



GEOGRAPHY

0460/11

Paper 1

October/November 2016

MARK SCHEME

Maximum Mark: 75

Published

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- 1 (a) (i) South Korea....China....Italy
Correct order needed [1 mark] [1]
- (ii) Decrease = Japan/Germany/Poland/Russia
Highest rate of growth = India [2 @ 1 mark] [2]
- (iii) Ideas such as:
- No abortion available;
 - little availability of/people don't use contraception/family planning;
 - not educated re. contraception/impact of population growth/family planning;
 - not likely to be able to afford contraception;
 - want children to work/earn money (or example);
 - want children to look after parents in old age;
 - want children to look after younger siblings/do domestic chores;
 - no government policy to reduce family size;
 - have large families due to tradition/status;
 - have large families due to religious influences;
 - high infant mortality rate/have greater number of children in the
 - hope some will survive;
 - polygamy;
 - women marry at young age;
 - women do not have careers;
 - keep having children until boys is born to carry on family name;
 - desire for girl children to obtain dowry money
etc. [3 @ 1 mark] [3]
- (iv) Ideas such as:
- people do not have enough resources/raw materials;
 - lack of fuel/power (or example such as electricity);
 - lack of work;
 - poverty/people cannot afford (specified items, e.g. education, houses, etc.);
 - inadequate food supplies/starvation/famine/lack of space for agriculture;
 - poor access to education;
 - poor access to health care/lack of hospitals;
 - high levels of disease/high death rates/low life expectancy/high IMR;
 - lack of/overcrowded housing/not enough space for housing/people live
in/growth of squatter settlements;
 - atmospheric/water pollution;
 - inadequate water supply;
 - lack of sanitation,
 - overcultivation;
 - overgrazing;
 - disputes over agricultural land/places to live;
 - traffic congestion;
etc. [4 @ 1 mark] [4]

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- (b) (i) Increasing proportion of 65+/old dependents/old people/people living longer;
Decreasing proportion of 0–19/children/young people/young dependents;
Increasing proportion of 20–64/economically active/adults;
Supporting statistics, e.g. 5% over 65 in 1950 likely to be 16% in 2050
/3X greater percentage, etc.
(1 mark MAX – Reserved)
(NB 1% tolerance on statistics) [3 @ 1 mark] [3]

(ii) Ideas such as:

- lowering of death rates/increase of life expectancy;
- improvements in health (medical) care/more doctors/more hospitals/better equipment (technology) used in hospitals;
- reduction of diseases/inoculation/medicines/cures for illnesses;
- improved sanitation;
- better water supplies;
- better diet/food supplies;
- healthy lifestyle/exercise;
- education about health/hygiene/diet;
- support for elderly/old people's homes;
- availability of pensions;
- lowering of birth rates/people have less children;

reasons for lower birth rate to MAX 1, etc.

(5 @ 1 mark) or development

[5]

(c) Levels marking

Level 1

[1–3 marks]

Statements including limited detail which evaluate the population policy.

Level 2

[4–6 marks]

Uses named example.

More developed statements which evaluate the population policy.

(NB Max 5 if no named or inappropriate 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:

- changes in birth rates
- consequences of falling/rising birth rates
- imbalance in proportions of male/female
- migration, etc.

Place specific reference is likely to consist of:

Named parts of the chosen country/location detail,

Specific details of the policy

Population data, etc.

NB The population policy could relate to natural population change or migration.

[7]

[Total: 25 marks]

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2 (a) (i) Area close to the CBD/close to the centre of the city [1 mark] [1]

(ii) long and straight;
right angles to each other;
parallel
grid pattern/rectangular/square, etc. [2 @ 1 mark] [2]

(iii) Ideas such as:

- to improve living conditions/quality of life/standard of living;
- areas are old/to modernise housing/build new houses/we need more houses/are derelict;
- properties lack amenities;
- factories/industries have closed down/are unoccupied;
- to attract/develop new business opportunities/industrial estates/retail parks/factories;
- to create employment (jobs)/people need jobs;
- new road building/inner ring roads being built/to improve traffic flow /building an urban expressway;
- some land is currently not being used/wasted, etc. [3 @ 1 mark] [3]

(b) (i) A = Suburbs
B = CBD
C = Inner city [3 @ 1 mark] [3]

(ii) One mark per appropriate description of **land use** based on photograph selected with credit for development;

Photograph A:
housing/apartments;
High rise buildings;
Open space/sports field;
Modern buildings, etc.

