CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2013 series

0460 GEOGRAPHY

0460/11 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.

1 (a) (i) Population of working age/aged 15 to 64/people who themselves/people who pay taxes/can financially provide

(ii) A Smaller or less % in Mexico at 65+ or any dependents/elderly/old people)/larger % at 65+ (or United States; United States pyramid has wider a narrower apex/or could use appropriate comparative

B Smaller or less percentage of population in younger in United States/wider base to Mexican pyramid; etc.

NB must look for comparatives. [2 × 1] **[2]**

(iii) Candidates should compare here though we should link together two discrete accounts providing they are not simple repetition of figures without interpretation.

Ideas such as:
greater proportion of young dependents in Mexico/smaller proportion of young dependents in United States;
about 2x/double percentage in Mexico than United States;
about 44–47% of population of Mexico compared with about 22–24% of that of United States;
e.g. 0–4 (or 5–9 or 10–14) 15/16% Mexico/7% United States
(MAX 1 on any identified age band) [3 × 1] **[3]**

(iv) Ideas such as:
high birth rates;
little availability of contraception/birth control/or examples;
not educated re: contraception;
not likely to be able to afford contraception;
likely to want children to work on the land/farms;
likely to want children to send out to work/earn money;
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;
high death rates/low life expectancy;
poor health care;
poor sanitation;
low water quality;
lack of care homes/care for elderly;
AIDS; etc. [4 × 1] **[4]**

(b) (i) Ideas such as:
population over 75 is expected to increase or rise by 203 them in 2031;
increase is expected to be rapid after 2021/more than pe between 2011–2021 and 2m by 2031;
expected to rise from 4.4 to 6.8 million (by 2.7 million);
allow tolerance of 4.4–4.5 to 6.8–6.9 (increase by 2.3–2.
increase by 57% from 2011 to 2031;

(ii) Ideas such as:
strain on working population/economy/government;
economically active/government have to support/take care of/look after more people;
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 or development] **[5]**

(c) Levels marking

Level 1 (1–3 marks)
Statements including limited detail describing the impacts of policies which have been used to influence growth rates.

Level 2 (4–6 marks)
Uses named example.
More developed statements describing the impacts of policies which have been used to influence growth rates.

(NB MAX 5 MARKS WITH NO EXAMPLE)

Level 3 (7 marks)
Uses named example
Comprehensive and accurate statements describing the impacts of policies which have been used to influence growth rates including some place specific reference.

Answers are likely to refer to impacts such as:
changing population growth
imbalance in population structure and result of it
advantages/disadvantages of policy
subsequent policies
Advantages of incentives **[7]**

[Total: 25]

2 (a) (i) Asia

(ii) Ideas such as:
in South/South East Asia/India **&** China;
distribution is uneven/there are clusters in some parts of
a lot/many/most cities of 5million+ are in northern hemis
there are more in LEDCs than MEDCs;
they are widespread;
there are some in all continents except Australasia;
a lot/many/most are on or near to coasts;

(iii) A Ideas such as:
birth rates exceed death rates/high birth rate and low death rate;
reduction of death rates;
life expectancy increased; [3 × 1] **[3]**

B Ideas such as:
lots of/many people move there/migrate into;
from rural areas/from other countries;
due to better work opportunities/higher paid jobs;
better health care;
improved sanitation;
better water supplies;
education opportunities;
natural disaster or example;
war; etc.

NB MAX 3 marks for push or pull factors. [4 × 1] **[4]**

(b) (i) A China
B Bangladesh
C Iraq [3 × 1] **[3]**

(ii) Ideas such as:
many people are unable to obtain jobs/unemployed;
or they work for low pay/in informal sector;
so cannot afford better housing/so forced to live in slums (dev)/so build own houses (dev);
inadequate investment in housing stock/not enough houses;
as authorities cannot cope with increases in population;
due to other government/local authority priorities;
lack of building space; etc. [5 × 1 mark or development] **[5]**

(c) Levels marking

Level 1 (1–3 marks)
Statements including limited detail on methods used to impro

Level 2 (4–6 marks)
Uses named example.
More developed statements on methods used to improve livi
been done to improve it).

(NB MAX 5 MARKS WITH NO EXAMPLE)

Level 3 (7 marks)
Uses named example. Can be MEDC or LEDC example.
Comprehensive and accurate statements on methods used to improve conditions in cities, including some place specific reference.

