

CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the October/November 2015 series

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.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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- 1 (a) (i) Population is decreasing/falling/getting less/negative growth rate;
- 1 mark [1]
- (ii) Ideas such as:
- Mainly Northern Hemisphere/north of Equator/north of tropic of cancer;
 - Eastern Europe/Northern Asia;
 - Any example of a country to illustrate the above point to max.1 (e.g. Russia/Poland/South Africa/Cuba/Japan)
- 2 @ 1 mark [2]
- (iii) Ideas such as:
- Generally higher in Africa/lower in South America;
 - Some parts of Africa over 3% but in South America all countries between 1–3%/below 3%;
 - there is more variation in Africa/uneven in Africa/less variation in South America;
 - mainly 1–2% in South America but in Africa varies between less than 0% and over 3%; etc.
- 3 @ 1 mark [3]
- (iv) Reference to factors such as:
- high birth rates;
 - poor access to contraceptives/family planning;
 - lack of education about birth control/family planning;
 - some religions are against contraception;
 - look after elderly parents;
 - early marriage/teenage pregnancy;
 - little education about adverse impacts of large families;
 - large amount of mechanization/of dependence on agriculture/send children to work;
 - high IMR;
 - attitudes towards women;
 - traditional attitudes encourage large families/sign of virility/polygamy/sign of wealth/want a son;
 - many women don't have careers;
 - no government policies;
 - decreasing death rates;
 - improving health care;
 - better care for elderly;
 - pension schemes being set up;
 - improved water supply/sanitation;
 - improved food supply; etc.
- 4 @ 1 mark [4]

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(b) (i) Ideas such as:

- Higher in Brazil than India between 1950 and 1980/earlier on;
- Higher in India than Brazil between 1990 and 2010/later on;
- Steeper increase/decrease in Brazil than India;
- Equal/same in 1986–87;
- Can refer to any one year;
- 1960's India rising but Brazil falling; etc.

3 @ 1 mark

[3]

(ii) Ideas such as;

- birth/population growth rates can be reduced/increased (by policies)/pro/anti-natalist policies;
- if people are given incentives to have children birth rates might increase;
- (e.g. Singapore) more than 3 children policy;
- free places in nurseries;
- if people are given incentives to have small families/one child birth rates might decrease;
- (e.g. China) One Child Policy
- no free education for families with more than one child;
- anti-immigration policies can reduce growth rates;
- policies to attract immigrants (e.g. no need for a VISA) can increase growth rates;
- policies to invest heavily in health care can increase growth rates;

NB: no max. on any policy. May give examples of incentives or disincentives.

5 @ 1 mark or development

[5]

(c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail which describe the problems caused by an ageing population

Level 2 (4–6 marks)

Uses named example.

More developed statements which describe the problems caused by an ageing population

(NB Max 5 if no named example)

Level 3 (7 marks)

Uses named example.

Comprehensive and accurate statements including some place specific reference.

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Content Guide:

Answers are likely to refer to;

- High levels of dependent population,
- Pressure on working population,
- Increased taxation,
- Payment for health care,
- Payment of pensions,
- Lack of workforce,
- Difficult to defend country, etc.

Place specific reference is likely to consist of:

Named parts of the chosen country/locational detail,

Population data etc.

[7]

[Total: 25]**2 (a) (i)** Plotting on scatter graph

1 mark

[1]

- (ii)**
- Higher the total population more services/lower the total population less services there are;
 - Illustration by reference to two examples (must have 4 sets of figures).

2 @ 1 mark

[2]

- (iii)** Bakers
Church
Convenience store

3 @ 1 mark

[3]

- (iv)** Ideas such as:

- Higher order services will only be found in larger settlements/low order in small settlements/only convenience goods;
- All services need a threshold population/few services because population is small/larger settlement more need or vice versa;
- If there are not enough people/customers living there services will not be profitable;
- Good accessibility will enable people to go elsewhere for some services/attract more people to use services or reverse; e.g. poor accessibility so less services as people can't get to them;
- an isolated area will need to provide as many services as possible, etc.

4 @ 1 mark

[4]

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- (b) (i) Completion of fig. 4B
Deduct 1 mark per error e.g. plotting/shading.

3 @ 1 mark

[3]

- (ii) Ideas such as;

- furniture shops are higher order;
- with a larger sphere of influence (dev.);
- there may be vegetable shops in Stebbach but no furniture shops;
- vegetables purchased locally by many people as people buy them more frequently than furniture;
- as they only buy furniture infrequently it is worth travelling to buy the items (dev.)
- they will be able to compare quality and prices by travelling to other settlements;
- buy vegetables locally as produced locally/so they are fresher; etc.

NB: do not need a comparison and must explain why.

5 @ 1 mark or development

[5]

- (c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail which describe and/or explain the pattern of transport routes.

Level 2 (4–6 marks)

Uses named example.

More developed statements which describe and/or explain the pattern of transport routes.
(NB max. 5 if no named example)

Level 3 (7 marks)

Uses named example.

Comprehensive and accurate statements which describe and explain the pattern of transport routes including some place specific reference.

