CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2014 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.

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1 (a) (i) 610 – 630 million   (1 mark)   [1]

      (ii) Europe
Sub-Saharan Africa   (2 × 1 mark)   [2]

    (iii) Ideas such as:
people do not have enough natural resources / raw materials;
lack of fuel / power (or example such as electricity / wood supply);
lack of work;
poverty;
inadequate food supplies/high food prices;
starvation / malnutrition;
poor access to education;
poor access to healthcare / hospitals;
high levels of disease / high death rate / high infant mortality rate;
lack of / overcrowded housing / not enough space for housing;
people live in squatter settlements;
traffic congestion / increase in traffic;
atmospheric pollution;
water pollution;
inadequate water supply / lack of water;
inadequate sanitation;
overuse of or lack of agricultural land / overcultivation;
overgrazing;
soil erosion;
disputes over (agricultural) land/living space;
deforestation / loss of vegetation;
loss of habitat;
loss of species / extinction;
etc.   (3 × 1 mark)   [3]

  (b) (i) Identification of birth rate (18) and death rate (6)   (1 mark)

           Birth rate minus death rate / 18 – 6   (1 mark)

           = 12 per thousand
                                               (3 × 1 mark)   [3]

     (ii) Ideas such as;
1st idea is general decline in death rate;
2nd idea is steeper decline up to 1980;
3rd idea is it levels off / more gradual / slow decline after 1980;
4th idea can be any set of statistics plus years for example from 22 (1960) to 6 (2010) per 1000 / or another pair of years

           N.B.: Not necessary for per 1000 / units to be stated.
                                              (4 × 1 mark)   [4]

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    (iii) Ideas such as:
        no abortion available;
        little availability of contraception / family planning;
        not educated re. contraception;
        not likely to be able to afford contraception;
        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 / status;
        likely to have large families due to religious influences;
        high infant mortality rate/have greater number of children in the hope some will survive;
        lower cost of raising children;
        polygamy;
        women marry at younger age;
        women don't have careers;
        prefer boys to carry on family name;

        N.B.: doesn't have to be comparative. Can accept reverse for MEDC. Allow examples of methods of contraception as development idea.

                          (5 × 1 mark or development)   [5]

(c) Levels marking

Level 1   (1–3 marks)   Statements including limited detail which explain why it has a low population density.

Level 2   (4–6 marks)   Uses named example. More developed statements which explain why it has a low population density. (N.B.: Max 5 if no named example or incorrect example)

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

Content Guide:
Answers are likely to refer to;
relief;
accessibility / isolation;
climate / low or high temperatures depending upon location / rainfall / desert;
water supply / desert / drought;
employment / lack of jobs;
natural resources / resource availability;
inability to grow food / soil fertility / inadequate food supply;
areas of dense vegetation/type of natural vegetation;
etc.

Place specific reference is likely to consist of:
named parts of the chosen country / locational detail,
population data
etc.

N.B.: Can be less than country size or a wider area e.g. Amazonia, Arctic, Sahel, Sahara, or an entire country such as Greenland.   [7]

[TOTAL: 25 marks]

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2 (a) (i) 14.5 – 15.5 kms   (1 mark)   [1]

(ii) A village where population is declining =
Cammeringham / Cherry Willingham / Hackthorn / Langton-by-Wragby / Scampton / Stainfield / Stapleford / Thurlby

The village with the highest population growth = Sudbrooke   (2 × 1 mark)   [2]

(iii) Ideas such as:
community spirit;
child / family friendly;
people want to get away from air pollution / less polluted air;
problems of traffic congestion in Lincoln / less traffic;
moving to an area where there is less noise / more peaceful;
retirement;
scenic beauty;
bigger gardens / more land;
less specified crime;
etc.   (3 × 1 mark)   [3]

(iv) Ideas such as:
higher order services in Lincoln;
more choice of services / comparison goods;
availability of specialist goods / services / luxury goods;
e.g. banks / department stores / hypermarket; (MAX 1);
specialist shops;
they might not have those services in their villages / don't have threshold population to support services;
secondary schools / hospitals / theatre; (max 1 on services);
may work in Lincoln;
cheaper products;
etc.   (4 × 1 mark)   [4]

(b) (i) Ideas such as:
may reduce property values in surrounding area;
extra traffic / traffic noise / danger / traffic congestion / air pollution from traffic;
pressure on schools;
pressure on doctors;
greater run off / more chance of flooding;
loss of open space / woodland / parkland / loss of farmland / visual pollution;
will make character of the area less rural;
construction problems;
water pollution from sewage disposal;
etc.

