

**UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS**  
**International General Certificate of Secondary Education**

**MARK SCHEME for the May/June 2012 question paper**  
**for the guidance of teachers**

**0460 GEOGRAPHY**

**0460/13**

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.

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<b>Page 2</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>IGCSE – May/June 2012</b>	<b>0460</b>	<b>13</b>

1 (a) (i) How the population is made up/can be divided up

1 mark

[1]

(ii) A: Stage 1

B: Stage 4

2 @ 1 mark

[2]

(iii) Changes such as:

base narrows/smaller % of children/0–9/young dependents reduces;

10–19 becomes largest age group;

Middle/upper part of pyramid widens/more in 30–60;

There are 70+ by Stage 3/number of old dependents increases;

Overall dependency ratio decreases;

Pyramid becomes more rounded/less pyramid shaped; etc.

3 @ 1 mark

[3]

(iv) Ideas such as:

longer life expectancy/decreasing death rates;

better treatment of diseases/or examples;

improved health care facilities/or examples/sanitation;

investment in care homes/services for elderly;

lower birth rates/smaller families;

more use of/educated about contraception/sex education; (max 1)

Education of women/careers are more important/materialistic outlook;

traditions/religions are less important in modern society;

less children needed to work (on farms) more mechanisation so less workers needed;

reduced infant mortality rate;

improved food supply/better diets;

marry later; etc.

4 @ 1 mark

[4]

(b) (i) Ideas such as:

Both increase;

Japan's rate of increase becomes greater whereas USA is constant over time;

United States percentage higher than that of Japan in 1950 but lower in 2010/after 1980;

Japan's percentage increasing more rapidly than United States;

United States 9% (1950) rises to 13% (2000)/Japan 6%

(1950) rises to 23% (2000) etc.

3 @ 1 mark

[3]

<b>Page 3</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>IGCSE – May/June 2012</b>	<b>0460</b>	<b>13</b>

- (ii) Ideas such as:  
 Pensions;  
 Government/funded by taxpayers/taxation; (dev);  
 Or employers (dev);  
 Elderly peoples homes/retirement homes;  
 Some are cared for by families;  
 Services such as 'meals on wheels';  
 Charities such as 'Help the Aged';  
 NHS/healthcare/hospitals/doctors/clinics;  
 Reduced rates for public transport/leisure/bus pass; etc.

5 @ 1 mark or development

[5]

**(c) Levels marking**

Level 1 (1–3 marks)

Statements including limited detail describing problems caused by an increase in percentage of over 65.

(e.g. increasing percentage of elderly dependents; strain on working population; higher taxation; need for more money to be spent on care of elderly; lack of workforce; harder to defend country; increase in rates of pay; under use of services for young; increasing dependency ratio; etc.)

Level 2 (4–6 marks)

Uses named example

More developed statements describing problems caused by an increase in percentage of over 65.

(e.g. increasing percentage of elderly dependents causes strain on working population; higher taxation as a result of increasing percentage of elderly dependents; need for more money to be spent on care homes/health care etc.; lack of innovative workforce; not enough recruitment to forces to defend country; lack of workers means need to attract foreign workers; reduced supply of workers leads to increase in rates of pay; under-use of services for young leads to inefficiency/closure of schools etc.)

(NB MAX 5 MARKS WITH NO EXAMPLE)

Level 3 (7 marks)

Uses named example (e.g. Japan).

Comprehensive and accurate statements explaining why the government is concerned by an increase in percentage of over 65, including some place specific reference.

(e.g. With over 20% of population elderly dependents causes strain on working population; higher taxation as a result of increasing percentage of elderly dependents; need for more money to be spent on care homes/health care etc.; lack of innovative workforce causes stagnation in electronics industries; not enough recruitment to forces to defend country; lack of workers means large need to attract Chinese and Filipino workers; reduced supply of workers leads to large MNCs like Sony having to increase in rates of pay/may reduce likelihood of future investment; under-use of services for young leads to inefficiency/closure of schools etc.)

[7]

**[Total: 25]**

<b>Page 4</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>IGCSE – May/June 2012</b>	<b>0460</b>	<b>13</b>

**2 (a) (i)** 25

1 mark

[1]

**(ii)** A. Australasia/Oceania

B. Africa

2 @ 1 mark

[2]

**(iii)** Greater/higher/faster increase in urban percentage in Africa;  
Africa more than doubled percentage/North America smaller increase;  
Africa increased from 25 to over 50% and North America increased from 70 to 90%;  
calculation of increase – 15–20% in North America and 25–30% in Africa; etc.

3 @ 1 mark

[3]

**(iv)** Pulls such as:

work opportunities/higher paid jobs;  
better provision of doctors/hospitals/health care;  
better chance of education for children;  
more food supplies;  
better provision of utilities/gas/water/electricity/sanitation;  
bright lights/entertainment;  
public transport/tarred roads; etc.