Content Guide:

Answers are likely to refer to;

- Location within the urban area,
- Radiating from centre,
- Cost of land,
- relief,
- serving different land use zones, etc.

Place specific reference is likely to consist of:
Named parts of the urban area;
locational detail etc.

NB: not a country; must be an urban area.

[7]

[Total: 25]

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3 (a) (i) Flood plain and meander (both needed)

NB: only 1 tick needed.

1 mark [1]

(ii) X = 1 mark (reserved);

- the water is flowing slowly;
- at that point the river does not have enough energy to carry the load; etc.

2 @ 1 mark [2]

(iii) Ideas such as:

- marshy land/buildings would sink;
- sandy soils;
- potential for flooding/no flood defences;
- access will be difficult/no roads/isolated;
- erosion of land on outer bank;
- breeding ground for mosquitoes/Malaria or other e.gs. etc.

3 @ 1 mark [3]

(iv) Ideas such as:

- erosion on outer bends of meander;
- neck narrows;
- eventually cuts through/water flows straight across;
- possibly during flooding;
- former meander sealed by deposition; etc.

NB: credit diagram labels no double credit.

4 @ 1 mark [4]

(b) (i) A = Nature Reserve/pasture

B = Sports field/pasture/nature reserve

C = Cheap housing for rent/high cost housing for private ownership/factory/hospital/old people's home; etc.

NB: no double credit for answers in A and B

3 @ 1 mark [3]

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(ii) Ideas such as;

- a nature reserve would not be a risky use of the area most likely to flood;
- as people`s lives would not be threatened when it floods (dev.);
- flooding could make the habitats more diverse;
- no damage could be caused to economy by flooding of a nature reserve/no rebuilding costs;
- Zone B will flood every 10 years so it does not make sense to build there;
- it will be inconvenient for sports field to be flooded but not life threatening;
- sports field could not be located in Zone A as it would be poorly drained/matches would have to be postponed regularly (dev.);
- housing/factory/hospital/old people`s home are unlikely to be affected by floods in Zone C;
- which will reduce potential damage/disruption/loss of life (dev.)
- pasture in A as fertile land for grass/cattle can be moved if river floods/silt makes land fertile for pasture; etc.

NB: only credit explanation of land uses from previous question e.g. if state cheap housing in B then incorrect so no reasoning can be awarded for that idea.

5 @ 1 mark or development

[5]

(c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail which explain the formation of a waterfall.

Level 2 (4–6 marks)

More developed statements which explain the formation of a waterfall.

Level 3 (7 marks)

Comprehensive and accurate statements including a fully labelled diagram.

Content Guide:

Answers are likely to refer to;

- Hardness of rock,
- Undercutting,
- Splashback,
- Formation of plunge pool,
- Collapse of overhang,
- Waterfall retreat/gorge formation;
- Process repeats;
- Erosional processes e.g. hydraulic action, abrasion; etc.

[7]

[Total: 25]

Page 8	Mark Scheme	Syllabus	Paper
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4 (a) (i) The disintegration/breaking up of rock **in situ** (or idea that material is not removed)

1 mark [1]

- (ii)
- Because it requires alternating high and low temperatures/tropical deserts have high daytime and low night temperatures/high diurnal range;
 - so the rock expands and contracts;
 - There is not enough water in a desert for freeze thaw;
 - There are not likely to be many plants growing in a tropical desert so biological is not very likely; etc.

2 @ 1 mark [2]

(iii) Ideas such as:

- a seed/small plant/sapling enters/starts growing in a crack in the rock;
- roots penetrate into the crack;
- and force it further apart/exert pressure/enlarge crack;
- eventually splitting it/breaking bits off; etc.

3 @ 1 mark [3]

(iv) Ideas such as:

- water enters cracks in rocks;
- temperatures fall/below 0C at night;
- water freezes/ice forms;
- volume increases/expands;
- puts pressure on rock/crack widens;
- melting in daytime allows more water to enter;
- eventually splitting it/breaking bits off ; etc.

4 @ 1 mark [4]

(b) (i) Ideas such as:

- bare rock outcrop;
- vertical/very steep slope/cliff;
- flat top;
- scree/broken rock at base/gravel;
- few trees/scattered vegetation/mainly grass;
- cracks/joints/pot holes;
- tree growing out of crack;
- layers/sedimentary; etc.

3 @ 1 mark [3]

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- (ii) Ideas such as;
- limestone is eroded by carbonation/caused by carbonation;
 - rainwater reacts with carbon dioxide;
 - to produce (carbonic) acid/acid rain/acids in rain/water's acidity;
 - which dissolves limestone/acid reacts with the limestone;
 - as calcium carbonate reacts with acidic water (dev.);
 - washed away in solution;
 - water passes through joints/bedding planes;
 - widening them as acid reacts with the rock; etc.

5 @ 1 mark or development

[5]

(c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail which describe the impacts of a drought on the people.

Level 2 (4–6 marks)

Uses named example.

More developed statements which describe the impacts of a drought on the people.

(NB max. 5 if no named example)

Level 3 (7 marks)

Uses named example.