N.B.: List of effects should not just be lifted from extract.

                                                       (3 × 1 mark)   [3]

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(ii) Many old houses in need of replacing / redevelopment of slum
housing;
increase in divorce rates;
so each partner needs a house (dev)
increasing urban populations / urbanisation;
people migrating there / moving into area; (dev);
or people living longer (dev);
greater affluence;
decrease number of homeless people / reduces waiting lists for housing;
increasing population growth / due to high birth rates or migration;
etc.   (5 × 1 mark or development)   [5]

(c) Levels marking

Level 1   (1–3 marks)
Statements including limited detail which describe attempts to reduce problems caused by traffic.

Level 2   (4–6 marks)
Uses named example.

More developed statements which describe attempts to reduce problems caused by traffic.

(N.B. Max 5 if no named example)

Level 3   (7 marks)
Uses named example. Can be MEDC or LEDC.
Comprehensive and accurate statements including some place specific reference.

Content Guide:
Answers are likely to refer to;
pedestrianisation;
road improvement / widening;
ring roads;
by-passes;
public transport systems / trams / tube / guided bus routes;
congestion charging;
park & ride;
number plate usage;
lanes for car sharing;
bus lanes;
catalytic convertors / reduce air pollution;
etc.

Place specific reference is likely to consist of:
named parts of the urban area / street names / locational detail / road numbers,
names of public transport schemes.
etc.

N.B.: Development is of description of attempts not the impact of the attempt for example 'so there are less cars on the road' is IR.   [7]

[TOTAL: 25 marks]

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3 (a) (i) 1.6 to 1.8 km   (1 mark)   [1]

(ii) X = Oxbow lake
Y = meander   (2 × 1 mark)   [2]

(iii) Ideas such as:
flooding of track;
erosion of embankment / track;
cost of maintenance;
disruption to services;
build a bridge;
rocks from river may be deposited and block the track;
etc.   (3 × 1 mark)   [3]

(iv) Ideas such as:
lateral erosion / or description;
deposition in channel / on bed of river;
displacement of water;
flooding of river / overflows bank;
carrying large amount of sediment;
slow moving / stationary water / friction;
deposition of sediment on flood plain / deposition of alluvium;
build up of layers;
etc.   (4 × 1 mark)   [4]

(b) (i) Ideas such as:
heavy rainfall / storms;
prolonged period of rainfall;
snow melting;
saturated ground / large amounts of impermeable surfaces / rapid runoff / overland flow;
deforestation
building on flood plains / urbanisation;
dam breaking;
etc.   (3 × 1 mark)   [3]

(ii) Ideas such as:
people trapped / forced to stay in houses;
loss of life / drowning;
damage to housing;
need to evacuate (dev);
people are homeless;
closure / flooding of workplaces;
so people cannot earn money (dev);
disruption to road transport / railways / bridges;
sewage flows onto land / road / water;
water borne disease;
such as cholera / typhoid (dev);
cost of repairs to damage;
leads to increase in insurance premiums (dev);
damage to possessions or examples e.g. car;
cuts off electricity / gas;
etc.   (5 × 1 mark or development)   [5]

(c) Levels marking

Level 1   (1–3 marks)
Statements including limited detail which explain why people live on flood plain / delta.

Level 2   (4–6 marks)
Uses named example.
More developed statements which explain why people live on flood plain / delta.
(N.B.: Max 5 if no named example)

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

Content Guide:
Answers are likely to refer to;
fertile soils / high yields of crops;
good grazing land;
water from river for drinking / washing / in homes;
irrigation;
flat building land;
transport along river;
easy communications / roads / railways can be built along valley;
power available from river / water mills / HEP;
scenic beauty / make money from tourists;
source of food / fishing;
clay for building / making pots;
etc.

