary) atmospheric conditions

1 mark [1]

(ii) Measured by observation/looking;
Estimation of the number of eighths of sky covered/proportion of sky covered by cloud/metal grid split into eight/mirror divided into eight sections etc.

2 @ 1 mark [2]

(iii) Precipitation – Rain gauge/pluviometer
Wind speed – anemometer
Atmospheric pressure – barometer

3 @ 1 mark [3]

(iv) Ideas such as:
open space/away from trees and/or buildings;
so readings are not affected by shade (shadow) or warmt
above grass/not above concrete;
as temperatures above concrete will be artificially high (r
in a fenced/walled compound;
to avoid tampering from people/wildlife (reason);
door opens away from the Equator;
to avoid direct sunlight entering (reason) etc.

NB MAX 3 without any reasoning. You can accept a reason without a description.

4 @ 1 mark [4]

(b) (i) Ideas such as Category 1 has:
higher air pressure;
lower wind speed/velocity;
creates a smaller storm surge;
does less damage

NB: Assume the candidate is writing about Category 1 unless they specify Category 3 first. Accept vice versa as long as Category 3 is clearly indicated. Accept statistics which have a label with them – for example: Category 1 has a wind speed/velocity of 119–153 (km/hr) whereas Category 3 has a wind speed/velocity of 178–209 (km/hr). Do not need to give units.

3 @ 1 mark [3]

(ii) Ideas such as:
flooding;
destruction of properties/homes/buildings;
power lines blown down;
disruption to/contamination of water supplies;
crops/food/livestock destroyed/farm animals die;
livelihoods ruined;
port installations damaged;
possessions destroyed or example such as cars/boats;
evacuation of people;
deaths/injuries;
trees/natural vegetation destroyed/habitat loss;
disruption of ecosystems/food chains;
coral/reefs damaged;
roads/railways flooded/damaged;
damage to beach/cliff/erodes coast faster;
loss of specified land along the coast e.g. farmland or recreation land etc.

NB: The impact is of the waves/wind/rain/storm – these are not impacts themselves.

5 @ 1 mark or development (5)

(c) Levels marking

Level 1 (1–3 marks)
Statements including limited detail describing opportunities pr

Level 2 (4–6 marks)
Uses named example
More developed statements describing opportunities provided

NB MAX 5 if no named or inappropriate example. NOT a specified. If the choice is not underlined at the start then MAX 5.

Level 3 (7 marks)
Uses named example
Comprehensive accurate statements describing opportunities provided, including place specific detail.

Suggested content:
Depending upon the choice candidates are likely to refer to opportunities in:
Water supply and irrigation
Farming
Tourism
Settlement
Transport
Ports and trade
Industry etc. [7]

[Total: 25]

4 (a) (i) Drought

1 mark [1]

(ii) More killed in LEDCs/less killed in MEDCs;
More damage in MEDCs/less damage in LEDCs

2 @ 1 mark [2]

(iii) Ideas such as:
High rise buildings in MEDCs;
More workplaces/factories/offices/commercial buildings in MEDCs;
Cost of replacing transport infrastructure/or examples is greater in MEDC/transport infrastructure is more extensive;
Cost of replacing underground supply of water/gas/electricity is greater in MEDCs/these are more extensive in MEDCs;
Many expensive buildings in MEDCs/cost more to repair/higher value buildings/old/flimsy buildings in LEDCs cheaper to replace etc.

NB. There is no need to compare – accept implied comparison

3 @ 1 mark [3]

(iv) Ideas such as:
many eruptions are small scale/localized;
warnings/alerts are given/eruptions can be predicted/det
lava is slow moving/not much lava released/only travels
physical signs e.g. bulges;
people can escape/evacuate;
examples of protection methods (e.g. diversion channels/
building design – for example, reinforcement of roof struc

4 @ 1 mark

(b) (i) Ideas such as:
they are mainly in the south/south-east of the region;
most of/northern/eastern part of Kenya;
most of Somalia;
south of Ethiopia;
north east of Nairobi;
between Nairobi and Mogadishu;
Kenya/Somalia/Ethiopia – any named two – if those specific countries have not been credited already etc.

3 @ 1 mark [3]

(ii) Ideas such as:
failure of crops/loss of farm income;
no water for irrigation;
death of livestock/death of farm animals/graze fewer animals;
famine/starvation/lack of food supply/hunger;
malnutrition;
deaths of people;
migration/movement to refugee camps;
dehydration;
reduced sanitation/people are forced to use dirty water;
lack of drinking water;
increased/long distance to fetch water;
dependence on aid;
economic collapse/reduction of exports;
natural vegetation dies/habitat loss;
impact on ecosystems/food chains etc.

5 @ 1 mark or development [5]

(c) Levels marking

Level 1 (1–3 marks)
Statements including limited detail explaining hot and/or dry c

Level 2 (4–6 marks)
Uses named example.
More developed statements explaining hot and/or dry conditi
clear whether the factor causes the climate to be hot or dry –

NB: MAX 5 marks if no named or inappropriate example. Example should be the name of a tropical desert. Not a country or region e.g. Sahel.

Level 3 (7 marks)
Uses named example
Comprehensive and accurate statements explaining hot and dry conditions of tropical desert, including some place specific reference.

NB: Do not accept answers relating to a lack of vegetation or water sources or global warming as causes.

