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**GEOGRAPHY**

**0460/11**

Paper 1

**May/June 2017**

MARK SCHEME

Maximum Mark: 75

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**Published**

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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This document consists of **16** printed pages.

**Levels of response marking** is used for section (c) of each question.

Thus it is the quality of the response that determines which level an answer is achieved rather than the quantity of statements contained within it. However, once assigned to a level the mark achieved within that level is determined by the number of points made.

Levels 1 and 2 are distinguished by whether statements are simple (level 1) or developed/elaborated (level 2). A candidate can immediately enter L2 by making developed points without making any L1 statements. In order to achieve L3 a candidate must have already reached the top end of L2 – in addition his/her answer should have a clear example and if the answer is place specific as well (7 marks). Highlight place specific detail.

Where statements are assigned levels by the examiner this should be indicated by the use of L1 and L2 next to the statements. Ticks should **not** be used on answers that are marked using levels of response marking. L1 annotation should be removed once a L2 is awarded for an answer. L3 annotation is not used. There is no need for a summary level at the end of a response.

**Summary:**

Level 1 (1 to 3 marks):

- 1 simple statement (1 mark)
- 2 simple statements (2 marks)
- 3 simple statements (3 marks)

Level 2 (4 to 6 marks):

- 1 developed statement (4 marks)
- 2 developed statements (5 marks)
- 3 or more developed statements with eg (6 marks)

Level 3 (7 marks)

- 3 or more developed statements + named example with at least one piece of place specific detail.

Question	Answer	Marks
1(a)(i)	15–19 (need both)	1
1(a)(ii)	<p>Ideas such as: Paraguay is more pyramid shaped/Belgium is more rounded; Paraguay has a narrower top; Paraguay has a wider base; Belgium bulges more in the middle</p> <p><b>Note:</b> Accept reverse statements but do not allow double credit. Comments must refer to shapes of pyramid. Must compare.</p> <p style="text-align: right;">2 @ 1 mark</p>	2
1(a)(iii)	<p>Ideas such as; High birth rates/high fertility rate; Lack of education about family planning/sex education/contraception/problems of having a large family/for females; <u>Lack of/cost of/access to/contraception/family planning/unprotected sex/no contraception for religious reasons;</u> Economic reasons for large families/children needed to work/earn money; <u>High</u> infant mortality; Traditional/in their culture/part of their religion to have large families/keep having children until produce a male child/status of having a large family; To look after parents in old age/no pensions; Get married young/start having children at a young age/teenage pregnancy; Lack of availability/cost of abortions; Not campaigns/no anti natal policy; Lack of female education; Women don't have careers; Role of women/not emancipated etc.</p> <p style="text-align: center;">•</p>	3
1(a)(iv)	<p>Ideas such as:</p> <ul style="list-style-type: none"> <li>• Low death rates/long life expectancy/decreasing death rates;</li> <li>• Investment in health care/hospitals/clinics;</li> <li>• Vaccination/cures for disease/medicines;</li> <li>• Lots of doctors/nurses;</li> <li>• Good water supply;</li> <li>• sanitation/more hygienic;</li> <li>• Improved food supplies/nutrition/better diet;</li> <li>• Provision of pensions</li> <li>• Care provision for elderly/old peoples' homes/specified care for elderly;</li> <li>• Education about diet/healthy lifestyle;</li> <li>• Early retirement;</li> <li>• Healthy lifestyle/exercise;</li> </ul> <p style="text-align: right;">4 @ 1 mark</p>	4

Question	Answer	Marks
1(b)(i)	Ideas such as: <u>Increase in both Europe and South America</u> Less increase in Europe than South America 40 to 46 (6 years) in Europe but 27 to 41 (14 years) in South America (RES)	<b>3</b>  3 @ 1 mark
1(b)(ii)	Ideas such as: Less people working/smaller workforce; Economic decline/GDP falls; Strain on economically active/people unable to work as care for parents; problems of providing pensions; increased pressure on hospitals/health services; need to invest more in health/welfare services; increased dependency ratio; lower earnings through taxation/need to increase taxes; increased need for old peoples' homes or specified service for the elderly; difficulty of recruitment for armed forces; less innovative workforce; children drop out of school to look after parents; less investments in schools; people forced to work longer/increase retirement age; encourage immigration etc.	<b>5</b>  5 @ 1 mark or development

