

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

**MARK SCHEME for the October/November 2010 question paper
for the guidance of teachers**

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) Shandong....Guizhou....Qinghai

1 mark for correct order [1]

(ii) 60 million divided by 187,400 (1 mark for method)
= 320 (.17) / (.2) (1 mark for correct answer)

2 @ 1 mark [2]

(iii) Ideas such as:
communications are difficult/roads hard to build;
difficult to build on (steeply sloping land);
isolation/far away from CBD/cities/towns;
agriculture is poor in mountains/food hard to produce/shortage of food;
climate often cold/snow/icy/or implications;
poor soils/infertile;
wet/windy;

N.B: Must relate to physical factors

3 @ 1 mark [3]

(iv) Ideas such as:
Settlements developed around ports/harbours/easier to travel abroad;
trade opportunities/imports/exports;
much industrial development/factories;
employment/job opportunities;
coastal areas have good communications/roads/rail links/transportation;
growth of tourism/examples of jobs in tourism;
fishing industry/food from sea;
first regions to be settled idea;
etc.

4 @ 1 mark [4]

(b) (i) Ideas such as:
insufficient workforce/not enough people to work/need to pay higher salaries;
resources cannot be fully exploited;
low production/of e.g. food/consumer goods;
negative balance of payments;
low GNP/national income/weak economy/economy fails/slow growth;
difficult to defend country;
businesses may move out;
high immigrant population/need to attract migrants;
underuse of services or examples or implications e.g. closure of schools;
lack of investment in named services;
etc.

3 @ 1 mark [3]

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- (ii) Ideas such as:
 people do not have enough resources/examples of resources (dev);
 lack of work;
 inadequate food supplies;
 poor access to education;
 poor access to health care;
 overcrowded housing;
 traffic congestion;
 atmospheric pollution/(illness e.g. asthma – dev);
 inadequate water supply;
 sanitation;
 overuse of agricultural land/overgrazing/overcultivation/(desertification – dev)
 deforestation/loss of natural vegetation/habitats destruction/(desertification – dev) but no
 double credit.
 etc.

Reserve 1 mark people/natural environment

5 @ 1 mark or development

[5]

(c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail which suggest reasons for international migration.
 (e.g. more jobs, better services, schools, hospitals, clinics, not enough food, improved
 standard of living, better quality of life, war, drought etc.)

Level 2 (4–6 marks) Max 5 if no named example. 3 × developed statements plus named
 example for 6 marks.

More developed statements which explain reasons for international migration.
 (e.g. more jobs in destination country where they can work in service sector/factories, better
 or more schools/hospitals/clinics so that...., can buy food from shops rather than rely on
 unproductive farmland, refugees fleeing from war torn areas in fear of their lives, drought
 prevents them from producing enough food to feed their families etc.)

Level 3 (7 marks) must include place specific information for 7 marks.

Uses named example (e.g. Turkey to Germany).

Comprehensive and accurate statements including some place specific reference.

(e.g. more jobs in Germany where they were employed in rebuilding cities like Dresden after
 World War 2, greater access to schools/hospitals/clinics than in remote mountainous areas
 of Turkey, refugees fleeing from war torn areas close to Iraqi border in fear of their lives,
 drought in regions such as central Anatolia prevents them from producing enough food to
 feed their families etc.)

NB: Level 3 response must refer to both push and pull factors.

[7]

[Total: 25]

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- 2 (a) (i) The area where people who use a service live/how far people travel/distance travelled from to use the service

1 mark [1]

- (ii) **Low order** examples such as:
 Newsagent/church/general store/primary school/hairdressers; etc.
High order examples such as:
 Department store/university/jeweller/theatre/specialist shops/car showrooms;
 etc.

2 @ 1 mark [2]

- (iii) Ideas such as:
 High order services need more customers to make a profit/use or operate the service;
 They are often expensive;
 High order services are likely to be used less frequently than others;
 High order services may be only used by a small proportion of the population;
 They are often specialist;
 etc.

3 @ 1 mark [3]

- (b) (i) Services such as:
 School/Colegio San Augustin;
 Shopping centre/Santa Cardina;
 Bus terminus/Terminal Ormeno;
 Hospital/clinic;
 Bank;
 etc.

