

MARK SCHEME for the May/June 2011 question paper
for the guidance of teachers

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 must be read in conjunction with the question papers and the report on the examination.

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

Cambridge is publishing the mark schemes for the May/June 2011 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

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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.

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).

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 e.g. (6 marks)

No example/inappropriate example = MAX 5 marks

Level 3 (7 marks)

- 3 or more developed statements + named example with at least one piece of place specific detail.

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- 1 (a) (i) A person who goes to live in another place/moves away from an area/leaves his country etc.

1 mark [1]

- (ii) Refugee; Asylum seeker

2 @ 1 mark [2]

- (iii) Push factors such as:
war/conflict/civil war;
famine/food shortage/starvation;
floods/volcano/earthquake/tsunami/tropical storm (MAX 2);
drought;
(religious/political) persecution etc.

3 @ 1 mark [3]

- (iv) Ideas such as:
lack of qualifications/skills/education/no experience/they have to do
unskilled jobs/work informally;
many are doing low paid jobs;
poor working conditions/dirty jobs/long hours/exploitation by employers;
many cannot speak the language;
some are unable to obtain employment/not enough jobs;
can't afford education/health care/food/housing etc.;
live in poor conditions/overcrowding/lacks sanitation;
some may have to live away from their families;
discrimination may occur/racism;
some may lack documentation/have to hide from authorities;
trouble adapting to culture/religion etc.

4 @ 1 mark [4]

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- (b) (i) Ideas such as:
rural to urban = village to nearest town/regional city/capital city;
urban to urban = nearest town to regional/capital city etc.
International migration = e.g. to any foreign city

3 @ 1 mark

[3]

- (ii) Candidates can choose any example from Fig. 2 – accept generic example (e.g. village to nearby town) or named example. Reasoning will depend on example chosen such as:
for work opportunities/lots of/more jobs;
better paid jobs;
to improve quality of life/better lifestyle/standard of living;
better provision of doctors/hospitals etc.;
better chance of education for children;
to escape (religious/political) persecution;
bright lights/leisure facilities/wider choice of shops;
war/civil war;
drought;
famine/food shortages;
lack of water supply/sanitation;
floods/volcano/earthquake/tsunami/tropical storm etc.

5 @ 1 mark or development

[5]

(c) Levels marking

Level 1 (1-3 marks)

Statements including limited detail describing problems caused by overpopulation.
(e.g. traffic congestion, overuse of agricultural land/overgrazing, deforestation/loss of natural vegetation etc.)

Level 2 (4-6 marks)

Uses named example.

More developed statements describing problems caused by overpopulation.

(e.g. traffic congestion as there are too many vehicles on the roads, overuse of agricultural land/overgrazing leads to loss of soil fertility, deforestation/loss of natural vegetation to use for firewood etc.)

(NB MAX 5 marks if no named example or if example of city given rather than country)

Level 3 (7 marks)

Uses named example (e.g. Bangladesh).

Comprehensive and accurate statements including some place specific reference.

(e.g. traffic congestion as there are far too many vehicles on the roads especially in cities such as Dhaka, overuse of agricultural land on floods plains of Brahmaputra/Ganges leads to loss of soil fertility/lower yields, widespread deforestation for firewood on slopes of Himalayas etc.)

[Total: 25]

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- 2 (a) (i)** Small settlement/settlement (village) in the countryside/settlement in a farming area/settlement with few services/settlement with low order services etc.

1 mark [1]

- (ii)** Advantage = It is unlikely to flood/sheltered from wind/a good defensive site

Disadvantage = distance from water supply/steeply sloping land/ sloping land makes building difficult

2 @ 1 mark [2]

- (iii)** Ideas such as:
availability of water;
above flood level of river;
flat/gently sloping land;
access to river for fishing;
good crop growing land/fertile soil;
water for animals/irrigation from river;
easy access along valley/transport routes/can travel along river;
sheltered etc.

3 @ 1 mark [3]

- (b) (i)** Ideas such as:
More rapid growth in Lesotho (reserve);
(1970 to 2010) Lesotho from 4% to 26/28% (or by 22/24%);
(1970 to 2010) Niger 6% to 18/20% (or by 12/14%);
Continuous/even growth in Lesotho/from 2000 onwards little growth in Niger.

NB Candidates can use figures for 1980/1990/2000 rather than 1970 to 2010 but must state years if they do that. If figures for 1970 to 2010 are used the dates do not need stating.