Question	Answer	Marks
1(c)	<p>Levels marking</p> <p><u>Level 1</u> (1–3 marks) Statements including limited detail which explain why natural population growth rate is low.</p> <p><u>Level 2</u> (4–6 marks) Uses named example. More developed statements which explain why natural population growth rate is low.</p> <p>(<b>Note:</b> Max 5 if no named or inappropriate example)</p> <p><u>Level 3</u> (7 marks) Uses named example. Comprehensive and accurate statements including some place specific reference.</p> <p><u>Content Guide:</u> Answers are likely to refer to:</p> <ul style="list-style-type: none"> <li>• birth rates remain low</li> <li>• low in death rates/reasons for reduction</li> <li>• availability of contraception</li> <li>• contraception – affordability</li> <li>• contraception – education about it</li> <li>• modern attitudes to family size</li> <li>• women have careers</li> <li>• education of women</li> <li>• emancipation of women</li> <li>• impact of secular society</li> <li>• low infant mortality rates</li> <li>• government support for old age;</li> <li>• government anti–natal policy etc.</li> </ul> <p><u>Place specific reference is likely to consist of:</u> Named parts of the chosen country, Population data etc.</p>	7

Question	Answer	Marks
2(a)(i)	Mexico	1
2(a)(ii)	<p>There is a positive relationship or as GDP increases then urban population increases;</p> <p>The relationship is not very strong/positive relationship is very clear up to GDP of \$10 000/after \$10 000 there is very little increase in urban percentage.</p> <p style="text-align: right;">2 @ 1 mark</p>	2
2(a)(iii)	<p>Ideas such as:</p> <p>overcrowded (housing) in cities;</p> <p>land space for housing in rural areas/larger houses/more space/more land;</p> <p>air pollution in urban areas;</p> <p>noise pollution in urban areas;</p> <p>traffic congestion in urban areas;</p> <p>safer environment in rural areas/less crime;</p> <p>development of transport allows commuting;</p> <p>people able to work from home.</p> <p><b>(Note:</b> There is no need for comparison and candidates can refer to either rural or urban areas as long as they make it clear to which area they are referring)</p> <p style="text-align: right;">3 @ 1 mark</p>	3
2(a)(iv)	<p>Ideas such as :</p> <p>migration from rural areas;</p> <p>availability of work in urban areas;</p> <p>higher wages in factories;</p> <p>more hospitals/better health care/doctors/clinics in urban areas;</p> <p>more access to education in urban areas/more schools etc.</p> <p>more entertainment/bright lights syndrome;</p> <p>more secure food supply in cities than rural areas;</p> <p>access to (potable) water;</p> <p>access to electricity network;</p> <p>better sanitation/hygiene</p> <p>follow family and friends etc.</p> <p><b>(Note:</b> Candidates can refer to rural pushes but no double credit)</p> <p style="text-align: right;">4 @ 1 mark</p>	4
2(b)(i)	<p>Ideas such as;</p> <p>Large population living in cities/many people live in the cities/people move into the cities;</p> <p>many people have low income/are poor/many people cannot afford to buy a house;</p> <p>not enough houses/they have to build their own houses etc.</p> <p><b>Note:</b> Do not allow copy of information from diagram.</p> <p style="text-align: right;">3 @ 1 mark</p>	3

Question	Answer	Marks
2(b)(ii)	<p>Ideas such as:  overcrowded housing/small houses/cramped conditions;  lack of piped water/(clean) water supplies/water borne diseases;  poor quality building materials;  fire risk/flammable building materials;  poor sanitation/no proper drains/lack of sewage/unhygienic;  lack of electricity supply/illegal connections to grid;  high crime rates;  unmade roads;  lack of waste disposal;  vermin spread disease;  risk of eviction;  lacks of clinics/schools;  houses not weatherproof/not stable;  diseases spread easily in crowded conditions etc.;</p> <p style="text-align: right;">5 @ 1 mark or development</p>	<b>5</b>
2(c)	<p>Levels marking</p> <p><u>Level 1</u> (1–3 marks)  Statements including limited detail which describe strategies used to reduce problems caused by rapid growth of squatter settlements.</p> <p><u>Level 2</u> (4–6 marks)  Uses named example.</p> <p>More developed statements which describe strategies used to reduce problems caused by rapid growth of squatter settlements.  (<b>Note:</b> Max 5 if no named or inappropriate example)</p> <p><u>Level 3</u> (7 marks)  Uses named example.  Comprehensive and accurate statements, with some place specific reference.</p> <p><u>Content Guide:</u>  building of low cost housing/flats;  site and services schemes;  self help;  provide tools/training/building materials;  installation of water pipes;  installation of electricity grid;  improvement grants/low interest loans etc.</p> <p><u>Place specific reference is likely to consist of:</u>  Locational details/named areas within the urban area,  Specific details of schemes  Named policies etc.</p>	<b>7</b>