3 @ 1 mark [3]

- (ii) Ideas such as:
 gridiron road development/straight roads;
 Traffic intersections/named examples;
 Public transport/bus services/bus station;
 Areas of greenery/parks/playing fields/plaza;
 Public services/retail/education/hospitals/clinic;
 Expressway/major road development
 etc.

NB: Must be map evidence.

4 @ 1 mark [4]

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- (iii) Ideas such as:
 Deforestation/loss of woodland/forest/greenery/open spaces;
 loss of farmland/hedgerows;
 habitats destroyed/animals killed/scared away;
 species under threat/extinction/examples of species (dev);
 filling in of water courses;
 reclamation of wetlands/swamps/flooding (dev);
 air pollution;
 water pollution etc.

NB: must be development of the impact rather than the source of the pollution.
 5 @ 1 or development

[5]

(c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail on reasons for growth of settlement.

(e.g. good roads, flat land, water available/close to a river, lots of migrants/people have moved there, work available. etc.)

Level 2 (4–6 marks) Max 5 if no example. 3 developed statements plus named example for 6 marks.

More developed statements on reasons for growth of settlement.

(e.g. focus of routes/route centre; good roads enabled growth of industry; flat land which was above flood plain; bridging point of river, reasons for growth of industry. etc.)

Level 3 (7 marks) Must include place specific information.

Uses named example (e.g. Liverpool).

More developed statements on reasons for growth of named settlement including some place specific reference.

(e.g. Liverpool is a port; located on estuary of Mersey river; deep water anchorage; sheltered anchorage; space for expansion of warehouse facilities; opposite side of Atlantic to USA encouraged trade; hinterland of industrial towns/cotton manufacturing; well developed road/rail communications; impact of Manchester Ship Canal etc.)

NB: accept shanty town examples and reasons for growth. Response can refer to growth of population or area.

[7]

[Total: 25]

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3 (a) (i) 50–60 metres

1 mark [1]

- (ii)** Ideas such as:
 Large waves/storms/destructive waves;
 Soft/unconsolidated rocks;
 No coastal protection/or examples of;
 Narrow beach;
 No wave cut platform;
 etc.

2 @ 1 mark [2]

- (iii)** Ideas such as:
 Destruction of houses/bungalows/homes;
 Loss of gardens;
 Need to evacuate;
 Threat to businesses/hotel/craft shop;
 Loss of income from tourists;
 Loss of part of car park etc.

3 @ 1 mark [3]

- (iv)** Methods of marine erosion such as:
 Hydraulic action; cliffs worn away by weight/power of water (exp)/expansion of air in cracks;
 Corrasion/Abrasion; cliffs worn away by materials which are being carried by waves acting like sandpaper (exp);
 Corrosion/Solution; cliffs dissolved by chemicals in water (exp);
 Attrition; materials being carried by waves reduced in size by hitting each other (exp)

NB: Max 2 for named process and 2 marks for explanation. Can credit explanation of process without the name of the process.

4 @ 1 mark [4]

- (b) (i)** Ideas such as:
 in lines;
 (North) west coast/western side;
 South/south east coast;
 Near the coast/offshore;
 Within 1 or 2 kms of coast;
 Between land and 100 m depth line;
 Named reference to 3 or more bays and/or Kitridge point and/or Marine reserve;
 etc.

3 @ 1 mark [3]

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- (ii) Conditions required for the growth of coral reef such as:
 Warm water/seas; temperatures above 20 °C (dev)
 Shallow water; not more than 60 metres deep (dev)
 Water free from sediment/clear/away from deltas/rivers;
 Plentiful supply of oxygen in water/unpolluted;
 Plentiful supply of plankton;
 Calm seas/lack of destructive waves;
 etc.

5 @ 1 mark or development

[5]

(c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail explaining how/why spit/sand dunes have developed.
 (e.g. deposition by wind, onshore winds, builds up over time etc)

Level 2 (4–6 marks) Max 5 marks if no named example. 3 developed statements plus named example for 6 marks.

More developed statements explaining how/why spit/sand dunes have developed.
 (e.g. deposition by wind as energy is reduced, onshore winds pick up dry sand from beach, obstruction on beach/pebble/seaweed causes eddies/sheltered area; marram grass colonises dunes and traps further sand etc.)

Level 3 (7 marks)

Uses named example (e.g. Ynyslas dunes, Dyfed).

