**CAMBRIDGE INTERNATIONAL EXAMINATIONS**

**International General Certificate of Secondary Education**

# MARK SCHEME for the May/June 2013 series

## 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 May/June 2013 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

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**1 (a) (i)** The (average) number of births/how many children born year)

1 mark

**(ii)** Philippines/Angola/New Zealand

2 marks for correct rank order
1 mark for 1(or 2) correctly placed

2 @ 1 mark [2]

**(iii)** Ideas such as:
little availability of contraception/birth control/or examples;
not educated re: contraception;
likely to want children to work on the land/on farms;
likely to want children to send out to earn money/work;
likely to want children to help around the house/look after younger children/collect water;
likely to want children to look after parents in old age;
not likely to be affected by government policy to reduce family size;
likely to have large families due to tradition/wealth/to get a son;
likely to have large families due to religious influences/religion does not allow contraception;
no access to abortion;
high infant mortality rates/people have more children in the hope that some will survive;
women stay in the home/don't work;
early marriage etc.

3 @ 1 mark [3]

**(iv)** Ideas such as:
better treatment of diseases/or examples/more medicines/drugs/research;
people have access to regular check-ups;
improved health care facilities/hospitals/clinics/medical care;
more doctors/nurses;
investment in care homes/services for elderly;
improved diet/increased food production/more food/healthy food;
better water supply;
better sanitation/hygiene/cleaner living environment;
pensions/economic support from government;
education about diet/how to stay healthy/prevent disease;
vaccinations/inoculations/immunisation;
use of contraception to reduce disease/HIV;
better prepared for natural disasters or example etc.

4 @ 1 mark [4]

**b) (i)** Ideas such as:
LEDC will have wider base/more young;
LEDC will have smaller/narrower apex/top/more old;
LEDC will have less in economically active;
LEDC will be more pyramid shaped;
LEDC will be more concave;

NB Needs a comparison. The focus is on the shape of t
reverse points for New Zealand as long as comparat
assume candidate is referring to LEDC. You can credi
point which could be expressed as an age band or age r

3 @ 1 mark

**(ii)** Ideas such as:
strain on working population/economy/government;
economically active/government have to support/take car
higher taxation;
have to pay for pensions;
more money to be spent on health care/more health care needed;
need to establish/spend money on care homes/specified service for the elderly;
fewer workers available/older people do not contribute to economy/older people do not work;
reduced supply of workers leads to increase in wages;
people have to retire later;
more immigration;
less people to defend country;
facilities for young people close/money taken away from schools;
longer waiting list in hospitals;
lack of innovation etc.

5 @ 1 mark [5]

**(c)** Levels marking

Level 1 (1–3 marks)
Statements including limited detail which suggest reasons for international migration.

Level 2 (4–6 marks)
Uses named example
More developed statements which explain reasons for international migration.

NB MAX 5 if no named or inappropriate example. Both countries are needed. Accept America.

Level 3 (7 marks)
Uses named example.
Comprehensive and accurate statements including some place specific reference. Push and pull factors are needed for L3.

Answers are likely to refer to factors such as:
jobs/employment
service provision or examples
food supply
natural hazards
war

[7]

**[Total: 25]**

**2 (a) (i)** Industry/industrial

1 mark

**(ii)** Ideas such as:
parks/theme park;
sports pitches or example;
allotments/gardens;
trees/woodland/forest;
car parks;
public squares etc.

2 @ 1 mark [2]

**(iii)** Ideas such as houses are likely to be:
older in X/newer in Y;
terraced/apartment/high rise/taller in X/detached/semi-detached houses /low rise in Y;
smaller in X/larger in Y;
smaller/no gardens in X/larger garden in Y;
no drives/garages in X but drives/garages in Y;
high density in X/low density in Y;

Answers need to compare. It should be clear whether the candidate is talking about area X or Y

**(iv)** Ideas such as:
proximity to motorway/A road/main road;
more space/lots of space (for car parking);
cheap land;
near residential areas/lots of people living nearby;
pleasant environment/less air pollution/greenfield site;
less competition with CBD stores;
access for deliveries/workforce;
avoids traffic congestion in the CBD etc;

**(b) (i)** Ideas such as:
modern buildings;
high rise;
many areas of glass/large windows;
high density;
shops/shopping malls/shopping arcades/shopping centre;
offices;
many neon/electric signs/brightly lit/advertisements;
buses/public transport;
sidewalks/pavements/lots of people/pedestrians/crowded/busy;
apartments;

3 @ 1 mark [3]

**(ii)** Problems such as:
(traffic) congestion/lots of traffic;
delayed journeys;
dangers to pedestrians from traffic;
air pollution/exhaust fumes;
noise;
muggings/pickpockets/begging;
difficult to park;
overcrowding of public transport etc

5 @ 1 mark or development [5]

**(c)** Levels marking

Level 1 (1–3 marks)
Statements including limited detail on attempts to solve the chosen urban problem.

Level 2 (4–6 marks)
Uses named example
More developed statements on attempts to solve the chosen urban problem.

