

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

MARK SCHEME for the May/June 2012 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.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

- Cambridge will not enter into discussions or correspondence in connection with these mark schemes.

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- 1 (a) (i) Ghana [1] [1]
- (ii) 19.2
2nd mark for correct calculation shown (ie 28.1 – 8.9)
Or $BR - DR = \text{Natural population increase.}$ [2 x 1] [2]
- (iii) A Spain
B Ethiopia
C Ethiopia [3 x 1] [3]
- (iv) Ideas such as:
Good treatment of diseases/or examples/less spread of disease/less disease/medicine;
innoculation against diseases;
improved health care facilities/can afford healthcare or examples;
training of doctors/nurses;
investment in care homes/services for elderly/care for elderly;
availability of pensions;
no famine/adequate nutrition/food supply/better diet;
good sanitation;
safe water supplies;
healthier lifestyles or examples;
education about health; etc. [4 x 1] [4]
- (b) (i) General decrease;
1.45–1.5% to 1.15% or any other pairs of statistics;(1 mark max or reserve on statistics).
Peak in 1962/major increase between 1950–58 or 1960–61 or other relevant dates
where increase occurs;
dip in 1960/decreases from 1957/ decrease from 1961 onwards;
fluctuates; etc. [3 x 1] [3]
- (ii) **One mark reserved for reference to decrease expected** [1]
Reasoning to MAX 4 such as: [4 x 1]
Reduction of birth rates in LEDCs;
Smaller families;
due to more availability of contraception (dev);
due to education re. contraception (dev);
less need for children to work in LEDCs;
due to more widespread access to education (dev);
less likely to need children to look after parents in old age;
due to state support/pensions (dev);
reduction in IMR/people not needing to have extra children to
ensure some survive;
education of women/careers/materialistic outlook;
traditions/religions are less important in modern society;
marry later;
increase in death rates/DR higher than BR/reduced life expectancy;
due to AIDS/HIV (dev);
due to increased drought/famine (dev);
war/conflict;
government policy/one child policy; [5]

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(c) Levels markingLevel 1 [1–3 marks]

Statements including limited detail which suggest reasons for international migration.
(e.g. more jobs, better services, not enough food, war, drought etc.).

Level 2 [4–6 marks]

Uses named example.

More developed statements which explain reasons for international migration.

(e.g. more jobs in destination country where they can work in service sector/factories, greater access to schools/hospitals/clinics, 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.)

NB max 5 if no named example; max 6 marks if just give push or pull factors.

Level 3 [7 marks]

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

Comprehensive and accurate statements including some place specific reference

Reference must include push and pull factors.

(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.)

[7]

[Total: 25]

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- 2 (a) (i) Ideas such as:
 Housing in B is older/C is newer;
 Terraced housing in B/Detached in C;
 Houses have gardens in C, not in B;
 Houses in C are larger than B;
 B have chimneys C don't;
 C have garages/driveways but B doesn't; etc.
 NB Must be comparative. [2 x 1] [2]
- (ii) D [1]
- (iii) Ideas such as:
 previous buildings were old/in disrepair/modernize buildings/homes;
 construction of new housing/apartments;
 part of traffic schemes/new road building (or example such as inner ring road);
 industries/businesses had closed down/use of land instead of derelict buildings;
 building of new shops/cinemas/leisure opportunities;
 improve aesthetic value of area /environment;
 building of new offices/factories;
 prevent building on Greenfield sites; etc.
 [3 x 1] [3]
- (iv) Conflicts such as:
 disturbs people/noise (during construction phase);
 dust/dirt from construction;
 traffic congestion (during construction or when in use);
 conflict over demolition of properties or examples (e.g. homes)/relocation of locals;
 loss of jobs if workplaces demolished;
 increased rents/prices of new residential properties;
 loss of historical buildings/heritage/interesting architecture;
 safety issues (on building sites or roads);
 closure of roads/footpaths; etc.
 [4 x 1] [4]
- (b) (i) Descriptions such as:
 in a sector/line/wedge;
 radiating out from the CBD;
 stretches from inner city to suburbs;
 Explanations such as:
 Transport accessibility;
 around railway lines;
 along major roads;
 next to/along a river or canal;
 flat land; etc.
 Reserve 1 mark on describe/explain [3 x 1] [3]
- (ii) Expect candidates to answer question by referring to variations in land use in both MEDC and LEDC cities, however no reserve on either. Be prepared to accept a wide variety of ideas such as:
 in many cities there are zones of specific land uses;
 especially industry (dev);
 however sometimes there is a more concentric pattern;
 with lower quality residential in inner city (MEDC) (dev);
 but in LEDC higher quality often in inner city (dev);
 in some cities redevelopment has made models like this irrelevant; etc.
 [5 x 1 or development] [5]