Comprehensive and accurate statements explaining how and why spit/sand dunes have developed, including labelled diagrams. Do not need place specific reference use of diagram will replace this.

(e.g. deposition by wind as energy of winds blowing from Cardigan Bay is reduced, westerly onshore winds pick up dry sand from the wide beach at the estuary of the Dovey river, obstruction on beach/pebble/seaweed causes eddies/sheltered area; marram grass colonises dunes and traps further sand etc.)

NB: Named examples must be names of dunes or spit.

[7]

[Total: 25]

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4 (a) (i) SW USA/Sahara/Thar/Arabian

1 mark [1]

(ii) Ideas such as:

In South America;
Around Tropic of Capricorn/23.5S;
West of land mass/near Pacific Ocean/West coast;
In Chile/Peru (accept either);
Between Andes and the coast;
In southern hemisphere;
etc.

2 @ 1 mark [2]

(iii) Ideas such as:

high daytime temperatures (desc); high angle of sun/absence of cloud (exp)
low night time temperatures (desc); absence of cloud/heat escapes (exp)

3 @ 1 mark with 1 reserve on day/night (no double credit) [3]

(iv) Ideas such as:

A long way from oceans;
Not close to sea/large lake;
Trade winds;
Blow over large areas of land hence no source of moisture;
Rain shadow;
High pressure;
etc.

NB: diagram or map must be labelled – credit diagram/map or text – no double credit.

4 @ 1 mark [4]

(b) (i) Features should be evident from photographic evidence. Ideas such as:

Scattered/sparse vegetation;
Low shrubs/bushes/scrub;
Cacti;
Palm trees;
Plants with narrow leaves/spines/spiky;
etc.

3 @ 1 mark [3]

(ii) Ideas such as:

Low precipitation (aridity) results in scattered (sparse) vegetation;
Seeds (plants) remain dormant during long dry spells;
Narrow (spiky) leaves reduce rates of evapotranspiration/because of high temperatures;
long roots (wide spreading roots) search for water;
Some plants (cacti) store water in order to survive long periods of drought
etc.

NB: Must link climate and vegetation.

5 @ 1 mark or development [5]

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(c) Levels markingLevel 1 (1–3 marks)

Statements including limited detail explaining how the area is at risk/threatened from human activities.

(e.g. the area is used for farming, resources/oil is mined/drilled in the area, animals are killed, tourists destroy dunes etc.)

Level 2 (4–6 marks) Max 5 marks if no named example. 3 developed statements plus named example for 6 marks.

More developed statements explaining why the area is at risk/threatened from human activities.

(e.g. large herds of animals are grazed in the area which destroys pastures, resources/oil is mined/drilled in the area and wildlife is killed as habitat is destroyed, the use of quad bikes/trampling on the dunes wears them away etc.)

Level 3 (7 marks)

Uses named example (e.g. Arabian Desert).

Comprehensive and accurate statements explaining how and why the area is at risk from human activities, including some place specific reference.

[NB For place specific reference candidates could name specific parts of the desert or countries affected.] [7]

[Total: 25]

5 (a) (i) Methods by which the raw materials are converted to finished products/stages in the manufacture of a product/jobs that take place in a factory.

1 mark [1]

(ii) Input = coal/iron ore/limestone/scrap iron/labour/power etc.
Output = pipes/tubes/plates/sheets/bars/rods etc.

2 @ 1 mark [2]

(iii) Ideas such as:
atmospheric pollution/smoke (from factory)/fumes/exhaust fumes;
pollution of rivers/groundwater;
visual impact/eyesore;
clearance of natural vegetation/deforestation;
loss of habitat/killing wildlife/wildlife scared away;
impact on ecosystems/food chains;

3 @ 1 mark [3]

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- (iv) Ideas such as:
 Improve infrastructure;
 Improve road network/build motorways/dual carriageways/widen roads/cheap transport;
 Improve rail network;
 Improve/build ports;
 Improve build airports;
 Free trade zones;
 Tax incentives;
 Low cost loans for equipment;
 Development/Assisted Area status;
 Grants for payment of workforce;
 Readily constructed buildings/build industrial estates/science parks;
 Rent free buildings/low rents;
 Setting up training schools for workers;
 Encourage immigration for workforce;
 Publicity/commercials;
 etc.