Answers are likely to refer to impacts such as:
water
sanitation
housing
infrastructure
healthcare
education **[7]**

[Total: 25]

3 (a) (i) Ski lift [1] **[1]**

(ii) Problems such as:
destruction of houses/people homeless;
farmland/crops destroyed/livestock killed;
transport disruption/road covered by ash;
flooding from snow melt;
death/suffocation from ash;
injuries from lava/volcanic bombs;
tourists/skiers may not come;
loss of jobs in e.g. tourism/farming; etc. [2 × 1] **[2]**

(iii) Ideas such as:
plates move apart;
so a line of weakness/gap is created;
where **magma or lava** can reach the surface/forms islands/bubbles up/bursts through crust; etc.
[3 × 1] **[3]**

(iv) Ideas such as:
fertile soils/high crop yields/good for farming;
geothermal power;
attract tourists/tour guides/souvenirs or other examples;
resource extraction/or examples e.g. sulphur;
volcanologists can study volcanoes; etc. [4 × 1] **[4]**

(b) (i) Ideas such as:
27–28N,
87–88E,
in Himalayas;
along border of China and Nepal/in Nepal/in North East
North East of India (or correct direction from any named
North of Bay of Bengal;
Asia;
650–750 km from coast; etc.

(ii) Ideas such as:
plates move towards each other;
collision zone/convergent boundary (dev);
both are continental plates;
pressure/compression;
no subduction occurs;
as rocks are of same density;
rocks squeezed;
uplift occurs/land rises etc.; [5 × 1 mark or development] **[5]**

(c) Levels marking

Level 1 (1–3 marks)
Statements including limited detail describing effects of an earthquake.

Level 2 (4–6 marks)
Uses named example.
More developed statements describing effects of an earthquake.
(NB MAX 5 MARKS WITH NO EXAMPLE)

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

Answers are likely to refer to impacts such as:
deaths
injuries
damage to property
economy
agriculture
communications
infrastructure **[7]**

[Total: 25]

4 (a) (i) (Sand) spit/(sand and shingle) spit;

(ii) Ideas such as:
0.8–1.2 kilometres in length;
50–200 metres wide;
curved;
attached to land at one end;
stretching partly across estuary;
made of sand **and** shingle;
below 10m above sea level;
East-west/towards North East/orientation (max 1); etc; [2 × 1] **[2]**

(iii) Ideas such as:
prevailing winds from South West;
formed as a result of deposition;
longshore drift occurring;
movement of materials from west to east;
swash moves materials at oblique angle;
backwash at right angle;
materials move in zig-zag fashion;
causes sand spit to gradually extend across estuary;
change in direction of coastline/where it meets estuary/currents in river prevent it going straight across estuary; etc.
[3 × 1] **[3]**

(iv) Ideas such as:
sand dries out;
wind picks up particles of sand/wind moves/wind blows;
from beaches/estuaries/onshore winds;
particularly at low tide;
initially deposited around an obstruction/stone/plant;
gradual accumulation/builds up over time/embryo dune to established dune;
colonized by Maram grass; etc.; [4 × 1] **[3]**

(b) (i) Ideas such as:
clay is soft/unconsolidated/not resistant to erosion;
stretch of coastline is exposed/not sheltered;
strong winds/storms;
large waves;
lack of protective measures;
water seepage/water lubricating lower cliff; etc. [3 × 1] **[3]**

(ii) Ideas such as:
farmland could be lost;
houss/properties could be damaged/destroyed/lost;
and residents may need to evacuate/move/relocate; (dev);
roads could be damaged;
making people travelling along the coast take long detours inland (dev);
cost of **or** difficulty of protecting coast;
could lead to increase in local taxation/money could not be used for other purposes (dev);
cliff erosion could be dangerous/falling rocks;
which may put off tourists visiting(dev);
high cost of house insurance/difficulty of getting insurance;
difficulty of selling house/can't sell houses; etc. [5 × 1 mark or development] **[5]**

(c) Levels marking

Level 1 (1–3 marks)
Statements including limited detail describing benefits or prob

Level 2 (4–6 marks)
Uses named example.
More developed statements describing benefits or problems

(NB MAX 5 MARKS WITH NO EXAMPLE)

Level 3 (7 marks)
Uses named example.
Comprehensive and accurate statements describing benefits and problems of living on a delta, including some place specific reference.