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(c) Levels markingLevel 1

[1–3 marks]

Statements including limited detail describing the main features of a squatter settlement.
(e.g. self built homes, unmade roads, homes built close together, informal businesses etc.)

Level 2

[4–6 marks]

Uses named example.

More developed statements describing the main features of a squatter settlement.

(e.g. homes built by local people who live in them using materials found on dumps, unmade roads which flood when it rains, flimsy homes built close together which are a fire hazard, many people carry out small businesses from their homes such as recycling scrap materials etc.)

NB Max 5 if no named example

Level 3

[7 marks]

Uses named example (e.g. Rio de Janeiro).

More developed statements describing the main features of a squatter settlement including some place specific reference.

(e.g. homes in Rocinha built by local people who live in them using materials found on dumps, unmade roads lead to favelas which flood when it rains, flimsy homes built close together which are a fire hazard, many people carry out small businesses from their homes such as recycling scrap materials etc.)

[7]

[Total: 25]

Page 6	Mark Scheme: Teachers' version	Syllabus	Paper
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- 3 (a) (i)** Stort/Ash/Rib/Beane **[1]**
- (ii)** Ideas such as:
 More tributaries have joined;
 Further distance downstream/X is nearer to mouth;
 More water will have been added by run off;
 More concrete surfaces around X so more runoff; etc.
 NB no need for comparative statements. [2 x 1] **[2]**
- (iii)** Answer needs to be comparative or two discrete accounts.
 Ideas such as:
 Wider at X;
 Less V shaped at X;
 More likely to have flood plain/flat land next to river at X;
 Steeper sides at Y etc. [3 x 1] **[3]**
- (iv)** Problems such as:
 flooding of roads;
 flooding of farmland/damage to crops/death of farm livestock;
 damage to houses/property/evacuation of residents;
 damage to/flooding of businesses;
 river may be polluted;
 need to build bridges for transport/difficult to travel;
 drowning/deaths;
- Benefits such as:
 Water supply;
 Fishing;
 Irrigation/water for livestock;
 Recreational value;
 Sewage/waste disposal;
 HEP;
 Transport; etc.
- Max 1 on each of problems/benefits [2 + 2] **[4]**
- (b) (i)** Hydraulic action – weight/power of water/loosening of unconsolidated/soft materials/pressuring of air in cracks etc.
 Corrasion – river uses load it is carrying to erode/sandpapering action etc.
 Corrosion – chemicals/acids in water/dissolve rocks etc. [3 x 1] **[3]**
- (ii)** Ideas such as:
 rapid erosion of less resistant rock;
 more resistant rock not worn away as rapidly;
 power of falling water enlarges plunge pool;
 undercutting of hard rock;
 collapse of hard rock layer/lack of support;
 waterfall retreats (to form gorge); etc. [5 x 1 mark or development] **[5]**

Page 7	Mark Scheme: Teachers' version	Syllabus	Paper
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(c) Levels marking

Level 1 [1–3 marks]

Statements including limited detail explaining how an oxbow lake is formed.
(e.g. river cuts off a meander, erosion during floods, outer bend of meander eroded etc.)

Level 2 [4–6 marks]

More developed statements on how/why an oxbow lake is formed.
(e.g. Outer bend of meanders eroded due to faster flowing water, neck of meander cut during time of flood, former meander sealed by deposition etc.)

NB Max 6 marks without diagram

Level 3 [7 marks]

Comprehensive and accurate statements explaining how and why an oxbow lake is formed, including appropriate labelled diagram(s).

