CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 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 October/November 2013 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

1 (a) (i) 68.1babies/infants/children out of 1000 die in their 1st year/before their first birthday [1] **[1]**

(ii) 10.2 – 8.00 [1]
= 2.2 (per 1000) [1]
[2 × 1] **[2]**

(iii) Ideas such as:
long life expectancy/higher life expectancy;
good treatment of diseases/medicines/vaccinations/can afford medicines;
good health care facilities/medical facilities/hospitals;
investment in doctors/nurses etc.;
investment in care homes/services for elderly;
availability of pensions;
good diet/food supply/no famine/no starvation/no hunger;
no drought/good water supply;
sanitation/hygiene;
education/advertisements/government support about diseases/what's good or bad for health;
low levels of named diseases; etc. [3 × 1] **[3]**

(iv) Ideas such as:
Little availability of contraception/do not use protection/family planning;
not educated re. Contraception/family planning;
not likely to be able to afford contraception/family planning;
likely to want children to work on the land;
likely to want children to send out to earn money;
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/culture;
likely to have large families due to religious influences;
high infant mortality rate/high death rate amongst children;
want boys so keep trying;
many women don't work;
male status/virility;
people marry young;
people have children from a younger age; etc. [4 × 1] **[4]**

(b) (i) Ideas such as:
Generally higher in Africa/lower in South America;
Many between 2 and 3% in Africa most below 2% in South America;
Some countries in both continents with same growth rates/some anomalies (or example of anomaly);
Max 2 for evidence e.g.: 1 country & statistic from Africa;
1 country & statistic from South America;
etc. [3 × 1] **[3]**

(ii) Ideas such as:
people do not have enough resources/overpopulation;
such as food supplies/starvation occurs/famine (dev.);
or overuse of agricultural land/overgrazing (dev.);
lack of work;
pressure on/poor access to/not enough education/want to improve education levels;
want to reduce levels of disease or examples/not enough/poor access to health care/lack of hospitals/overcrowded hospitals/can't afford hospitals;
overcrowded housing/not enough space to live in/not enough houses;
traffic congestion;
atmospheric pollution;
inadequate water supply/sanitation;
deforestation/loss of natural vegetation;
increased poverty;
high cost for governments;
low/less economic development;
start to construct shanty towns; etc.
NB: question is not about dependency [5 × 1] **[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 with no named example.

Level 3 [7 marks]
Uses named example (e.g. Turkey to Germany).
Comprehensive and accurate statements referring to **both pulls and pushes**, including some place specific reference. [7]
Candidates may refer to ideas such as:
Employment opportunities
Salary
Services
Food supply
War
Drought
Natural disasters

[Total: 25]

2 (a) (i) may be expressed in many different ways e.g.:
Rural are smaller/urban are more built up
Rural more spread out/urban more clustered
Rural areas has less services/urban has more services
Rural has lower population density/urban has higher population density
Rural has less people living there/urban has more people living there
etc.
NB: Must be comparative [1] **[1]**

(ii) A = Linear B = Nucleated [2 × 1] **[2]**

(iii) Ideas such as:
Buildings are far apart/spread out;
And separated by countryside/farmland etc.;
Population density is low;
There is likely to be few services;
No clear centre to a settlement;
etc. [3 × 1] **[3]**

(b) (i) Ideas such as:
on a hill/mountain/high land/in an upland area;
on flat land at the top of a hill/plateau;
over 1000 metres above sea level;
Apennines;
etc. [3 × 1] **[3]**

(ii) Ideas such as:
Defensive site;
Controls passage through valley;
Above flood level of river;
Building materials/woodland;
Near railway line/good communications or transport;
Route to Foggia and Naples;
Near a water supply/river for water/river for fish;
etc. [4 × 1] **[4]**

(iii) Ideas such as:
loss of woodland/forest/deforestation;
loss of farmland/hedgerows/fields;
habitats destroyed;
destroys ecosystems/food chains;
species under threat/extinction;
reclamation of wetlands/swamps;
air pollution;
water/river pollution;
specified impact of litter on environment;
acid rain (dev.);
specified impact of noise pollution;
etc. [5 × 1] **[5]**

(c) Levels marking

Level 1 [1–3 marks]
Statements including limited detail on reasons for function of settlement.