Answers are likely to refer to impacts such as:
floods
economic activities (e.g. salt extraction, fishing, tourism)
transport
fertile soil
flat land **[7]**

[Total: 25]

5 (a) (i) Use of water in the home/for household use/for personal use; [1] **[1]**

(ii) higher use in Norway/lower in Sudan;
180 litres per person Norway and 50 in Sudan;
About 3 times higher in Norway/higher in Norway by 130 litres [2 × 1] **[2]**

(iii) Differences such as:
more used for washing in Norway;
more used for flushing toilet in Norway;
more used for washing clothes in Norway;
more used for washing dishes and cleaning in Norway
more used for cooking/drinking in Sudan; etc.

NB Comparison needed (can accept figures for comparison if both sets are provided).

[3 × 1] **[3]**

(iv) Ideas such as:
washing machines/dishwashers use lots of water in Norway;
norwegian people will have greater access to flush toilets in the home;
more water used overall in Norway as more homes have easy access to piped water/less water available in Sudan/can't waste it/scarce so needed for drinking/more available in Norway or vice versa;
more use for drinking in Sudan due to higher temperatures;
showers/baths in most homes in Norway so more used for washing; etc.

NB Comparison not needed [4 × 1] **[4]**

(b) (i) Ideas such as:
north of Mangla;
2/3 km (north of Mangla);
South western corner of reservoir;
Where River Jhelum flows from reservoir;
At northern end of Bangla Canal; etc.

NB Credit accurate distance and/or direction from any na

(ii) benefits such as:
increased storage of water;
therefore less likely to be shortages (dev);
employment in construction;
increased electricity supplies can be generated;
which may attract more manufacturing industry (dev);
foreign investment attracted;
improved flood protection for areas downstream; etc.

problems such as:
loss of farmland;
vegetation/trees/deforestation for fruit or firewood (must have link to people) etc;
greater visual impact of dams;
need to re-route some of roads/flood roads;
possible flooding of settlements/settlements relocated;
therefore people need to be relocated (dev);
extra noise/traffic/dust during construction (max 1);
costs a lot so taxes increased; etc. [5 × 1 mark or development] **[5]**

(c) Levels marking

Level 1 (1–3 marks)
Statements including limited detail describing the causes of pollution and/or its effects on the natural environment.

Level 2 (4–6 marks)
Uses named example.
More developed statements describing the causes of pollution and/or its effects on the natural environment.

(NB MAX 5 MARKS WITH NO EXAMPLE)

Level 3 (7 marks)
Uses named example.
Comprehensive and accurate statements describing the causes of pollution and its effects on the natural environment, including some place specific reference.

Answers are likely to refer to impacts such as:
Causes:
industry
sewage
agriculture
domestic waste

Effects:
drinking water quality
ecosystems
food chains
impacts on aquatic life

6 (a) (i) Production of raw materials

(ii) Ideas such as:
emissions/exhaust gases/greenhouse gases/named gases/air pollution;
uses energy/uses fuel/depletes fuels/depletes oil;
noise pollution from vehicles;
deforestation/loss of habitats for road building;
increased road kill or examples; etc. [2 × 1] **[2]**

(iii) Ideas such as:
use less packaging/recycled packaging;
transport materials in bulk;
produce raw materials close to factory;
use renewable energy sources (or example);
catalytic convertors/ use fuel efficient engines/bio fuels;
conserve energy in factory by using…;
recycle water; etc. [3 × 1] **[3]**

(iv) Ideas such as:
build up in atmosphere;
let heat/sun`s rays through,
bounces/reflects from earth's surface;
do not allow heat to escape;
insulates/acts like a greenhouse; etc. [4 × 1] **[4]**

(b) (i) Ideas such as:
Input = energy/chemicals/water/silicon;
Process = wafer production/circuit etching/purifying silicon;
Output = waste silicon/waste water/silicon chips/waste; [3 × 1] **[3]**

(iii) Ideas such as:
few alternative energy sources are available or potentially available;
some in early stages of development;
limited technology in many areas;
expense of development/set up;
solar limited by environmental factors/lack of sunshine;
wave/tidal limited to coastal locations;
geothermal to volcanic regions;
much of industry/transport geared up to using fossil fuels;
government doesn't prioritise renewable energy; etc.
[5 × 1 mark or development] **[5]**

(c) Levels marking

Level 1 (1–3 marks)
Statements including limited detail explaining location of man

Level 2 (4–6 marks)
Uses named example.
More developed statements explaining location of manufactur

(NB MAX 5 MARKS WITH NO EXAMPLE)

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

Answers are likely to refer to impacts such as:
large workforce
good transport links
cheap land
raw materials
energy supply
water supply
(market if relevant) [7]

[Total: 25]