NB MAX 5 if no named or inappropriate example. Both countries are needed. Accept conurbation, city, town or part of an urban area. Max 5 if no obvious link between problem and solutions. MAX 5 for problem that is 'pollution' or 'lack of space'.

Level 3 (7 marks)
Uses named example.
More developed statements on attempts to solve the chosen urban problem, including some place specific reference.

Problems are likely to include:
unemployment
housing
traffic
crime
specified pollution
shanty towns
natural disasters

NB The development needs to focus on description not on explanation. Credit answers that talk about attempts that have been made, are in progress or are currently in the planning process.

[7]

**[Total: 25]**

**3 (a) (i)** An area with an annual average precipitation of less than
Candidates can indicate this in anyway – circle; underline

1 mark

**(ii)** Condensation … decreases

2 @ 1 mark

**(iii)** Ideas such as:
Water vapour/clouds are forced to rise/go over mountains;
Condensation occurs/rain falls on mountains/relief rainfall;
Air mass is dry by the time it reaches the desert/the clouds don't reach the desert/rain does not fall on the desert;

3 @ 1 mark [3]

**(iv)** Ideas such as:
air rises at Equator;
air spreads north/south from Equator;
air gets cooler/descending air at tropics;
warming air (so less rainfall);
high pressure;

4 @ 1 mark [4]

**(b) (i)** Features should be evident from photographic evidence. Ideas such as:
Scattered/sparse/not much vegetation;
Shrubs/bushes/thorn bushes/thin leaves;
Large area of rock/rock outcrops/red rocks/many rocks;
Areas of loose/broken rock/stones/bits of rock/weathered rocks;
Steep slopes;
Dry river channel etc;

3 @ 1 mark [3]

**(ii)** Ideas such as:
seeds/plants remain dormant during long dry spells;
and have a short life cycle to grow quickly after rain (dev)
narrow/spiky leaves;
to reduce rates of evapotranspiration (dev);
to stop predators taking water (dev);
long roots;
to reach to aquifer/water underground (dev);
wide spreading roots;
to search for surface water (dev);
some plants/cacti store water;
in order to survive long periods of drought (dev);
thick, waxy surface;
to prevent evaporation (dev);
widespread vegetation;
to reduce competition for water (dev) etc

NB The development point needs to link to the adaption. No marks for plant names.

5 @ 1 mark or development [5]

**(c)** Levels marking

Level 1 (1–3 marks)
Statements including limited detail describing the impact of human activities on the tropical rainforest ecosystem.

Level 2 (4–6 marks)
Uses named example
More developed statements describing the impact of human activities on the tropical rainforest ecosystem.

NB MAX 5 if no named or inappropriate example. Focus on rain forest ecosystem not river.

Level 3 (7 marks)
Uses named example.
Comprehensive and accurate statements explaining how and why the area is at risk from human activities, including some place specific reference.

There is likely to be reference to the following ideas:
impact on plants
wildlife
food chain
soil
local atmosphere

NB Credit positive impacts – for example conservation and afforestation. Answers should focus on the impact. Do not accept answers relating to people. The focus of the answer is local not global. [7]

**[Total: 25]**

**4 (a) (i)** Cliff
Candidates can underline, tick or circle to indicate their a
1 mark

**(ii)** Ideas such as:
bare/angular/grey/white/jagged/hard/resistant rock;
steep/almost vertical;
high/20 metres in height;
overhanging/undercut/wave cut notch/eroded rock at bott
jointed rock/cracks/lines of weakness;
bedding planes/layered rocks/bands of rocks/ sedimentary/ stepped profile etc.

2 @ 1 mark [2]

**(iii)** Corrasion = erodes the coast when the materials carried by the waves hit the rocks
Corrosion = dissolves the rocks by chemical reactions
Attrition = makes rocks smaller as they hit each other in the waves

3 @ 1 mark [3]

**(iv)** Ideas such as:
alternate bands of hard and soft rock;
hard rock resists erosion;
hard rock forms headlands;
soft rock easily eroded/soft rock from bays;
differential erosion;

4 @ 1 mark [4]

**(b) (i)** Ideas such as:
unevenly distributed;
clustered/close together/between 2 and 4 km apart;
south/south west of Singapore;
one exception to north east;
within 20km of coast (accept 2 – 20 km range) of Singapore Island coast;
surrounding/near to small islands;
in the Straits of Singapore;

3 @ 1 mark [3]

**(ii)** Ideas such as:
not all sea areas possess conditions required for the gro
coral/coral needs specific conditions;
such as warm water/ not too hot and not too cold /if water
world coral will not form;
temperatures between 18 – 27degrees C (accept figure
shallow water/water is too deep in some oceans for coral
not more than 60 metres deep;
water free from sediment/clear/if water is polluted coral w
sunlight is able to penetrate the water;
plentiful supply of oxygen in water/not enough oxygen to support reef;
plentiful supply of plankton/if there are not enough plankton, reefs will not form;
not found in some area as damaged/destroyed by tourism/ fishing;
calm water/if waves are too large coral will not form etc.

5 @ 1 mark or development [5]

**(c)** Levels marking

Level 1 (1–3 marks)
Statements including limited detail describing the impacts of a tropical storm.

