Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

GEOGRAPHY	**0460/13**
Paper 1	**May/June 2018**
MARK SCHEME	
Maximum Mark: 75	

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.

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

Cambridge International will not enter into discussions about these mark schemes.

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This document consists of **15** printed pages.

Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

Question	Answer	Marks
1(a)(i)	The total population at which GDP (per head) is at its high/highest level.	1
1(a)(ii)	Under-population = too few people (population) for the available resources/the number of resources is greater than the number of people Over-population = too many people (population) for the available resources/the number of people is greater than resources	2
1(a)(iii)	Ideas such as: High population growth/high population increase; High birth rates or reason for high birth rates/a lot of children born; Low or decreasing death rates or reason for decreasing death rate/long life expectancy; Large amount of immigration/high positive net migration; Few resources/resources become exhausted/increased demand for resources etc. 3 @ 1 mark	3
1(a)(iv)	Problems such as: lack of work/unemployment; poverty; pressure on health care; pressure on education services; lack of housing/growth of shanty towns/house prices rise; famine/lack of food/food prices rise; traffic congestion; lack of clean water/water shortage; shortage of electricity/fuel; deforestation; loss of habitat; soil infertility/soil exhaustion; air/water pollution; pressure on sanitation; 1 @ 1 mark	4
1(b)(i)	Ideas such as: Easier visas (for skilled immigrants); Lower taxation (to attracts immigrants); Give more benefits or incentives for larger families/people who have children/pronatalist policy etc. Note: Must be from Figure 1.3 3 @ 1 mark	3

Question	Answer	Marks
1(b)(ii)	Ideas such as: Many people could be living there/high population density/many people have moved there; There could be limited amounts of habitable land/large areas of land could be of little use; E.g. deserts/mountains; Few resources might be available/there are not lots of resources available; Such as coal/oil/minerals/fertile land etc.; High level of technology in the country (allows economy to develop) without much labour/capital intensive production; So all resources can be easily exploited be few people; 5 @ 1 mark or development	**5**
1(c)	Levels marking <u>Level 1</u> (1–3 marks) Statements including limited detail which describe the problems caused by a large percentage of dependent population. <u>Level 2</u> (4–6 marks) Uses named example. More developed statements which describe the problems caused by a large percentage of dependent population (Note: 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 are likely to refer to • High dependency ratios • Strain of supporting dependents • Increasing need for provision of health care • High cost of provision of services/goods for elderly • High cost of provision of schools/nurseries/goods for young • Pressure on government revenues • Need to pay pensions/child allowances • Difficulty of obtaining workforce • Defence of country is difficult etc. <u>Place specific reference is likely to consist of:</u> Named parts of the chosen country, statistical data etc. Note: Max 1 × L2 for using statistics for development. Development is of the description.	**7**

Question	Answer	Marks
2(a)(i)	population shift from rural to urban areas/increasing <u>proportion</u> (or <u>percentage</u>) of population living in urban areas or towns and cities	**1**
2(a)(ii)	Africa; <u>Over</u> 75% 2 @ 1 mark	**2**
2(a)(iii)	Ideas such as: Unevenly distributed/clustered; Mainly northern hemisphere/more in the northern hemisphere/more north of the Equator; (Mainly) LEDCs/less developed countries/LICs/poor countries; <u>Most</u> in Asia/<u>a lot in</u> Asia; <u>Mainly</u> coastal etc. 3 @ 1 mark	**3**
2(a)(iv)	Ideas such as: Large amounts of inward migration (from countryside)/lots of people moving in; People seeking employment/higher wages/industrial development; Education; Health care; Bright lights/entertainment; Follow family and friends; Electricity; Water supply; Or trying to escape drought/natural disaster; Persecution/war/civil war; High birth rates/high natural increase or valid reason for; Falling death rates or valid reason for etc. Credit pulls and/or pushes but no double credit. 4 @ 1 mark	**4**
2(b)(i)	Ideas such as: X is higher than Y X is on steeper land/Y is on flatter land; Y is closer to river/lake/water/sea; Y is closer to mosque/church etc. Note: The answer must compare and candidates need to state X or Y 3 @ 1 mark	**3**