Photograph B:
High rise buildings;
High density land use/crowded;
Offices;
Especially on upper floors;
Shops/retail;
High order services;
Roads;
Restaurants;
Apartments;
Hotels;
banks, etc.

Photograph C:
High density;
Old buildings;
Housing/apartments;
Offices;
3 storeys, etc. [4 @ 1 mark] [4]

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(iii) Ideas such as:

- variation in the cost of land;
- land will be higher cost in CBD;
- variation in accessibility;
- CBD will be most accessible/focus of roads;
- Relief of land;
- Historical development of urban area etc.

(5 @ 1 mark) or development

[5]

(c) Levels marking

Level 1

[1–3 marks]

Statements including limited detail describe the effects of urban sprawl.

Level 2

[4–6 marks]

Uses named example.

More developed statements which describe the effects of urban sprawl.

(NB Max 5 if no named or inappropriate example)

Level 3

[7 marks]

Uses named example.

Comprehensive and accurate statements with some place specific reference.

Content Guide:

Answers are likely to refer to:

Deforestation/loss of vegetation/loss of farmland,

Impacts on ecosystems/food chains,

Traffic congestion,

Atmospheric pollution,

Water pollution.

Noise pollution,

Visual pollution.

House prices/land values increase,

Growth of squatter settlements, etc.

Place specific reference is likely to consist of:

Locational details,

Specific details of transport/communication network,

Named businesses, etc.

[7]

[Total: 25 marks]

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3 (a) (i) A = Strato-volcano B = Shield volcano

NB Both needed for 1 mark [1 mark] [1]

(ii) Ideas such as:

- B is higher/A is lower (or statistics);
- B is wider/A is narrower (or statistics);
- A has different layers but B does not;
- A has 2 vents B has one;
- B is more gently sloping/A is steeper, etc.

NB Points need to be comparative. [2 @ 1 mark] [2]

(iii) X = Vent

Y = Magma Chamber

Z = Crater

[3 @ 1 mark] [3]

(iv) Ideas such as:

- scenic beauty/views;
- tourist industry (examples of jobs in tourist industry);
- fertile soils/high yields of crops;
- geothermal power/'free' hot water;
- minerals/mining or example;
- building materials;
- hot springs;
- religious/cultural significance, etc.;

[4 @ 1 mark] [4]

(b) (i) Ideas such as:

- circle/ring;
- around Pacific Ocean;
- linear/in lines;
- along west of Americas;
- east of Asia;
- north of Australasia;
- isolated volcanoes (2 volcanoes) in center of Pacific Ocean, etc.

[3 @ 1 mark] [3]

(ii) Ideas such as:

- along plate boundaries/between plates/edge of plates/where plates meet;
- which are lines of weakness;
- convergence of plates/plates move towards each other;
- subduction/one plate sinks;
- as oceanic crust is more dense (dev);
- destruction of crust/magma created;
- build up of magma;
- creating pressure (dev)
- release of magma;
- through cracks in crust (dev);
- hot spots (accept if related to Hawaii or similar, 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 the impacts of an earthquake.

Level 2 [4–6 marks]
 Uses named example.
 More developed statements which describe the impacts of an earthquake.

(NB Max 5 if no named or inappropriate 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:

- deaths,
- injuries,
- destruction of property,
- fires,
- damage to infrastructure,
- economic impacts, etc.

Place specific reference is likely to consist of:

- Locational details,
- Date/Richter scale measurement,
- Details of named parts of the area,
- Statistical information, etc.

[7]

[Total: 25 marks]

Page 8	Mark Scheme	Syllabus	Paper
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4 (a) (i) Meander [1 mark] [1]

(ii) Ideas such as:

- gentle slope;
- rocks/pebbles/deposits;
- inside bend, etc.