Level 2 (4–6 marks)
Uses named example
More developed statements describing the impacts of a tropical storm.

NB MAX 5 if no named or inappropriate example. Do not accept a tropical storm as named example – must be the name of an area. Accept a region country or part of a country as long as the whole of that area was affected.

Level 3 (7 marks)
Uses named example.
Comprehensive and accurate statements describing the impacts of a tropical storm, including some place specific reference.

There is likely to be reference to the following ideas:
deaths
flooding
damage to property
injuries
economy
communication
agriculture

NB The focus is on impacts not causes. Use of appropriate statistics link to impact = L2.

[7]

**[Total: 25]**

**5 (a) (i)** the proportions/percentage of the workforce who work in employment;
how the workforce is divided up into different sectors/typ
distribution of workers across the sectors.

1 mark

**(ii)** 65 primary
15 secondary

2 @ 1 mark [2]

**(iii)** Ideas such as in Ghana:
more people work in agriculture/produce their own food;
more mining/more raw materials;
there is not as much mechanisation;
more people lack education/skills for other employment;
less development of factories/services etc.

Need the comparison. Could do vice versa but must mention Spain if they do.

3 @ 1 mark [3]

**(b) (i)**

| | |
| --- | --- |
| Primary | F |
| Secondary | D |
| Tertiary | E |

3 @ 1 mark [3]

**(ii)** Answers to A and B will depend on the choice of photograph and should be marked accordingly e.g. Photograph D (Secondary)

Photograph D shows a sugar beet refinery;
Photograph E shows a hotel;
Photograph F is a quarry.

Most of the points below will apply to any of the photographs although there may be specific points that relate to individual photos.

A Ideas such as:
employment in factory/jobs/earn money/type of job;
so people can buy better food/send their children to school/ better housing;
improved service provision or example (healthcare; education)
more money circulating in area/multiplier effect;
development of transport network;
development of infrastructure/electricity/water supply;
can use products from the factory etc.

4 @ 1 mark [4]

B Ideas such as:
atmospheric pollution/smoke from factory;
gases such as carbon dioxide;
exhaust fumes from lorries;
pollution of rivers/groundwater;
clearance of natural vegetation/plants are killed;
loss of habitat;
impact on fauna;
impact on ecosystems/food chains;
global warming;
acid rain etc.

5 @ 1 mark or development [5]

**(c)** Levels marking

Level 1 (1–3 marks)
Statements including limited detail explaining how and/or why the employment structure of a country has changed.

Level 2 (4–6 marks)
Uses named example
More developed statements explaining how and why the employment structure of a country has changed.

NB MAX 5 if no named or inappropriate example.

Level 3 (7 marks)
Uses named example.
Comprehensive and accurate statements explaining how and why the employment structure of a country has changed including some place specific reference.

There is likely to be reference to the following ideas:
mechanisation
education
skills development
investment
multinationals
demand for services
reasons for moving into a different sector (e.g. better paid jobs)

[7]

**[Total: 25]**

**6 (a) (i)** Beijing/New Delhi

1 mark

**(ii)** Ideas such as:
vehicle exhausts/cars/transportation/traffic;
factories/industry/refineries;
power stations;
domestic fires;
burning rubbish etc.

2 @ 1 mark [2]

**(iii)** Ideas such as:
smog/poor visibility;
breathing difficulties/asthma/chest complaints;
dirt on washing;
discoloration/weathering/corroding/damage of statues/stonework;
smells etc.

The following answers would need more development for credit:
acid rain
more traffic accidents
disease
makes people sick
air becomes unhealthy

3 @ 1 mark [3]

**(b) (i)** Ideas such as:
trees chopped down/deforestation;
road constructed/bridge over river;
more buildings/extension of settlement;
more terraces cut into hillside/farmland extended etc.

The focus must be on change.

3 @ 1 mark [3]

**(ii)** Ideas such as:
less interception;
surface soil is compacted;
more overland flow;
less infiltration;
less water used by trees;
fewer roots to bind the soil;
more soil erosion;
more impermeable surfaces;
mud/soil washed to rivers;
raises bed/displaces water etc.

4 @ 1 mark [4]

**(iii)** Ideas such as:
loss of species of plants/animals/loss of wildlife/animals killed;
habitat loss;
impact on food chains;
extinction/endangered species;
soil erosion is more likely to occur;
more landslides;
leaching of minerals from soil;
air pollution;
reduced use of carbon dioxide by vegetation/less oxygen;
global warming;
greenhouse gases trapping heat in/enhanced greenhouse effect;
melting of ice caps/glaciers may result from increased temperatures;
acid rain;
water pollution;
noise scares animals etc:

NB You can also credit a named example of a gas emitted to a MAX 1 provided context is appropriate.

5 @ 1 mark or development [5]

**(c)** Levels marking

Level 1 (1–3 marks)
Statements including limited detail explaining causes of water

Level 2 (4–6 marks)
Uses named example
More developed statements explaining causes of water pollut

NB MAX 5 if no named or inappropriate example. Not a coun

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

There is likely to be reference to the following ideas:
factories
sewage
farming
oil spills
power stations
shipping

[7]

**[Total: 25]**