Question	Answer	Marks
3(a)(i)	Arch	<b>1</b>
3(a)(ii)	steep slopes/steep; bare rock/rock/rocky; area where rock has been worn away/large hole in it/large section missing/shape of a bridge; cracks in rock/joints/faults; uneven/jagged  2 @ 1 mark	<b>2</b>
3(a)(iii)	Ideas such as: Waves crash against the rocks; Abrasion/hydraulic action/corrosion (or description of an erosional process – MAX 1) erosion of line of weakness/joint/bedding plane; line of weakness enlarges; formation of cave; erosion of back walls/back to back caves; waves break through etc.  3 @ 1 mark	<b>3</b>
3(a)(iv)	Ideas such as: Further/more erosion will occur; Hole/arch will become bigger; roof of arch will get thinner/become unsupported; Collapse of arch; Formation of stack; Further erosion of stack/formation of stump etc.;  4 @ 1 mark	<b>4</b>
3(b)(i)	Ideas such as: Stress/worry about... Properties in danger of collapse/destruction; Loss of gardens/yards/backyards/fences; Roads/paths/parking areas destroyed; Danger to people/children <u>from collapsing cliffs</u> ; Damage to underground drainage/water supply pipes/gas pipes/electricity cables; People forced to move away from their homes/evacuation; Property values go down / difficult to insure/people cannot sell their home etc.  3 @ 1 mark	<b>3</b>



Question	Answer	Marks
3(b)(ii)	<p>Ideas such as:  <u>Employment</u> in tourism (or examples);            Examples of leisure activities;            Ports/trade;            Fishing;            Fresh/clean air;            Scenic beauty/good view;            Sentimental attachment/lived there all their life;            Can't afford to move;            Friends and family;            Risk perception/prepared to take the risk;            Confidence in precautions;            Temperate climate/cooler/equable (if developed appropriately) etc.</p> <p style="text-align: right;">5 @ 1 mark or development</p>	<b>5</b>
3(c)	<p>Levels marking</p> <p><u>Level 1</u> (1–3 marks)            Statements including limited detail which explain how a sand spit is formed.</p> <p><u>Level 2</u> (4–6 marks)            More developed statements which explain how a sand spit is formed.</p> <p><u>Level 3</u> (7 marks)            Comprehensive and accurate statements which explain how a sand spit is formed with labeled diagram.</p> <p><u>Content Guide:</u>            Reference should refer to:            Longshore drift;            Constructive waves;            Swash;            Backwash;            Zig zag movement of materials;            Change in direction of coastline etc.</p> <p><b>Note:</b> Credit any descriptive detail or explanation on diagram but do not double credit with text.</p>	<b>7</b>

Question	Answer	Marks
4(a)(i)	Waterfall	<b>1</b>
4(a)(ii)	Vertical/steep drop/cliff with water going over it; Wide; Plunge pool; White water; High/long drop; Layers of rock; Rock/rocky etc.  2 @ 1 mark	<b>2</b>
4(a)(iii)	Ideas such as: Abrasion/hydraulic action (or description of an appropriate erosional process – MAX 1) hard rock overlies soft rock; slow erosion of hard rock layer/soft rock quickly eroded; undercutting; overhang forms collapse of hard rock/overhang; Plunge pool formed etc.  3 @ 1 mark	<b>3</b>
4(a)(iv)	Ideas such as: further or more erosion/undercutting; collapse of more rock; waterfall retreats; formation/extension of gorge; plunge pool gets bigger/deeper etc.  4 @ 1 mark	<b>4</b>
4(b)(i)	Ideas such as: Flooding of/damage to roads; Flooding of/damage to houses/buildings/urban area; Flooding of farmland/drowns crops; Flooding/damage to railway; Closure of/damage to workplaces; Flooding of/damage to parks; Flooding of/damage to Native American Reserve; Flooding of forest etc.  3 @ 1 marks	<b>3</b>