[2 @ 1 mark] [2]

(iii) Ideas such as:

- speed of flow is slow/reduced/less energy;
- deposition of materials
- insufficient energy to move them;
- accumulation over time, etc.

[3 @ 1 mark] [3]

(iv) e.g. **flooding:**

reservoirs/dams upstream;
 increase height of banks/raise levees/build artificial levees;
 afforestation/reduce deforestation;
 overflow channels/spillway;
 straighten channel;
 dredging;
 widening river;
 warning systems/monitoring;
 land zoning, etc.

erosion:

strengthen banks/add hard rocks to banks/place rock barriers
 in front of banks;
 use gabions;
 concrete river channel, etc.

(4 @ 1 mark) with 1 reserve on each section

[4]

(b) (i) Ideas such as:

- lower course is wider/upper is narrower;
- lower course has gentler slopes/upper steeper slopes;
- upper course is deeper;
- upper course is more V shaped;
- lower course has flood plain but upper does not, etc.

NB Points made need to be comparative

[3 @ 1 mark] [3]

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- (ii) Explanation of formation of waterfall:
horizontal hard rock layer/hard rock on top of soft;
erosion of soft rock;
named erosional process (MAX 1)
formation of plunge pool;
undercutting/hard rock not supported;
collapse of hard rock;
retreat of waterfall;
gorge formation, etc.

NB Credit marks on diagram labels or in written text but no double credit.

(5 @ 1 mark) or development

[5]

(c) Levels marking

Level 1 [1–3 marks]
Statements including limited detail which describe opportunities provided for people by a river.

Level 2 [4–6 marks]
Uses named example.
More developed statements which describe opportunities provided for people by a river.

(NB Max 5 if no named or inappropriate 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:
agriculture,
fishing,
transportation,
water supply,
power supplies,
tourism, etc.

Place specific reference is likely to consist of:

Locational details;
Specific locations along the river, etc.

[7]

[Total: 25 marks]

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- 5 (a) (i)** Human Development Index [1 mark] [1]
- (ii)** Higher generally in North America/high North America but low/medium in Africa; more varied in Africa [2 @ 1 mark] [2]
- (iii)** Ideas such as:
- It takes into account a variety of factors/it is a composite index/uses more than one indicator/provides a general/overall indication of development/it is better than just using income;
 - Takes into account life expectancy/education/mean years of schooling;
 - Produces an index of 0 to 1/easy to carry out comparisons between countries/change over time
- [3 @ 1 mark] [3]
- (iv)** Ideas such as:
- specific references to variation in climate or example;
 - variations in relief;
 - variations in soil fertility;
 - presence/absence of rivers/water supplies/drought;
 - communications/accessibility/transport links;
 - impacts of historical development/length of time development has been occurring,
 - impacts of colonisation;
 - presence/absence of raw materials/resources (or example);
 - accessibility/presence of ports/landlocked;
 - government policies/political system;
 - corruption;
 - varying levels of education/skills;
 - trading policy/free trade;
 - AIDs;
 - investment/aid from abroad/charities;
 - presence of TNCs;
 - war/unrest;
 - degree of reliance on primary production;
 - development of a specific industry (e.g. tourism, mining, commercial agriculture, etc.)
- [4 @ 1 mark] [4]

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(b) (i) Ideas such as:

- positive relationship/life expectancy increases with GNP/low/high life expectancy = low/high GNP;
- statistics to illustrate relationship – 2 pairs required;
- relationship is not exact/anomaly;
- e.g. over 10 000 there is little if any relationship, etc.

NB Reserve 1 marks for statistics

[3 @ 1 mark] [3]

(ii) Ideas such as:

- high GNP will result in more investment in health care;
- and people will be able to afford medicines (dev);
- in countries with high GNP people will be able to afford enough food/good diet;
- so less likely to suffer malnutrition (dev)
- in low GNP countries many people have poor sanitation;
- in low GNP countries many people have water supply;
- so many die from water borne diseases (dev);
- high GNP countries are able to pay pensions to elderly;
- in high GNP countries education is provided about health care/diet, etc.