4 @ 1 mark

[4]

**(b) (i)** Problems such as:

not enough housing/live in squatter settlements/poor quality housing;  
lack of electricity;  
water;  
unemployment/poverty;  
traffic congestion/more road accidents;  
sanitation;  
health services;  
public transportation;  
lack of recreational facilities;  
flooding;  
litter/lack of refuse collection/causes diseases;  
etc.

3 @ 1 mark

[3]

<b>Page 5</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>IGCSE – May/June 2012</b>	<b>0460</b>	<b>13</b>

- (ii) Ideas such as:
- Installation of mains water/provide running water/water supply;
  - Laying of sewage pipes/building of sewage works/sanitation;
  - increase of local authority housing stock/concrete/brick built houses;
  - with low cost to residents (dev)
  - build tarred roads to Squatter areas;
  - and improve provision of public transport (dev);
  - Regular collection of refuse;
  - Site and services schemes;
  - Including education in building skills (dev);
  - And provision of low cost building materials (dev);
  - building of schools;
  - building of clinics/hospitals;
  - provide free education for street children;
  - provide employment with specific examples;
  - supply electricity;

5 @ 1 mark or development

[5]

**(c) Levels marking**

Level 1 (1–3marks)

Statements including limited detail on problems which occur in rural-urban fringe.  
(e.g. traffic congestion, loss of farmland, atmospheric pollution)

Level 2 (4–6 marks)

Uses named example

More developed statements on problems which 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 etc.)

(NB MAX 5 with no named example)

Level 3 (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]**

<b>Page 6</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>IGCSE – May/June 2012</b>	<b>0460</b>	<b>13</b>

**3 (a) (i) Cliff**

1 mark [1]

- (ii) Corrasion (Abrasion) = wearing of rock by rocks/pebbles being thrown/rubs against it by waves/sandpaper effect.  
Corrosion = chemical solution of rocks by sea water.

2 @ 1 mark [2]

- (iii) Ideas such as;  
Cliff may be undercut/notch forms;  
As further erosion takes place at base;  
Wave cut platform may form;  
upper part may collapse;  
form cave/arch;  
cliff retreat;  
etc.

3 @ 1 mark [3]

- (iv) Ideas such as:  
By constructive waves;  
Powerful swash moves material up beach;  
Weak backwash does not get chance/have energy to remove it;  
(Or swash is stronger than backwash = 1)  
Therefore beach material builds up over time/deposition of eroded materials;  
Larger material carried further up beach;  
Longshore drift;  
Zig zag movement of materials/prevailing winds move material at an angle;  
Gentle slope reduces speed – causes sedimentation;  
Deposition in sheltered bays/refraction – Max 1

4 @ 1 mark [4]

- (b) (i) Ideas such as;  
plants;  
fish or examples/turtles;  
high biodiversity/lots of variety of species/diversity;  
colourful; etc.

3 @ 1 mark [3]

- (ii) Ideas such as:  
Fringing reef attached to coast;  
Barrier reef is offshore/separated from coast by a lagoon;  
Atolls are roughly circular surrounding a deep central lagoon

Further 2 marks for diagrams labelled or linked with above definitions.

3 @ 1 mark + 2 for diagrams [5]

<b>Page 7</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>IGCSE – May/June 2012</b>	<b>0460</b>	<b>13</b>

**(c) Levels marking**Level 1 (1–3 marks)

Statements including limited detail describing conditions which have led to coral reef formation and development.

(e.g. warm water, shallow water, unpolluted/plentiful supply of oxygen etc.)

Level 2 (4–6 marks)

Uses named example

More developed statements describing conditions which have led to coral reef formation.

(e.g. Warm water/seas with temperatures above (20 °C), shallow water not more than 60 metres deep, water free from sediment so it is clear/sunlight can pass through, unpolluted so there is a plentiful supply of oxygen in water etc.)

(NB MAX 5 marks if no named example)

Level 3 (7 marks)

Uses named example (e.g. Seychelles).

Comprehensive and accurate statements, describing conditions which have led to coral reef formation, including some place specific reference.

(e.g. Indian Ocean shores have temperatures above 20 °C, Beau Vallon Bay has shallow water at a depth of 10 metres, water free from sediment so is clear/sunlight can pass through, Vallon Bay is unpolluted as it is not industrialised so there is a plentiful supply of oxygen in water etc.)