- NB 1. Diagram must be labelled (or numbers + key) for L3 credit.
2. Do not double credit text and annotation (other than allowing access to L3)

[7]

[Total: 25]

Page 8	Mark Scheme: Teachers' version	Syllabus	Paper
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- 4 (a) (i)** Himalayas **[1]**
- (ii)** Ideas such as:
plates move/push towards each other/collide/pressure;
crust/rocks get bent and crumpled/into a series of folds;
layers of crust gets uplifted as a result, [2 x 1] **[2]**
- (iii)** A = Destructive/Convergent
B = Constructive/Divergent
C = Conservative/transform [3 x 1] **[3]**
- (iv)** Ideas such as:
Subduction of one plate (oceanic)/sinks;
Greater density of oceanic plate;
Friction/heating;
Destruction of oceanic plate/turns to magma/melts;
Build up of magma/pressure;
Magma rises through lines of weakness/fissure/crack;
Lava solidifies to create volcano; [4 x 1] **[4]**
- (b) (i)** Ideas such as;
it is an area where plates meet/at/on/near to a plate boundary;
there are many faults/lines of weakness;
friction/build up of pressure;
pressure release/becomes too great until released; etc. [3 x 1] **[3]**
- (b) (ii)** Ideas such as:
Poor quality buildings/infrastructure/roads/bridges;
Which easily collapse (dev);
As building regulations are not enforced (dev);
High population densities;
Poor medical services/hospitals/get destroyed;
Therefore people cannot be properly treated for their injuries (dev);
Lack of planning/emergency procedures/emergency shelters/level of preparation;
Poor education eg earthquake precautions;
Lack of money for re-building/assistance/rescue; etc. [5 x 1 mark or development] **[5]**

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(c) Levels markingLevel 1 [1–3 marks]

Statements including limited detail explaining why people live close to a volcano.

(e.g. soils are fertile; they can get hot water/electricity from the volcano; the volcano attracts tourists; the volcano provides raw materials; they have lived there all their lives; they are close to family/friends; they work in the area; they cannot afford to move; they are willing to take the risk etc.)

Level 2 [4–6 marks]

Uses named example of a volcano.

More developed statements explaining why people live close to a volcano.

(e.g. soils are fertile and yields of crops are high; they can use or generate geothermal power/energy; the volcano attracts tourists and they can get jobs as tour guides; the volcano provides raw materials such as sulphur; they are confident in prediction and willing to take the risk etc.)

(NB Max 5 if no named example)

Level 3 [7 marks]

Uses named example (e.g. Mt Etna volcano).

Comprehensive and accurate statements explaining why people live close to a volcano, including some place specific reference.

(e.g. The fertile volcanic soils support extensive agriculture with vineyards and orchards spread across the lower slopes of the mountain and the broad Plain of Catania to the south.; they can generate electricity from the volcano using geothermal power; the volcano attracts tourists and residents of nearby Messina and Catania earn money from renting accommodation to tourists; the Italian government have invested money in prediction and they are willing to take the risk etc.)

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[Total: 25]

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- 5 (a) (i) February [1]
- (ii) 1.5(C)
29.5–28(C) (1 mark for showing method) [2 x 1] [2]
- (iii) Ideas such as:
Long/many sunshine hours;
Sunny/sunshine all year round;
Up to 250 hours of sunshine /never lower than 200 hours monthly;
High temperatures/never gets too cold/hot/warm all year round;
Average never below 28°C/always between 28–30 degrees; etc. [3 x 1] [3]
- (iv) Ideas such as:
Clear/blue seas;
for swimming/boating;
Sheltered/calm waters;
Sandy/white beaches for sunbathing;
Areas of tropical vegetation e.g. palm trees;
Relaxing/peaceful atmosphere;
Clear blue skies/sunshine; etc. [4 x 1] [4]
- (b) (i) Ideas such as :
Higher in November than June/increased in November;
November 38 000–39 000;
June 24 000 allow tolerance of 23 000–24 000;
Greater number of between 14 000–16 000 in November; [3 x 1] [3]
- (ii) Ideas such as:
Benefits:
jobs are created for local people/earn money;
examples of jobs (dev);
foreign exchange/income too country/boosts economy;
enabling spending on education/hospitals etc.;
development of infrastructure (water, electricity, transport etc.);
cultural exchange;
retention of culture/traditions;
increased market for local farmers;
sales of local craft items.
Disadvantages:
increase in local traffic congestion/atmospheric pollution from traffic;
loss of local culture/traditional way of life;
impact of behaviour of tourists/drunkenness etc.;
noise from tourists;
exploitation/low paid jobs/long hours;
seasonal work;
shortage of water supplies;
litter from tourists;
lack of privacy;
loss of farmland for building;
visual pollution; etc. NB Max 3 on benefits/disadvantages [5 x 1] [5]