Question	Answer	Marks
2(b)(ii)	Ideas such as: Possible flooding from the river (in Y); Difficult access due to steep slopes (for X); Risk of landslides; Poor quality building materials/flimsy/easily destroyed by storms; Lack of electricity; Lack of (clean) water supplies/polluted water; Overcrowding/lots of people live in small areas/lack of privacy; Lack of open space; Crime levels high/muggings/burglaries/lack of security/drugs/gangs; Unmade/poor quality roads/difficult access; Disease spreads easily/water borne disease or example/sickness; Lack of a sewage system/poor sanitation/lack of hygiene; Risk of fire; Can be moved on/have no rights to the land; Inadequate waste disposal/vermin 5 @ 1 mark or development	5

Question	Answer	Marks
2(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which describe what has been done to reduce the negative impacts of urbanisation. Level 2 (4–6 marks) Uses named example. More developed statements which describe what has been done to reduce the negative impacts of urbanisation. (Note: 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 pushes or pulls such as: • Self-help schemes • Building of low cost houses • Site and services schemes • Improvement of infrastructure or examples • Creation of employment • Reduce urbanisation by investing in the countryside • Better security measures • Provision of education/hospitals • Creation of jobs for people with low skills/or examples etc. Place specific reference is likely to consist of: Named parts of the chosen city, Locational detail statistical data details of schemes etc. Could be LEDC or MEDC focus.	7

Question	Answer	Marks
3(a)(i)	An area of land drained by a river (and its tributaries)	1
3(a)(ii)	P = Infiltration Q = Groundwater flow/base flow 2 @ 1 mark	2

3(a)(iii)	A Ideas such as:
	    Amounts of precipitation/rainfall will vary;
	    Temperature will vary/evaporation;
	    Amount/density of vegetation will vary/transpiration;
	    In some seasons, there is snow melt.
	
	3 @ 1 mark
		3

	B Ideas such as **variation within** drainage basin of:
	    Angle of slope;
	    Rock type;
	    Thickness/type of soil;
	    Vegetation cover;
	    Precipitation will vary;
	    Land use will vary;
	
	4 @ 1 mark
		4

3(b)(i)	Ideas such as: River in 3.2 is steeper; Valley sides in 3.2 are steeper; River in 3.2 has a more irregular long profile/3.2 has rapids/waterfall or and 3.3 does not; 3.3 has interlocking spurs but 3.2 does not; 3.3 has a more sinuous/winding course; 3.3 is wider/has flatter floor; 3.2 is more turbulent/has more white water Note: It is steeper (without reference to river or valley) is one mark overall for first two m/s lines. The answer needs to compare. Assume candidates are writing about 3.2 unless stated. 3 @ 1 mark	3
3(b)(ii)	Methods such as: Traction; Large boulders moved/rolled along the bed (dev); Saltation; Stones bounces along the river bed (dev); Suspension; Light materials carried within the water (dev); Solution; Material dissolved in the (dev); 4 @ 1 mark or development Note: Mark from either the name of the process or the description. Candidates must correctly identify the link to get the development mark (i.e. two marks for one process)	5

Question	Answer	Marks
3(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which explain how an oxbow lake is formed. Level 2 (4–6 marks) More developed statements which explain how an oxbow lake is formed. Level 3 (7 marks) Comprehensive and accurate which explain how an oxbow lake is formed, including an accurate diagram or series of diagrams. Content Guide: Ideas such as: • Faster flow on outer bends • Erosion on outer bends • Neck of meander narrows/meander becomes more pronounced • Cuts through neck in time of flood; • Former meander sealed by deposition	**7**