Level 2 [4–6 marks]
Uses named example
More developed statements on reasons for function of settlement.
NB MAX 5 marks if no named example

Level 3 [7 marks]
Uses named example (e.g. Liverpool).
More developed statements on reasons for function of named settlement including some place specific reference.
Candidates may refer to functions such as:
Capital city
Industrial town
Administrative centre
Market town
Port
Tourist resort [7]

[Total: 25]

3 (a) (i) Physical = plants/ice/temperature change
Chemical = water/oxygen/acids/plants

Both needed for 1 mark **[1]**

(ii) A = Freeze/thaw/frost shattering
B = Carbonation/solution [2 × 1] **[2]**

(iii) Ideas such as:
seeds fall into cracks in rocks;
seeds/plants/roots grow in cracks;
cracks widened/rocks broken apart;
organic acids help decomposition of rocks;
animals may burrow/weaken rocks;
etc. [3 × 1] **[3]**

(iv) Ideas such as:
rocks with cracks are likely to experience freeze-thaw weathering ;
some rocks/carbonates may be dissolved by chemicals in rainwater;
in areas where temperatures fluctuate around zero freeze thaw is more likely to occur;
high temperature range will lead to exfoliation;
higher temperatures increase rate of weathering/ doubles with every rise of 10C;
presence of absence of plants/animals/vegetation will encourage/discourage biological weathering;
etc. [4 × 1] **[4]**

(b) (i) Ideas such as:
large areas of bare rock/not many plants/not much vegetation;
jointed rock/cracks;
red/orange/brown rock;
steep/vertical slopes/cliff;
scree/loose rock/boulders;
less steep at base;
short grass/low plants/scattered plants;
caves/holes in rock;
etc. [3 × 1] **[3]**

(ii) Ideas such as:
High temperatures during the day;
Heat outer layers of rock;
Therefore expansion/rock expands (dev.);
Colder temperatures at night;
Cause contraction /rock contracts (dev.);
Causes stresses/strains in rock;
So outer layer peels away/like onion skin;
Constant repetition etc.

Credit information in text or labelling of diagram but do not double credit.

NB: Diagram is not compulsory [5 × 1] **[5]**

(c) Levels marking

Level 1 [1–3 marks]
Statements including limited detail describing and/or explaining characteristics of climate of tropical desert.

Level 2 [4–6 marks]
Uses named example.
More developed statements describing and/or explaining characteristics of climate of tropical desert.

NB MAX 5 marks of no named example

Level 3 [7 marks]
Uses named example (e.g. Sahara Desert).
Comprehensive and accurate statements describing and explaining characteristics of climate of tropical desert, including some place specific reference.

Candidates may refer to ideas such as:
Temperature
Precipitation
Distance from ocean
High pressure
Latitude
Cold ocean currents
Rain shadow [7]

[Total: 25]

4 (a) (i) Plunge pool

[1] **[1]**

(ii) W = 1 mark
there is a steep gradient/contours are close together = 2nd mark [2 × 1] **[2]**

(iii) Ideas such as:
Hard rock & soft rock layers;
Hard rock is resistant to erosion/soft rock is less resistant to erosion;
Soft rock below is undercut/hard rock forms an overhang;
Collapse of hard rock/overhang falls/hard rock falls;
Moves back/retreats/forms a gorge;
Max 1 for processes hydraulic action/abrasion/solution;
etc. [3 × 1] **[3]**

(iv) Differences such as at Y:
Valley is wider;
More likely to have a flood plain;
More gently sloping;
Less V-shaped
River is wider;
And deeper/more volume;
River more likely to be carrying out deposition;
More gentle long profile;
Is faster flowing;
Z is a tributary but Y is the main river;
etc.

NB 1. Accept above approach or the reverse in relation to F
2. Answer must be comparative (or 2 sets of discrete statements which can be linked)

[4 × 1] **[4]**

(a) (i) Ideas such as:
distributaries/river splits into many branches;
formed by Ganges and Brahmaputra/two rivers;
200km across;
Close to Bay of Bengal/north of/next to/flows into;
In Bangladesh;
Arcuate;
etc. [3 × 1] **[3]**

(ii) Ideas such as:
Deposition of sediment/alluvium by river;
As speed of flow slows down/cannot carry load;
Especially if river is heavily laden with silt (dev.);
Absence of major tidal flows/currents;
Impact of salt water causes further deposition;
Growth of vegetation raises it above sea level;
Distributaries form/river divides into many branches;
etc.

[5 × 1] **[5]**

(c) Levels marking

Level 1 [1–3 marks]
Statements including limited detail describing benefits and/or difficulties of living on a delta.

Level 2 [4–6 marks]
Uses named example

More developed statements describing benefits and/or difficulties of living on a delta.

NB MAX 5 marks if no named example.

Level 3 [7 marks]
Uses named example (e.g. Ganges Delta).
Comprehensive and accurate statements describing benefits and/or difficulties of living on a delta.