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(c) Levels markingLevel 1

[1–3 marks]

Statements including limited detail describing how tourism is damaging the natural environment

(e.g. vegetation destroyed/plants killed, animals killed, fumes from exhausts/traffic, over use of water, litter from tourists on beaches, waste from hotels, etc.)

Level 2

[4-6 marks]

Uses named example

More developed statements which describe how tourism is damaging the natural environment.

(e.g. sand dune vegetation destroyed; ecosystems threatened; food chain disrupted; loss of habitats; noise from construction/traffic scares animals away; fumes from exhausts/traffic damages roadside vegetation, over use of water supplies lowers water table; litter from tourists on beaches/in sea may kill sea turtles; waste from tourists dumped on landfill sites causes seepage of toxins into water table; more CO₂ from deforestation increases global warming; etc.)

NB Max 5 if no named example

Level 3

[7 marks]

Uses named example (eg Villingili, Maldives).

Comprehensive and accurate statements including some place specific reference.

(e.g. tropical coconut palms destroyed for building of hotels; ecosystems threatened as food chain disrupted, loss of habitats for lizards; ferry every 10 minutes from Male pollutes seas, noise from construction/traffic scares animals away; litter from tourists on beaches/in sea may kills reef fish; waste from tourists incinerated polluting atmosphere, coral reefs destroyed by tourists trampling on them/taking samples home etc.)

[7]

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- 6 (a) (i)** Producing things on farms to sell/makes a profit/earns an income; **[2]**
- (ii)** Differences such as:
 More vines within 2 km of village;
 More arable between 6–8 km/more wheat & Barley;
 More pasture 6–8 km;
 More coppice/wood 6–8 km;
 NB must be comparative statements. [2 x 1] **[2]**
- (iii)** Ideas such as:
 vines kept near village as they need lots of attention;
 arable away from village as it needs lots of land;
 more irrigated land closer to village as it takes a lot of labour;
 vines close to village to be protected from thieves;
 further away from village has more space available; etc.
 [3 x 1] **[3]**
- (iv)** Ideas such as:
 soil fertility/quality/depth;
 relief/height/slope/flat land;
 amount of rainfall/precipitation;
 number of frost free days;
 amount of sunshine;
 temperature;
 drainage; etc.
 [4 x 1] **[4]**
- (b) (i)** Removing field boundaries – to create more land/bigger fields/easier to use machines etc.
 Chemical spraying – to kill insects/pests.
 Fertilizer spread on crops – to increase yields/make them grow better.
 [3 x 1] **[3]**
- (b) (ii)** Ideas such as:
 natural vegetation/trees destroyed;
 loss of habitat (dev);
 including nesting space for birds (dev);
 poisoning of insects;
 impacts on food chain (dev);
 reduction in biodiversity (dev);
 fertilizers washed into rivers/run off of fertilizers;
 nitrates increase in rivers;
 growth of algae (dev);
 lack of oxygen/eutrophication;
 kills aquatic life (dev);
 soil erosion;
 burning stubble/vegetation;
 creates air pollution;(dev)
 air pollution from machines; etc.
 [5 x 1 mark or development] **[5]**

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(c) Levels markingLevel 1

[1–3 marks]

Statements including limited describing processes carried out on a small scale subsistence farm.

(e.g. ploughing, transplanting, harvesting, watering etc.)

Level 2

[4–6 marks]

Uses named example

More developed statements describing processes carried out on a small scale subsistence farm.

(e.g. ploughing using plough drawn by water buffalo, harvesting using sickle, watered using traditional irrigation channels)

NB Max 5 marks if no named example.

Level 3

[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

[7]

[Total: 25]