Place specific reference is likely to consist of:
locational details;
named settlements along river
etc.   [7]

[TOTAL: 25 marks]

4 **(a)** **(i)** 20°C   (1 mark)   [1]

   (ii) A = Tropical desert
           B = Tropical rainforest   (2 × 1 mark)   [2]

   (iii) More cloud cover in rainforest

           Higher humidity in rainforest

           Lower temperatures at night in desert

           N.B.: Comparative statements required.
           Must identify which area being discussed.
           Can have vice versa ideas.   (3 × 1 mark)   [3]

    (iv) Ideas such as:
trade winds / wind blows from SE / NE;
across large areas of land;
offshore winds / blows from a desert;
so it does not pick up any moisture / or it has lost its moisture;
atmospheric pressure is high;
as air is descending;
so no cooling / condensation;
no condensation;
etc.

N.B.: No transfer of ideas from wind direction and atmospheric pressure.
(3 × 1 mark wind direction or atmospheric pressure plus 1 mark reserved for other idea)

[4]

(b) **(i)** Ideas such as:
fleshy (stems / leaves) / fat;
low to ground / small shrubs / small plants;
needles / spiky / thorny / narrow / thin;
in patches / some bare surfaces / grow far apart / gaps between plants / waxy leaves;
white lichen / moss / funghi;
etc.   (3 × 1 mark)   [3]

   (ii) Ideas such as:
seeds / plants remain dormant during long dry spells / lose their leaves during long dry spells;
only flowering for a short period of time after rain; (dev);
waxy / narrow / spiky leaves reduce rates of evapotranspiration / because of high temperatures;
tap roots / long roots / wide spreading roots search for water;
so that it can get water from a large area / deep below surface; (dev);
some plants / cacti store water in order to survive long periods of
drought;
light colours to reflect sunlight
reduces evaporation (dev)
etc.   (5 × 1 mark or development)   [5]

(c) Levels marking

<u>Level 1</u> (1–3 marks)
Statements including limited detail which describe impacts of large scale deforestation on the local and / or global natural environment.

<u>Level 2</u> (4–6 marks)
Uses named example.

More developed statements which describe impacts of large scale deforestation on the local and/or global natural environment.
(NB Max 5 if no named example)

<u>Level 3</u> (7 marks)
Uses named example.
Comprehensive and accurate statements, which describe impacts of large scale deforestation on the local **and** global natural environment, including some place specific reference.

Content Guide:
Answers are likely to refer to;
it destroys animals/plants;
threatens species with extinction;
impacts on food chain;
loss of habitat;
reduces interception;
increases run off/ causes floods;
sedimentation of rivers;
carbon dioxide build up;
(enhanced) global warming;
rise in sea levels;
coastal flooding
etc.

place specific reference is likely to consist of:
locational details;
named species and locations within rainforest;
other relevant locations (e.g. Antarctica, Maldives)
etc.

N.B.: Must be development of impacts not causes.   [7]

[TOTAL: 25 marks]

5 (a) (i) 83.1 (1 mark)   [1]

(ii) Biomass;
Hydro electric power;
Geothermal;
Wind;
Solar

(2 × 1 mark)   [2]

(iii) Ideas such as:
exhaustion of fossil fuels;
fluctuating fossil fuel prices / increasing cost of type of fossil fuel / fossil fuels are expensive;
attempts to reduce reliance on imported fuels;
environmentally friendly / safer for environment or examples;
worries about global warming;
ongoing running costs or examples;
etc.   (3 × 1 mark)   [3]

(iv) *Advantages such as*:

low production cost;
no air pollution / greenhouse gases / global warming;
small amounts of raw materials / uranium required / will last a
long time / produce large amount of energy from small amounts of uranium;

Disadvantages such as:

construction costs are high / decommissioning costs are high;
worries over radiation / reactor meltdown / concerns over cancers or mutations;
storage / Disposal of waste is not easy;
land cannot be used after closure for many years;
etc.