[7]

**[Total: 25]**

<b>Page 8</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>IGCSE – May/June 2012</b>	<b>0460</b>	<b>13</b>

**4 (a) (i) Meander**

1 mark [1]

**(ii) Open space (1 mark)**

Recreation fields/Agricultural show ground/football ground/Quarry park (2<sup>nd</sup> mark)

2 @ 1 mark [2]

**(iii) Ideas such as:**

heavy rain/storms;  
rain over a long period of time;  
melting snow;  
land is flat alongside the river/there is a flood plain/low land next to river;  
impermeable rocks;  
river has many tributaries;  
urban growth/concrete surfaces;  
narrow valleys;  
dam breaks;  
etc.

3 @ 1 mark [3]

**(iv) Ideas such as:**

drowning/death;  
damage to housing/possessions;  
need to evacuate/homeless;  
disruption of transport/communication;  
people cannot get to work/school etc.;  
damage to workplaces/loss of stock;  
workplaces closed/loss of employment;  
farmland ruined/flooded/crops destroyed;  
football matches cancelled/agricultural show cancelled/unable to use park;  
pollutes water supply;  
electricity is cut;  
can not get insurance/higher cost of insurance/can't sell house;

4 @ 1 mark [4]

**(b) (i) Ideas such as:**

below average rain/insufficient rain/small amount of rain;  
dryness/dry (and windy);  
water shortages;  
delayed rainfall/first rain in April;  
increased risk of fire; etc.

3 @ 1 mark [3]



<b>Page 9</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>IGCSE – May/June 2012</b>	<b>0460</b>	<b>13</b>

- (ii) Ideas such as:  
 not enough drinking water/low water supply;  
 therefore dehydration (dev);  
 livestock did not have enough water/food;  
 therefore death of livestock;  
 insufficient water for growth of crops;  
 therefore low yields;  
 people die from lack of food;  
 income reduced;  
 as less crops/animals sold (dev);  
 increased risk of fires;  
 farmers lose soil;  
 as soil is loose/blown away by wind/made infertile (dev);  
 food prices increase; etc.

5 @ 1 mark or development

[5]

**(c) Levels marking**

Level 1 (1–3 marks)

Statements including limited detail explaining why weathering is more rapid in humid tropical regions than in temperate regions  
 (e.g. temperatures are hotter, there is more rainfall, more plants grow etc.)

Level 2 (4–6 marks)

More developed statements explaining why weathering is more rapid in humid tropical regions than in temperate regions.  
 (e.g. tropical regions have higher temperatures/more rainfall which encourages more chemical weathering, there is more biological weathering; as there is far more plant growth)

Level 3 (7 marks)

Comprehensive and accurate statements explaining why weathering is more rapid in humid tropical regions than in temperate regions including some process specific reference.  
 (e.g. tropical regions have higher temperatures/more rainfall which encourages more chemical weathering such as carbonation/oxidation, Chemical weathering doubles with every rise of 10 °C; there is more biological weathering as there is far more plant growth thus more likelihood of tree roots in cracks, higher temperatures and rainfall cause more rapid release of CO<sub>2</sub> from decay of plants etc.)

[7]

**[Total: 25]**

<b>Page 10</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>IGCSE – May/June 2012</b>	<b>0460</b>	<b>13</b>

5 (a) (i) 150 000

1 mark

[1]

(ii) A = Sweden/Denmark

B = Italy/Finland

2 @ 1 mark

[2]

(iii) Ideas such as:

Increasing affluence;  
developments in travel/larger planes;  
tourists are being more adventurous;  
more knowledge about distant locations/internet;  
increased holiday time/time off work/paid holidays;  
more advertising; etc.

3 @ 1 mark

[3]

(b) (i) Ideas such as:

employment/or example;  
development of economy/brings in money;  
local farmers/fishermen can sell produce;  
benefits to local transport operators/taxis/or other example;  
infrastructural developments/electricity/water/sanitation;  
increased sales of building materials;  
increased spending by tourists in local shops/restaurants/sell souvenirs; or examples;  
improvements in road network;  
etc.

3 @ 1 mark

[3]

(ii) Ideas such as:

natural vegetation/forest/grassland removed for construction;  
destructions of habitats;  
vegetation/plant life trampled/killed by people;  
swimming in sea/boats anchoring could damage corals/rocks;  
increase disposal of sewage in sea/rubbish in sea;  
fumes from traffic/air pollution from traffic;  
lowering of water reserves/water table;  
noise scares animals;  
death of fish/sea creatures;  
specific impact of litter/rubbish left on natural environment;  
break down of ecosystems/destroys ecosystems;  
cliff has been cut away to make a road; etc.