(5 @ 1 mark) or development

[5]

(c) Levels marking

Level 1

[1–3 marks]

Statements including limited detail which describe organisation and/or links in a transnational corporation.

Level 2

[4–6 marks]

Uses named example.

More developed statements which describe organisation and/or links in a transnational corporation.

(NB Max 5 if no named or inappropriate example)

Level 3

[7 marks]

Uses named example.

Comprehensive and accurate statements, which describe organisation and links in a transnational corporation, including some place specific reference.

Content Guide:

Answers could refer to:

Inputs,
Processes,
Outputs,
Manufacturing and assembly locations,
Transport network, etc.

Place specific reference is likely to consist of:

Locational details;
Specific details of transnational,
Named settlements, etc.

[7]

[Total: 25 marks]

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- 6 (a) (i) A condition that results from eating a diet in which nutrients are not enough (or are too much) such that it causes health problems/lack of balanced diet/lack of essential nutrients in the diet, etc. [1 mark] [1]
- (ii) More malnutrition in Niger/Niger has more areas with large numbers of cases [accept comparative statistics if totals worked out – 49 000 – 170 000 (BF) 271 000 – 370 000+ (N)] ;
in regions of Niger 40 000–60 000/over 60 000 but only up to 20 000 in regions of Burkino Faso;
every region in both countries has some malnutrition;
Burkina Faso has a more even spread of malnutrition across the country [2 @ 1 mark] [2]
- (iii) Ideas such as:
- drought/desertification/deserts/no nearby rivers to use;
 - infertile soils;
 - population pressure/growth/large population/overpopulation;
 - crop diseases;
 - pests/locusts;
 - lack of money/poverty/unemployment/can't afford to buy (import) food;
 - war;
 - cannot afford fertilisers/pesticides;
 - lack of cultivable land;
 - flooding/tsunami;
 - volcanic eruption;
 - tropical storms;
 - overdependence on cash crops/export market;
 - trade sanctions;
 - lack of transportation to rural areas, etc. [3 @ 1 mark] [3]
- (iv) Ideas such as:
- death/starvation/low life expectancy/malnutrition/famine;
 - conditions such as marasmus/scurvy/kwashiorkor/rickets, etc.
 - people are too weak/cannot work properly;
 - vicious circle/cannot escape poverty;
 - people cannot resist disease/infection/people easily get disease;
 - requirement of international aid;
 - appropriate specified crime;
 - increased food prices, etc. [4 @ 1 mark] [4]
- (b) (i) Ideas such as:
- produces soy milk;
 - protein rich;
 - products made from left over solids/tofu/yogurt/bread;
 - less students will go hungry/lack protein/have poor nutrition/provides food for children/reduces cases of malnutrition;
 - they will perform/concentrate better in school, etc. [3 @ 1 mark] [3]

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(ii) Ideas such factors such as:

- irrigation;
- use of fertilisers/manure;
- pesticides;
- herbicides/weedkillers;
- land reform;
- use of high quality seeds or example, e.g. IR8 rice/GM crops/HYV seeds;
- improve food distribution network;
- improve food storage/refrigeration/grain silos;
- greenhouses/glasshouses;
- aeroponics;
- hydroponics;
- terracing;
- selective breeding;
- international aid;
- trading of goods (or example) in exchange for food;
- mechanisation, etc.

(5 @ 1 mark) or development

[5]

(c) Levels marking

Level 1

[1–3 marks]

Statements including limited detail which describe the farming system.

Level 2

[4–6 marks]

Uses named example.

More developed statements which describe the farming system.

(NB Max 5 if no named or inappropriate example)

Level 3

[7 marks]

Uses named example.

Comprehensive and accurate statements, referring to inputs, processes and outputs, including some place specific reference.

Content Guide:

Answers are likely to refer to:

Natural inputs,
Human inputs,
Economic inputs,
Processes,
Outputs,
By-products, etc.

Place specific reference is likely to consist of:

Locational details;
Named settlements, e.g. markets
Specific details about the farm/area,
Statistical information, etc.