Candidates may refer to benefits and difficulties such as:

Irrigation
Agriculture
Flooding
Food supply
Construction difficulties
Transport [7]

[Total: 25]

5 (a) (i) Coal mining [1] **[1]**

(ii) Decline in motor vehicle industry but increase in computer manufacture;
Loss of 200 000 employees compared with increase of 30 000 [2 × 1] **[2]**

(iii) Ideas such as:
Competition from abroad/foreign companies;
Substitute materials/e.g. plastics replacing iron and steel;
Impacts of mechanization/automation/development of technology;
Factories relocated abroad/cheaper to make things abroad;
etc. [3 × 1] **[3]**

(iv) Ideas such as:
Recession/economic decline/country earns less money;
Loss of jobs/unemployment;
Poverty;
Negative multiplier;
Less money available to spend locally/less government spending on schools/hospitals etc.;
Shops may have to close down;
Suppliers may go out of business;
Need for workforce to retrain/people left with wrong skills;
Less atmospheric pollution;
Employment opportunities for computer technicians;
Less exports;
Out migration;
etc. [4 × 1] **[4]**

(b) (i) Inputs = items which are brought into the factory to use in production/raw materials for the industry

Processes = what happens in the factory to convert the raw materials into finished products

Outputs = the finished products/the items which have been made in the factory.
[3 × 1] **[3]**

(ii) Ideas to credit will depend on the industry chosen:
e.g. sugar beet refining -
the raw materials have influenced the location to a great extent/it is a raw material location/located near sugar beet farms (eval);
as it uses large quantities of raw materials/sugar beet;
raw materials are more bulky than finished products;
as weight is lost in processing (dev.);
transport costs can be saved by locating close to farms;
sugar is delivered nationwide/market is not just in one area so location next to it is impossible;
sugar is not perishable etc.

NB: Be prepared to accept any example of manufacturing or processing (but not high technology industry). It is valid to choose an industry (such as bread making) where the location has been barely influenced by where the raw materials are obtained as it is a market location.
One mark reserved for evaluative element.
[5 × 1 mark or development] **[5]**

Examples of high technology industries are:
Aircraft industry
Pharmaceuticals
Computers/software
Mobile phone technology

(c) Levels marking

Level 1 [1–3 marks]
Statements including limited detail explaining the factors which have attracted high technology industries.

Level 2 [4–6 marks]
Uses named example
More developed statements explaining the factors which have attracted high technology industries.
NB MAX 5 if no named example

Level 3 [7 marks]
Uses named example (e.g. Cambridge Science Park).
Comprehensive and accurate statements including some place specific reference.

Candidates may refer to ideas such as:
Workforce
Transport
Land availability
Cost of land
Government incentives/investment
Universities
Environmental factors [7]

[Total: 25]

6 (a) (i) E [1] **[1]**

(ii) Ideas such as:
people want to farm to earn a living/make a profit/make money;
they can produce large surplus/quantities of products/more than family can eat;
there is good access to markets/large demand for products;
family business;
etc. [2 × 1] **[2]**

(iii) Ideas such as:
harvesting is taking place/cutting the crop;
mechanised/using machinery;
manual/hand labour/collecting waste/picking up crop;
tractors/trailers/truck taking crop away;
etc. [3 × 1] **[3]**

(iv) Ideas such as:
crops need to be grown where there is an adequate growing season;
there must be sufficient rainfall for crops to grow;
some crops need sunshine to ripen;
too much rainfall may waterlog/flood crops;
irrigation is used when rainfall is low;
glasshouses are used when temperatures are low/to protect from frost;
in areas with frost/long winter hardy crops will be grown;
gently sloping land is easy to mechanize;
fertile soils enable good crop growth;
strong winds/hail will ruin the crops;
fertilisers will be needed if soil is poor;
etc. [4 × 1] **[4]**

(b) (i) Changes such as:
Field sizes have been increased/not so many fields;
Field boundaries have been removed;
Woodland has been cut down/deforestation;
A new housing estate has been built;
More houses are used by non-agricultural workers/less houses for workers;
Country road changed to dual carriageway/dual carriageway has been built;
etc. [3 × 1] **[3]**

(ii) Ideas such as:
more mechanisation;
as fields are bigger they can use bigger machines (dev.);
use of fertilizers;
use of pesticides/herbicides;
greater use of irrigation;
such as sprays which use water pumped from aquifer (dev.);
battery farming of poultry/pigs;
more space as hedgerows removed/field boundaries removed/more space for farming as there is less woodland;
GM crops/HYV's/green revolution/or examples;
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.

Level 2 [4–6 marks]
Uses named example
More developed statements which explain why there are food shortages.
[NB MAX 5 if no named example]

Level 3 **[7]**
Uses named example (e.g. Ethiopia).
Comprehensive and accurate statements, explain why there are food shortages, with some place specific reference.

Candidates may refer to ideas such as:

Drought
Extreme weather events
Flooding
Poor farming practices
War
Lack of agricultural technology/knowledge
Natural disaster **[7]**

[Total: 25]