3 @ 1 mark [3]

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- (ii) Ideas such as:
 more crowded/overcrowded;
 many people are unable to obtain jobs/more jobs are needed;
 work for low pay/cannot afford housing/work in informal sector;
 inadequate investment in housing stock/people live in squatter settlements/more housing is needed;
 pressure on schools/inadequate education provision;
 pressure on hospitals/inadequate medical care provision;
 increased crime rates or example (max 1);
 difficulties of waste/litter disposal;
 traffic congestion;
 noise pollution;
 spread of disease;
 food shortages;
 lack of sanitation/fresh water/poor hygiene;
 poor quality of life/standard of living;
 loss of farmland etc.

4 @ 1 mark

[4]

- (iii) Ideas such as:
 loss of vegetation/deforestation;
 loss of habitats;
 impacts on food chains;
 pollution of rivers;
 death of fish/other species;
 pollution of ground water/seepage of toxins from dumps;
 air/atmospheric pollution;
 rivers dry up due to water extraction/water table lowered etc.

5 @ 1 mark or development.

[5]

(c) Levels marking

Level 1 (1-3 marks)

Statements including limited detail on methods used to improve quality of life in LEDC cities.
 (e.g. improve water supply, create employment, provide better education facilities, improve transport facilities etc.)

Level 2 (4-6 marks)

Uses named example.

More developed statements on methods used to improve quality of life in LEDC cities.
 (e.g. improve water supply by laying water mains, create employment by employing people to clean up litter, increase government spending on building schools, building tarred roads which provides transport to the shanty town etc.)

(NB MAX 5 marks if no named example)

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Level 3 (7 marks)

Uses named example (e.g. Rio de Janeiro).

Comprehensive and accurate statements on methods used to improve quality of life in LEDC cities, including some place specific reference.

(e.g. improve water supply by laying water mains to the favelas, create employment by employing people to clean up litter in areas such as Rocinha, increase government spending on building schools; build tarred roads to shanty towns on mountain slopes on edge of city.)

[Total: 25]

3 (a) (i) Wednesday

1 mark

[1]

(ii) A lower air pressure the higher the precipitation/inverse relationship/negative correlation

B winds from south (west) / southerly direction bring higher temperatures (than winds from north)

2 @ 1 mark

[2]

(iii) precipitation = rain gauge;
air pressure = barometer;
wind direction = wind/weather vane.

NB Assume same order and credit if precipitation/air pressure and wind direction not stated.

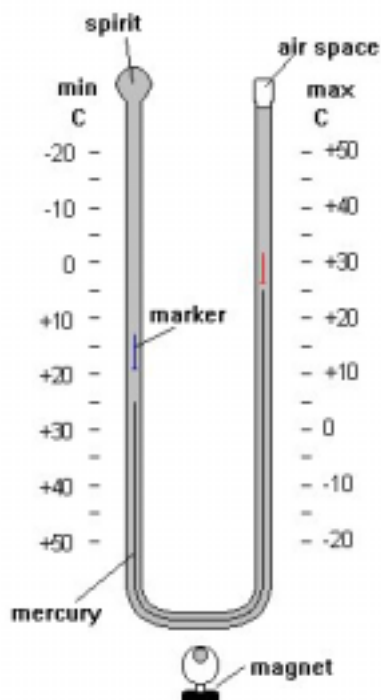
3 @ 1 mark

[3]

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(iv) Features on diagram to be shown and labelled:

Figure 2. The maximum-minimum thermometer



U- Shape (no labelling needed);
maximum/minimum scales;
magnet;
metal markers;
alcohol/spirit;
mercury;
air space.

4 @ 1 mark

[4]

- (b) (i) Differences such as:
B shows a greater amount of cloud cover than A/more oktas in B;
B clouds are grey but A are white/darker clouds in B;
B nimbus/stratus but A cumulus;
B clouds are lower than A;
clouds in B are more likely to produce rain etc.

3 @ 1 mark

[3]

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- (ii) Ideas such as:
distance from oceans;
winds blow over large areas of land;
winds blow offshore/do not blow from sea hence no source of moisture/water sources;
low humidity;
lack of evaporation;
sparse vegetation;
lack of transpiration;
high air pressure;
descending air;
cold offshore currents etc.

5 @ 1 mark or development

[5]

(c) Levels marking

Level 1 (1-3 marks)

Statements including limited detail describing and/or explaining the main features of tropical rainforest climate.

(e.g. hot, wet, cumulus clouds, sun overhead, low pressure, high rainfall etc.)

Level 2 (4-6 marks)

Uses named example.

More developed statements describing and/or explaining the main features of tropical rainforest climate.