4 @ 1 mark [4]

- (b) (i) Ideas such as:
 employment in factory/jobs;
 multiplier effect;
 more money (circulating in area);
 improvements to quality of life or examples (e.g. afford more food/education/health care etc.)
 development of transport network/roads/rail/air;
 development of infrastructure/electricity/water supply/sewage;

3 @ 1 mark [3]

- (ii) Ideas such as:
 land is likely to be flat;
 availability of coal/measurement/last long time (dev);
 iron ore nearby/measurement/last long time (dev);
 reduces cost of transporting raw materials; which are bulky (dev);
 water supplies available; (from river)/river nearby/for cooling (dev)/ dispose of waste in river; (dev)
 railway network (for transport);
 port nearby; for export of products(dev)/imports of raw materials not available/cheaper to import raw materials; (dev)
 nearby potential market/railway to market e.g. Kolkata;

5 @ 1 mark or development [5]

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(c) Levels marking

Level 1 (1–3 marks)

Statements including limited detail explaining why tourism has developed in an area, referring to physical and/or human attractions.

(e.g. a hot climate; scenic beauty; beaches; tropical vegetation; interesting culture; historical buildings etc.)

Level 2 (4–6 marks) Max 5 marks if no named example. 3 developed statements plus named example for 6 marks.

More developed statements explaining why tourism has developed in an area, referring to physical and/or human attractions.

(e.g. a hot climate with summer average temperatures at least 25 °C; Clean/Safe/Sandy/white beaches; clear blue seas; tropical vegetation with palm trees; historical buildings such as cathedrals etc.)

Level 3 (7 marks)

Uses named example (e.g. Majorca).

Comprehensive and accurate statements explaining why tourism has developed in an area, **referring to physical and human attractions**, including some place specific reference.

(e.g. a Mediterranean climate with hot, dry summers with average temperatures at least 25 °C and mild winters with no frost and snow; Sandy beaches at resorts like Alcudia; historical buildings such as the cathedral at Palma; theme parks/water parks etc.)

NB: Named area can be a resort e.g. Athens/London/Blackpool. Tourist Islands are also acceptable. [7]

[Total: 25]

- 6 (a) (i) A. Farming to produce just enough to feed family/tribe.
B. Producing things on farms to sell/make a profit.

2 @ 1 mark [2]

- (ii) Photograph C

1 mark [1]

- (iii) Differences such as:
D is subsistence but E is commercial;
E is much larger scale;
D is growing vegetables, E cereals;
E is more mechanised etc

NB: Must be comparative.

3 @ 1 mark [3]

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- (b) (i) Reduction of numbers in Asia but increase in Africa; c. 96 – 100 million to 250 million in Africa;
c. 640 – 645 million to c. 310 – 315 million in Asia

NB: Reserve 1 mark for overall pattern/trend.
Any pair from Africa and Asia can be accepted for 2 marks.

3 @ 1 mark [3]

- (ii) Ideas such as:
Drought; crops won't grow;
Flooding; crops washed away; a lot of rain drowns crops/washes them away;
Hurricanes/cyclones/typhoons; destroy food;
Infertile soils; no nutrients for crops to grow;
soil erosion by wind; nutrients;
leaching of nutrients;
Pests or examples i.e. Locusts;
etc.

4 @ 1 mark [4]

- (iii) Ideas such as:
more food to eat/for the family;
thus in better health;
and can therefore work harder;
greater surplus to sell;
greater income for family;
money for education of children; or other use;
access to qualifications/better job in future;
able to invest money in farm machinery etc.

5 @ 1 mark or development [5]

(c) Levels marking

Level 1 (1–3 marks)

Statements including limited describing a small scale subsistence farming system.
(e.g. soil, ploughing, transplanting, harvesting, rice)

Level 2 (4–6 marks) Max 5 marks if no named example. 3 developed statements plus named example for 6 marks.

More developed statements describing the chosen subsistence farming system.
(e.g. alluvial soils, fertile soil, ploughing using plough drawn by water buffalo, harvesting using sickle, rice used to feed family, watered using traditional irrigation channels)

Level 3 (6 or 7 marks)

Uses named example (e.g. rice growing in Ganges Valley).

Comprehensive and accurate statements including correct reference to a named area.

NB Place Specific references could be to specific areas/villages/regions or to Monsoon climate.

Must have input, process and output for level 3. May name a city if appropriate. [7]

[Total: 25]