Near the Equator receives no credit.

Suggested content:
Latitude
Distance from the sea
Cloud cover
Air pressure
Wind direction
Relief
Ocean currents etc. [7]

[Total: 25]

5 (a) (i) copper

1 mark [1]

(ii) Water;
Copper ore;
Electricity;
Labour

2 @ 1 mark [2]

(iii) Ideas such as:
to reduce transport costs/less labour for transport;
as they are bulky/heavy raw materialsl/lots of raw materials needed;
copper ore contains waste materials/loss of weight as a result of processing;
finished product is cheaper to transport than raw material etc.

3 @ 1 mark [3]

(iv) Ideas such as:
atmospheric pollution/smoke from factory/gases from fact
exhaust fumes from lorries/vehicles/trains;
pollution of rivers/groundwater/dam/water;
clearance of natural vegetation/flora/loss of biodiversity/d
kills animals/wildlife;
imbalances ecosystems/food chains;
destruction of habitat;
noises disturb animals;
global warming/greenhouse effect;
acid rain etc.

4 @ 1 mark [4]

(b) (i) Ideas such as:
in the south of India;
13 degrees North;
200km from (west) coast/300 km from the east coast;
west of Chennai;
distance from Chennai;
SE of Mumbai;
distance from Mumbai;
NE of Mysore;
distance from Mysore;
S of Delhi;
distance from Delhi
SW from Kolkata;
distance from Kolkata etc.

Measure the distance and accept a sensible tolerance given the fact that the scale is small.

3 @ 1 mark [3]

(ii) Ideas such as:
Large/increasing market in LEDCs;
Cheap labour supply;
Increasing literacy/skill level/educated;
Low cost of land;
Few labour restrictions/limited trade union activity;
Workers prepared to work long hours/strong work ethic;
Ease of global transport of components/products by air/sea/easy to import and export;
Low bulk/low cost transport;
Government incentives/low taxation;
Lack of government restrictions on pollution etc.

5 @ 1 mark or development [5]

(c) Levels marking

Level 1 (1–3 marks)
Statements including limited detail describing the benefits o
industry.

Level 2 (4–6 marks)
Uses named example
More developed statements describing the benefits of the gro

NB MAX 5 with no named or inappropriate example. A country is not an appropriate example.

Level 3 (7 marks)
Uses named example
Comprehensive and accurate statements including some place specific reference.

Suggested content:
Employment
Wages
Skill development
Living Standards
Service Provision
Transport
Infrastructure
Economy etc. [7]

[Total: 25]

6 (a) (i) Transport….industry….residential…..commercial

NB Correct order required

1 mark [1]

(ii) Transport

Thermal

2 @ 1 mark [2]

(iii) Ideas such as:
to keep down cost of imports/they are very expensive/reduce transport costs;
to reduce balance of payments deficit;
to avoid being without supplies if imports are cut off (due to war)/to be self sufficient;
to develop cleaner/greener/renewable alternatives;
oil is not renewable/may run out;
reduce air pollution/global warming;
risk of oil spills etc.

3 @ 1 mark [3]

(iv) Ideas such as:
newer energy sources cannot yet meet demands;
some are still in early stages of development;
limited technology in many areas;
expense of development/setting up power stations/canno
limited by siting factors or example;
sun does not always shine/wind does not always blow;
much of industry/transport is geared up to using fossil fue
coal/fossil fuels are cheaper;
small output from renewable power stations;
Government policy etc.

4 @ 1 mark [4]

(b) (i) 1 mark = a simple comment on one of the scales – for example: the top diagram shows energy and the natural environment **in balance**.

2 marks = same as above but a reference to both diagrams – for example: the top diagram shows energy and the natural environment in balance and the second diagram shows energy and natural environment are **not in balance/not equal**.

3 marks = clear message based on interpretation of the diagram (i.e. not repeating the word 'balance') – for example.

We should not develop energy at the expense of the environment
Energy production should not be seen as more important than the environment
The use of too much energy could badly damage the natural environment/could cause global warming etc.

NB: A candidate does not need to make 1 and 2 mark comments before being able to access the 3 mark comment.

3 @ 1 mark [3]

(ii) Ideas such as:
burning pollutes the atmosphere/produces gases;
named appropriate example of a gas (e.g. carbon dioxide, sulphur dioxide);
global warming/greenhouse effect;
acid rain;
thermal pollution of rivers from power station etc.

NB: Focus on how USING fossil fuels impacts the natural environment. Credit appropriate development – for example, a candidate may develop global warming by reference to melting ice caps and sea level rises.

5 @ 1 mark or development [5]

(c) Levels marking

Level 1 (1–3 marks)
Statements including limited detail describing and/or ex location of chosen power station type.

Level 2 (4–6 marks)
Uses named example.
More developed statements describing and/or expla location of chosen power station type.

NB: MAX 5 marks if no named or inappropriate example used. If there is a mismatch between the power station and type of fuel then MAX 5.

Level 3 (7 marks)
Uses named example
Comprehensive and accurate statements describing and/or explaining factors which influence location of chosen power station type, including some place specific reference.

Suggested content:

Factors referred to will depend upon the choice of the type of power station but may include:

- Physical factors
- Transport
- Raw materials
- Government Policy
- Safety etc. [7]

[Total: 25]