(e.g. temperatures which are no lower than 30C all year, small annual range of temperature, wet climate due to low pressure/convection currents, high temperatures due to overhead sun, daily build up of cumulus clouds due to convection, daily convective rainfall etc.)

(NB MAX 5 if no named example)

Level 3 (7 marks)

Uses named example (e.g. Amazon).

Comprehensive and accurate statements describing and explaining the main features of tropical rainforest climates.

(e.g. annual range of temperature only 2 degrees C. Over 2000mm rain due to low pressure/convection currents, high temperatures due to overhead sun within a few degrees of Equator, daily build up of cumulus clouds due to convection, daily convective rainfall etc.)

[Total: 25]

- 4 (a) (i)** The edge/meeting points of two tectonic plates/plates which form the earth's crust/line separating two plates.

1 mark

[1]

- (ii) A** destructive/convergent/subduction zone/collision margin

B constructive/divergent

2 @ 1 mark

[2]

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- (iii) Ideas such as:
X is in centre of a plate/not on a plate boundary;
so there are no lines of weakness/no gaps;
where magma/lava can reach the surface etc.

3 @ 1 mark

[3]

- (iv) Ideas such as:
faults are line of weakness;
plates slide past each other;
plates are moving in different/opposite directions/at different speeds;
friction caused/plates lock together/stick;
build up of pressure;
sudden movement/jerk apart/pressure release etc.

4 @ 1 mark

[4]

- (b) (i) Ideas such as:
steep slopes/cliffs;
(bare) rocky/large rocks/jagged rocks/rugged;
(pools of) mud/ash;
caldera/crater/lake;
steam;
gullies;
greenery/vegetation/trees on upper slopes/background etc.

3 @ 1 mark

[3]

- (ii) Ideas such as:
fertile/volcanic soils;
geothermal power;
attract tourists/tour guides/souvenirs etc.;
resource extraction/or examples e.g. sulphur;
researchers/vulcanologists live close by to study volcanoes;
they have lived there all their lives/sentimental attachment;
close to family/friends;
work/education in area;
cannot afford to move;
pressure of living space;
confidence in prediction/safety;
willing to take the risk/they don't think it will erupt etc.

5 @ 1 mark or development

[5]

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(c) Levels marking

Level 1 (1-3 marks)

Statements including limited detail describing impacts of an earthquake.

(e.g. Lots of people were killed/injured; many houses collapsed; roads were blocked/damaged; it left people homeless; lots of fires broke out etc.)

Level 2 (4-6 marks)

Uses named example.

More developed statements describing impacts of an earthquake.

(e.g. Nearly 5000 people died; over 14000 people were injured; most people died through being crushed by collapsed houses; electricity supplies were cut off across the city as cables were cut; many of the large factories in the industrial district were badly damaged and so production had to stop etc.)

(NB MAX 5 if no named example – cannot be just country name)

Level 3 (7 marks)

Uses named example (e.g. Kobe).

Comprehensive and accurate statements including some place specific reference.

(e.g. Large areas of the central city were set alight by fires starting from broken gas pipes which made it impossible for the rescue services to enter the city centre; the Hanshin expressway, a main route through Kobe, collapsed on the road below. This occurred where the road crossed areas of softer, wetter ground where the shaking was stronger and lasted longer.)

[Total: 25]

- 5 (a) (i)** Subsistence farming is producing products for family only
Commercial farming is when products are for sale

1 mark

[1]

- (ii) A** = when crops are watered artificially/given extra water

B = using large amounts of worker/manualwork/farmwork using no machines

2 @ 1 mark

[2]

- (iii)** Inputs: tractor/pesticide/fertilizer/manure/water/seeds/fodder crops etc.
Processes: ploughing/applying fertilizer/spraying pesticide/planting crops/harvesting/feed cattle/irrigate crops etc.
Outputs: wheat/milk/beef etc.

3 @ 1 mark

[3]

- (iv)** Ideas such as:
temperature determines crops grown;
crops need to be grown where there is an adequate growing season;
there must be sufficient rainfall for crops to grow/irrigation needed if insufficient rain;
cereal crops/vines need sunshine to ripen;
too much rainfall may waterlog/flood crops/require a drainage system;
in areas with frost/long winter hardy animals may be kept;
if it is windy wind breaks are needed etc.

4 @ 1 mark

[4]

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- (b) (i) Changes such as:
subsistence changed to commercial;
crops exported rather than sold in country;
more use of fertilizers etc.;
higher yields;
crops sold through marketing organisation rather than directly by farmer etc.;
farmer now buys food from local market rather than growing it himself.