(N.B. 2 marks for advantages / disadvantages)
     (4 × 1 mark)   [4]

(b) (i) Ideas such as:
above 200 metres / on a hilltop / high areas / contours of 200–220 m;
clustered / close together;
more on western side of hillside;
south east of cross road / within 1 km of crossroads;
North / West / North West of farms / within 1 km of farms / at least ½ km from farms;
on plateau / gentle slopes;
west of river / within 1km of river;
etc.   (3 × 1 mark)   [3]

(ii) Ideas such as:
people are upset by visual impact / can be seen for many miles;
especially as many of these areas are scenic (dev);
hotel owners may be worried about loss of tourism (dev);
some people claim they are noisy;
birds flying into turbines / or other environmental / land issue;
construction noise / dust / traffic;
can interrupt radio / TV signals;
etc.   (5 × 1 mark or development)   [5]

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(c) Levels marking

Level 1   (1–3 marks)
Statements including limited detail which describe problems for people of using wood and charcoal as sources of energy.

Level 2   (4–6 marks)
Uses named example.

More developed statements which describe problems for people of using wood and charcoal as sources of energy.

(N.B.: Max 5 if no named example)

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

Content Guide:
Answers are likely to refer to;
problems caused by smoke / Asthma / eyesight loss;
difficulties of collecting wood;
impacts on people of loss of vegetation e.g. soil erosion reduces crop production (must have link to people not just soil erosion);
fire risk;
desertification prevents crops gowing;
etc.

Place specific reference is likely to consist of:
Locational details;
Named locations within area studied;
Statistical details
etc.   [7]

[TOTAL: 25 marks]

6 (a) (i) The production and distribution of goods and services   (1 mark)   [1]

   (ii) C = Secondary   D = Primary   E = Tertiary

        All 3 correct = 2 marks

        2 correct = 1 mark

        0 / 1 correct = 0 mark   (2 marks)   [2]

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    (iii) Ideas such as:
        lack of alternative employment / can't get another job / lack of jobs;
        lack of skills / education;
        cheap / quick to set up in business / quick way to earn cash;
        large number of customers;
        no taxes to be paid / no paperwork to be done;
        no need for premises;
        can work for themselves;
        can work from a very young age;
        etc.   [3 × 1 mark]   [3]

    (iv) *Advantages such as:*

        speeds up production / works quicker / more efficient;
        reduces need for/cost of workers;
        enables larger area to be cultivated / more products to be produced;
        easy to operate / few skills required;
        etc.

        Disadvantages such as;

        Loss of employment;
        people have to learn how to use them;
        cost may be too high for them to afford / high costs of repairs;
        spare parts may not be easy to obtain / machines may break down;
        etc.

        N.B.: 2 marks for advantages / disadvantages.
                                      (4 × 1 mark)   [4]

 (b) **(i)** Ideas such as:
        reduction in primary sector;
        increase in tertiary sector;
        (initial) increase in secondary sector / secondary sector levels off / eventual decrease;
        etc.

        Alternative response to all of above for 1 mark is 'Low level of development is mainly
        primary and higher level of development is mainly tertiary.

        N.B.: No need for statistics.
                                      (3 × 1 mark)   [3]

(ii) Ideas such as:
mechanization of jobs in primary / secondary sector;
reduces need for workers (dev);
some primary industries may close due to exhaustion of resources;
growth of secondary sector as technology improves;
countries want to manufacture their own goods rather than import;
eventual decline of secondary due to automation / competition from abroad;
where labour is cheaper (dev);
rise in tertiary as education / skills levels increase;
growth of secondary due to globalization/MNC's or TNC's locate there;
growth of tourism;
because a country has become more industrialized;
closure of primary or secondary industries due to import of items (primary resources or secondary products);
demand for services e.g. medical;
etc.   (5 × 1 mark or development)   [5]

(c) Levels marking

Level 1   (1–3 marks)
Statements including limited detail which describe attractions or simple explanation.

Level 2   (4–6 marks)
Uses named example.

More developed statements which describe attractions and explain how they encouraged the growth of tourism.

(N.B. Max 5 if no named example)

Level 3   (7 marks)
Uses named example.
Comprehensive and accurate statements, which describe attractions and how they encouraged the growth of tourism, including some place specific reference.

Content Guide:
Answers are likely to refer to:
specified climatic attractions;
specified scenic attractions;
flora and fauna;
religious buildings;
historical buildings;
purpose built tourist attractions (or examples);
government investment or policy;
etc.

Place specific reference is likely to consist of:
locational details;
named locations within area studied;
statistical details
etc.   (7)

[TOTAL: 25 marks]