Question	Answer	Marks
4(b)(ii)	<p>Ideas such as:</p> <ul style="list-style-type: none"> <li>Fertile land;</li> <li>Farmers obtain high yields of crops;</li> <li>Land is flat so easy to build on/transport/trade;</li> <li>Communications on land are easy along flood plain;</li> <li>River can sometimes be used for navigation;</li> <li>Fishing/food supply from river;</li> <li>Water supply from river;</li> <li>Scenic beauty/good view;</li> <li>Jobs in tourism;</li> <li>HEP/generate energy;</li> <li>Wash clothes/bathing;</li> <li>Religious significance;</li> <li>Irrigation/water for crops</li> <li>Gold panning;</li> <li>Example of leisure activities etc.</li> </ul> <p style="text-align: right;">5 @ 1 mark or development</p>	<b>5</b>

Question	Answer	Marks
4(c)	<p>Levels marking</p> <p><u>Level 1</u> (1–3 marks) Statements including limited detail which explain the causes of flooding.</p> <p><u>Level 2</u> (4–6 marks) Uses named example.  More developed statements which explain the causes of flooding.  (<b>Note:</b> Max 5 if no named or inappropriate example)</p> <p><u>Level 3</u> (7 marks) Comprehensive and accurate statements including some place specific reference.</p> <p><u>Content Guide:</u> Answers are likely to refer to: Heavy rainfall Rainfall over a long period of time Saturation of rock/soil/ground Overland flow Rapid run off Rapid increase in river discharge Deforestation Lack of flood management Urban development in river catchment/on flood plain Snow melt Build up of waste in the river</p> <p><u>Place specific reference is likely to consist of:</u> Locational details, named places experiencing flooding, date of flood/rainfall statistical details e.g. rainfall etc.</p>	7

Question	Answer	Marks
5(a)(i)	540–560	1
5(a)(ii)	<ul style="list-style-type: none"> <li>• Oil/coal/natural gas</li> <li>• HEP/geothermal/solar/wind</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	2
5(a)(iii)	<p>Ideas such as: Nuclear power increased in importance/nuclear power has become the biggest; Reduction in the use of coal/oil/fossil fuels; Increase in use of renewables(or appropriate examples) /they have stated to use renewables; Increase in gas.</p> <p style="text-align: right;">3 @ 1 mark</p>	3
5(a)(iv)	<p>Benefits such as: They won't run out; cheaper <u>running</u> costs; they do not pollute the atmosphere/does not produce carbon dioxide; so will be less likely to enhance global warming; they do not produce acid rain; benefits of multi-purpose schemes – for example, recreation or irrigation (MAX 1) there are no waste products; they do not depend on imports/can export renewable energy etc.</p> <p><b>Note:</b> Accept vice versa answers but do not double credit e.g. they will not run out/fossil fuels will run out.</p> <p style="text-align: right;">4 @ 1 mark</p>	4
5(b)(i)	<p>Ideas such as: Widespread/dispersed/scattered; uneven; many are on rivers; most are inland; a few are on the coast/along north coast; distant from cities/close to but not in city</p> <p style="text-align: right;">3 @ 1 mark</p>	3