4 @ 1 mark

[4]

<b>Page 11</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>IGCSE – May/June 2012</b>	<b>0460</b>	<b>13</b>

- (iii) Problems such as:
- increase in local traffic/traffic congestion/atmospheric pollution; from traffic;
  - hotel could cause visual impact;
  - loss of local culture/traditional way of life;
  - impact of behaviour of tourists/drunkenness etc.;
  - noise disturbs people;
  - exploitation/low paid jobs/long hours;
  - seasonal work;
  - shortage of water supplies;
  - litter from tourists;
  - lack of privacy;
  - loss of farmland for building;
  - visual impact;
  - increases prices in local shops;
  - Government invests more money in tourist areas rather than local housing; etc.

5 @ 1 mark or development

[5]

**(c) Levels marking**

Level 1 (1–3 marks)

Statements including limited detail which briefly describe physical and/or human factors which have encouraged growth of tourist industry.

(e.g. hot weather, sunny, low rainfall, nice scenery, beaches, local culture, easy to get to, waterfront restaurants/bars etc.)

Level 2 (4–6 marks)

Uses named example.

More developed statements which explain how physical and/or human factors have encouraged growth of tourist industry.

(e.g. long hours of sunshine enable people to sunbathe, high temperatures during summer months encourage tourists from colder climates, low rainfall so tourists can go on the beach, clean blue seas so can do water sports, waterfront restaurants/bars for evening entertainment, attractive headlands with cliffs so people can enjoy a picturesque environment, sheltered sandy bays ideal for sunbathing, ease of access via good roads and airport etc.)

(NB MAX 5 marks if no named example)

Level 3 (7 marks)

Uses named example (e.g. Algarve).

Comprehensive and accurate statements, statements which explain how physical and human factors have encouraged growth of tourist industry.

(e.g. long hours of sunshine especially from June to September enable people to sunbathe, average temperatures of over 20 °C during summer months encourage tourists from colder climates, low rainfall between April and October so tourists can go on the beach, clean blue seas so can do water sports, waterfront restaurants/bars in resorts like Albufeira for evening entertainment, attractive headlands with cliffs near Lagos so people can enjoy a picturesque environment, sheltered sandy bays ideal for sunbathing, ease of access via good roads and Faro airport)

[7]

**[Total: 25]**

<b>Page 12</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>IGCSE – May/June 2012</b>	<b>0460</b>	<b>13</b>

**6 (a) (i) Zone C**

1 mark

[1]

**(ii) A.** yams/peppers/vegetables/fruit/cassava/maize/melons/oil palm

B. Kola nut/rubber/cocoa/groundnuts

2 @ 1 mark

[2]

**(iii)** Ideas such as:  
small plots of land;  
large amounts of inputs/fertilizer/machines/capital input etc.;  
high yield;  
labour intensive/lots of workers;

3 @ 1 mark

[3]

**(iv)** Ideas such as:  
larger amount of land;  
better water supply/presence of river/good irrigation;  
zone E is largely forested;  
flatter land;  
more fertile soils; etc.

4 @ 1 mark

[4]

**(b) (i)** Ideas such as:  
lack of investment/poor/no savings;  
cannot afford fertilizers/pesticides/machinery/seeds;  
they have nothing to sell/low crop yields/no profits/just produce enough for family;  
illiterate/poor farming practices;  
small size of farms;  
low/unreliable rainfall;  
less food so too weak to work on land; etc.

3 @ 1 mark

[3]

<b>Page 13</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>IGCSE – May/June 2012</b>	<b>0460</b>	<b>13</b>

- (ii) Ideas such as:  
 increased mechanisation;  
 such as harvesters/tractors;  
 greater use of fertilizers;  
 more irrigation;  
 increases yields (dev);  
 High Yield variety (HYV) seeds;  
 Such as IR8 rice (dev);  
 use of pesticides/herbicides;  
 prevent destruction of crops by insects (dev);  
 terracing;  
 draining soil/marshes;  
 education about farming techniques;  
 GM crops; etc.

5 @ 1 mark or development

[5]

**(c) Levels marking**

Level 1 (1–3 marks)

Statements including limited detail describing or explaining the land use.

(e.g. good soil, cereal crops grown, flat land, large expanse of land, climate not too hot/wet)

Level 2 (4–6 marks)

Uses named example

More developed statements explaining land use.

(e.g. deep, fertile soils encourage growth of cereals, large expanse of flat land to grow wide variety of cereals such as wheat, oats etc. able to use large machinery for harvesting, below zero temperatures in winter break up soil to allow ease of ploughing)

(NB No named example MAX 5 marks)

Level 3 (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 and physical and human factors.

(e.g. wheat farming in the Canadian Prairies because of deep, fertile Chernozem soils, large expanse of flat land to grow wide variety of cereals such as wheat, oats etc. able to use large machinery for harvesting, below zero temperatures in winter break up soil to allow ease of ploughing, good railway link to Great Lakes allowing export of cereal crops).

[7]

**[Total: 25]**