3 @ 1 mark

[3]

- (ii) Ideas such as:
more money available/he can buy possessions or examples;
with which the farmer can improve his farm/or examples;
money can be used to send children to school;
or pay for regular health care;
pay for electricity to be installed;
or water pipes/sewage disposal etc.;
family will be better fed etc.;

5 @ 1 mark or development

[5]

(c) Levels marking

Level 1 (1-3 marks)

Statements including limited detail which explain why there are food shortages.
(e.g. Drought, flooding, hurricanes/cyclones/typhoons, poor farming practices, exhaustion of soils, soil erosion, wars/conflict, lack of investment/poverty, lack of agricultural technology; low crop yields; rapidly increasing population etc.)

Level 2 (4-6 marks)

Uses named example.

More developed statements which explain why there are food shortages.
(e.g. drought reduces yields of crops, overcultivation as fields are not given fallow time, overgrazing due to keeping too many cattle, lack of investment in irrigation/fertilizers, still using traditional farming practices such as ploughing up and down slopes, poverty prevents them buying fertilizers/pesticides etc.)

(NB MAX 5 if no named example)

Level 3 (7 marks)

Uses named example (e.g. Ethiopia).

Comprehensive and accurate statements, explain why there are food shortages, with some place specific reference.

(e.g. drought which extended into neighbouring Eritrea reduces yields of crops, overcultivation as fields are not given fallow time, overgrazing due to keeping too many cattle especially in the northern region of Tigray, lack of investment in irrigation/fertilizers, still using traditional farming practices such as ploughing up and down slopes, poverty prevents them buying fertilizers/pesticides etc.)

[Total: 25]

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6 (a) (i) Magaluf/Palma Nova/El Arenal/Alcudia/Cala d'Or etc.

1 mark [1]

(ii) A Caves of Hams/Caves of Drach/Torrent de Parais/Cape Formentor/Bay of Pollensa/Playa de Trenc etc.

B Talyot de ses Paisses/Santuari Castle/Monastery of Lluch/Bon Any/Sant Magdalena Sanctuary.

2 @ 1 mark [2]

(iii) Ideas such as:
temperatures are high;
there are high/more sunshine hours/very sunny;
rainfall is low.

3 @ 1 mark [3]

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- (b) (i) Ideas such as:
it is beautiful/unique/visually attractive/spectacular/to see one before they die out completely;
fishing;
diving;
boat trips;
lots of species of fish/exotic fish/plants/large biodiversity etc.

3 @ 1 mark

[3]

- (ii) Allow two marks for activities - Activities acceptable are:
dredging;
intensive fishing;
diving;
boating/boats/boat trips;
anchoring on reef;
farming;
sewage disposal;
industry;
deforestation;

Further two marks are for the impacts of the chosen activities:
E.g. (sewage disposal) kills species;
(diving) may break/destroy the coral;
(boat trips) may disturb the fish with the noise;
NB Do not double credit effects.

2 @ 2

[4]

- (iii) Ideas such as:
create **reserves**/areas where people cannot dive/use boats/fish/only allow diving in certain areas;
control/stop/ban/fine/make laws to prevent people for fishing on the reef/diving/anchoring etc.;
reduce numbers of tourists/times when tourists can access/people visiting/boats/**reduce** dredging etc.;
treat all pollutants/sewage;
educate people about the impacts of damage to reefs/how to dive without causing damage etc.;
supervise groups of divers/employ 'rangers'.

5 @ 1 mark or development

[5]

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(c) Levels marking

Level 1 (1-3 marks)

Statements including limited detail describing problems and/or benefits to local people.

(e.g. jobs are created; foreign exchange/income; development of infrastructure so people benefit from better water supply/ electricity/transport , litter, noise, seasonal jobs etc.)

Level 2 (4-6 marks)

Uses named example.

More developed statements describing problems and/or benefits to local people.

(e.g. jobs such as waiters in hotels, foreign exchange/income enabling spending on education/hospitals, development of infrastructure – water, electricity, transport; litter dropped by tourists spoils the appearance of their home area, seasonal jobs so they have no source of income in winter months etc.)

(NB MAX 5 if no named example of area or resort)

Level 3 (7 marks)

Uses named example (e.g. Majorca).

Comprehensive and accurate statements describing problems and benefits to local people, including some place specific information.

(e.g. jobs such as waiters in hotels in large resorts such as Magaluf, foreign exchange/income enabling spending on education/hospitals, development of infrastructure such as the transport system including the airport at Palma which is one of the most modern in Spain; locals in Alcudia complain about the litter dropped by visitors to the water park, seasonal jobs only from May to September so they have no source of income in winter months as fewer hotels are open etc.)

[Total: 25]