Question	Answer	Marks
5(b)(ii)	<p>Benefits such as:            Large amounts of electricity can be generated;            Low cost of generation/cheap running costs;            No atmospheric pollution;            Does not enhance global warming;            Uses small amounts of uranium/will last many centuries</p> <p>Disadvantages such as;            Radiation/risk of leaks/cancer;            difficulty of disposal of nuclear waste;            public opposition/perception of threat;            expensive to build the power station.</p> <p><b>Note:</b> MAX 3 marks on each of benefits/disadvantages</p> <p style="text-align: right;">5 @ 1 mark or development</p>	<b>5</b>
5(c)	<p>Levels marking</p> <p><u>Level 1</u> (1–3 marks)            Statements including limited detail which explain the location of a factory or industrial zone.</p> <p><u>Level 2</u> (4–6 marks)            Uses named example.</p> <p>More developed statements which explain the location of a factory or industrial zone.</p> <p>(<b>Note:</b> Max 5 if no named or inappropriate example)</p> <p><u>Level 3</u> (7 marks)            Uses named example.            Comprehensive and accurate statements including some place specific reference.</p> <p><u>Content Guide:</u></p> <p>Answers are likely to refer to:            Raw materials            Sources of power            Labour supply            Market            Government policies            Transport network            Airports/ports            Cost of land etc.</p> <p><u>Place specific reference is likely to consist of:</u>            Locational details,            Named areas/transport routes etc.</p>	<b>7</b>

Question	Answer	Marks
6(a)(i)	Tertiary	1
6(a)(ii)	<ul style="list-style-type: none"> <li>• ecotourism</li> <li>• cultural/historic</li> </ul> <p style="text-align: right;">2 @ 1 mark</p>	2
6(a)(iii)	<p>Ideas such as:</p> <p>increase in local traffic/congestion;  atmospheric pollution from traffic <u>causing</u> asthma/breathing difficulty;  loss of local culture/traditional way of life/traditions exploited;  impact of behaviour of tourists/drunkenness/disrespect culture/fighting/abusive to locals/racism; etc.;  noise;  exploitation/low paid jobs/long hours;  seasonal work;  shortage of water supplies;  litter;  lack of privacy;  loss of farmland for building/development of hotels;  locals offended by tourist dress;  increased cost of living/house prices/locals can't afford it;  loss of housing for tourist development/not enough space for local housing;  damage to/accidentally break ancient artefacts/take religious artefacts as souvenirs;  Queues in shops;  Locals cannot use beaches as overcrowded;  Sea pollution so fishing declines;  Visual impact</p> <p style="text-align: right;">3 @ 1 mark</p>	3
6(a)(iv)	<p>Ideas such as:</p> <p><u>beaches</u> attracts tourists;  because tourists can sunbathe/watersports;  <u>river valleys</u> attract tourists;  as scenery is attractive/there are opportunities for water sports;  <u>mountain areas</u> are attractive in some areas;  as they are suitable for winter sports activities/hiking etc.</p> <p>One mark for identification of type of landscape and a further mark for explanation of attraction (either a specific activity or suitable natural attraction linked to the environment. Allow site seeing; photography; scenery/good views/see natural beauty/fresh air/unique or unusual as generic ideas)</p> <p style="text-align: right;">2 @ 2 marks</p>	4

Question	Answer	Marks
6(b)(i)	Employment such as: Selling of food/drinks/working in bar or restaurant/stalls; Selling souvenirs/beach toys ; Selling photographs taken of people on beach; Beach cleaners Jobs in hotel or an example  <div style="text-align: right;">3 @ 1 mark</div>	<b>3</b>
6(b)(ii)	Ideas such as: loss of natural vegetation/deforestation; destruction of habitats; atmospheric pollution; causes acid rain; litter could injure/kill birds; pollution of the sea/water; threat to marine species/fish; impact on ecosystems/food chains; disturb breeding sites; exhaustion of soil as land used to produce food for tourists; noise scares away animals etc.  <div style="text-align: right;">5 @ 1 mark or development</div>	<b>5</b>
6(c)	Levels marking  <u>Level 1</u> (1–3 marks) Statements including limited detail which explain how tourism is being managed in order for it to be sustainable.  <u>Level 2</u> (4–6 marks) Uses named example.  More developed statements which explain how tourism is being managed in order for it to be sustainable.  ( <b>Note:</b> Max 5 if no named or inappropriate example)  <u>Level 3</u> (7 marks) Uses named example. Comprehensive and accurate statements, including some place specific reference.  <u>Content Guide:</u> Answers should refer to appropriate forms of management of tourism, ranging from small scale (e.g. fencing of vulnerable areas of sand dunes to protect them from trampling) to large scale (e.g. creation of National Parks).  <u>Place specific reference is likely to consist of:</u> Locational details; Names of places/species within chosen area Specific details of management of area affected,	<b>7</b>