Comprehensive and accurate statements which describe the impacts of a drought on the people and include place specific information.

Content Guide:

Answers are likely to refer to;

- Death,
- Famine/food shortages,
- Malnutrition/deficiency diseases,
- Loss of livestock,
- Bans on use of hose pipes; etc.

[7]

[Total: 25]

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5 (a) (i) C...E...D (Correct order needed) or correct names

1 mark

[1]

(ii) Ideas such as:

- employment/jobs/earn money;
- so can people can buy better food/send their children to school/better housing;
- improved service provision or an 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 mine/materials for building;
- can export/sell products from the mine;
- Learn new skills; etc.

2 @ 1 mark

[2]

(iii) Ideas such as:

- loss of farmland;
- noisy/noise disturbs sleep/no peace and quiet;
- more traffic;
- prices rise;
- loss of culture;
- rude/badly behaved/drunken/racist tourists;
- litter;
- water resources used;
- visual pollution;
- overcrowded transport/shopping areas; etc.

3 @ 1 mark

[3]

(iv) Ideas such as:

- atmospheric pollution/smoke from factory;
- gases such as carbon dioxide/greenhouse gases;
- pollution of rivers/groundwater/water pollution;
- clearance of natural vegetation/plants are killed;
- loss of habitat;
- impact on fauna/animals die/fish die;
- impact on ecosystems/food chains/nutrient cycle;
- global warming;
- acid rain;
- noise disturbs animals; etc.

4 @ 1 mark

[4]

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(b) (i) Ideas such as:

- More primary in Nepal/less primary in Brazil/or statistics;
- More secondary in Brazil/less secondary in Nepal/or statistics;
- More tertiary in Brazil/less tertiary in Nepal/or statistics;
- Mainly tertiary in Brazil/mainly primary in Nepal; etc.

3 @ 1 mark

[3]

(ii) Ideas such as in Brazil:

- less people work in subsistence agriculture/produce their own food;
- less mining/less raw materials/raw materials exhausted;
- there is more mechanization of farming;
- more people have education/skills for secondary/tertiary employment;
- more development of factories/services or examples of hotels (dev.)/can't afford to build factories in Nepal;
- more technology in Brazil;
- better developed infrastructure allow development of factories in Brazil; etc.

NB: answer needs the comparison. Can link discrete accounts/descriptions. Could do vice versa.

5 @ 1 mark or development

[5]

(c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail describing and/or explaining recent changes in employment structure

Level 2 (4–6 marks)

Uses named example

More developed statements describing and/or explaining recent changes in employment structure

NB max. 5 marks with no named example or inappropriate historical example such as Industrial Revolution in UK.

Level 3 (7 marks)

Uses named example

Comprehensive and accurate describing and/or explaining recent changes in employment structure including some place specific reference.

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There will be likely reference to ideas such as:

- Mechanization
- Education
- Skills Development
- Investment
- Multinationals
- Demand for services
- Reasons for moving into a different sector (e.g. better paid jobs)

NB: must show change.

[7]

[Total: 25]

- 6 (a) (i)** Cost of/wages for/payment for workers/cost of the work done/cost to pay the employees/staff.

1 mark

[1]

- (ii)** Women`s clothing...iron and steel...flour milling

2 marks for all 3 correct

1 mark for 1 or 2 correct

2 @ 1 mark

[2]

- (iii)** Ideas such as:

- some industries are less mechanized than others or vice versa;
- cannot be completely automated;
- some jobs have to be done by hand/some jobs are more labour intensive/some require more physical effort;
- some jobs/hand painted porcelain cannot be done by machinery/or other examples;
- some jobs are higher paid/higher salaries/highly skilled; etc.

3 @ 1 mark

[3]

- (iv)** Factors such as:

- labour costs;
- availability of workers;
- skills availability;
- location of universities/research establishments;
- government policy (or example);
- location of large/growing markets;
- close to motorway network;
- near to/access to airports/ports/good access for imports/exports;
- near to component manufacturers;
- near to other high tech industries/agglomeration;
- near to pleasant environment;
- large area of/flat/cheap land; etc.

4 @ 1 mark

[4]

Page 13	Mark Scheme	Syllabus	Paper
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- (b) (i) • Inputs: resources/things needed in order for production to take place;
 • Processes: what is done to the inputs to turn them into outputs/create a product;
 • Outputs: the products which are produced/what they sell;

3 @ 1 mark [3]

- (ii) Credit identification of inputs, processes and outputs as appropriate to choice of manufacturing/processing industry chosen.

1 mark reserved for each of input/process/output. No mark awarded for choice.

5 @ 1 mark [5]

(c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail describing and/or explaining inputs of a farming system.

Level 2 (4–6 marks)

Uses named example

More developed statements describing and/or explaining inputs of chosen farming system.

(NB max. 5 marks with no named example)

Level 3 (7 marks)

Uses named example.

Comprehensive and accurate answer describing and explaining inputs of chosen farming system, including some place specific reference.

There will be likely reference to ideas such as:

- Human inputs
- soils
- land
- Government incentives
- Climate
- relief
- fertilizers etc.

[7]

[Total: 25]