Question	Answer	Marks
4(a)(i)	Y	**1**
4(a)(ii)	Rainfall: Desert is drier/has less rainfall; Temperature: Desert has larger (annual) temperature range; Desert has larger diurnal temperature range; Note: The answer needs to compare. Accept valid statistics. 2 @ 1 mark	**2**
4(a)(iii)	Ideas such as: The equatorial climate/desert is hot because the sun is overhead/high in the sky/at low latitudes The equatorial climate does not have seasons because the sun is overhead at all times/the desert has seasons because of the lower angle of the sun at different times of the year; Rainfall is high in equatorial regions due to low pressure/rainfall is low in desert regions due to high pressure; As the air is rising in equatorial regions/the air is falling in deserts; Note: Does not need to compare. 3 @ 1 mark	**3**

Question	Answer	Marks
4(a)(iv)	Ideas such as: Deserts are inland/a long way from the sea; So winds are dry by the time they reach them/winds have lost moisture; Influenced by trade winds; From north east in northern hemisphere/south east in southern hemisphere; And blow over large areas of land before reaching them/blow from land to sea/winds blow out from the deserts etc.; 4 @ 1 mark	4
4(b)(i)	Ideas such as: Sparse/not much vegetation/scattered; Low level/short/not tall; Bushes/small trees/shrubs; Fleshy leaves/thick leaves/succulents; Spines/thorns/thin leaves/spikes 3 @ 1 mark	3
4(b)(ii)	Ideas such as: (Long roots) reach to water table/underground rocks; (Wide root systems/widely spaced) to collect water from a larger area; (Fleshy stems) store water; (Thorns/spikes) prevent evaporation; (Thorns/spikes) protects from predators; (Seeds lie dormant) and germinate in times of rainfall; (Light colours) to reflect the sunlight; (waxy leaves) to prevent water loss; (Low lying) to protect against winds; 5 @ 1 mark or development	5

Question	Answer	Marks
4(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which explain why deforestation has taken place. Level 2 (4–6 marks) More developed statements which detail which explain why deforestation has taken place. (MAX 5 if no or inappropriate example) Level 3 (7 marks) Comprehensive and accurate statements, including reference to places. Content Guide: Answers are likely to refer to: Economic development Commercial agriculture Ranching Shifting cultivation Logging Mining Hydro-electric power generation Road building Settlement Increasing population etc. Note: Not a country. Borneo is OK or example where majority of country is rainforest. Statistics are not appropriate for development.	7

Question	Answer	Marks
5(a)(i)	Grazing	**1**
5(a)(ii)	A = River/irrigation/sufficient rainfall/enough rainfall/250 mm of rainfall/a lot of rainfall B = Irrigation/close to river Note: no double credit for river 2 @ 1 mark	**2**
5(a)(iii)	Ideas such as: Farmers have to fight in army/reduced labour force/farmers killed; Crops destroyed/animals killed/<u>farmland</u> damaged; Unsafe to farm due to bombing/mines; Government investment in farming reduced due to war effort/spend all the money on the army/divert food for the army Unable to transport food;/unable to import food Market/shops destroyed; Increased food prices; People unable to work so cannot afford food; 3 @ 1 mark	**3**
5(a)(iv)	Ideas such as: Lack of investment in agriculture (by government); Poor distribution network/poor road system; Many farmers produce cash crops/crops for export rather than food for people who live there; Aid is poorly distributed; People cannot afford food due to <u>unemployment</u>/currency devaluation; Unstable/corrupt government; Cannot <u>afford</u> to <u>import</u> food; High cost of inputs for farming or examples; 4 @ 1 mark	**4**
5(b)(i)	Ideas such: Crops/rice/land is cultivated/padi fields; Terraced land/in small steps; Bunds/embankments around field; Soil waterlogged/standing water in fields/flooded fields; Small <u>fields</u>/divided into many fields 3 @ 1 mark	**3**

Question	Answer	Marks
5(b)(ii)	Ideas such as: fertilisers; natural manure; crop rotation; herbicides pesticides/insecticides; mechanisation; land reform; high yielding varieties keep fish in padi fields 5 @ 1 mark or development	**5**
5(c)	Levels marking Level 1 (1–3 marks) Simple statements which describe/explain the land use of farm or agricultural system. Level 2 (4–6 marks) Uses named example. More developed statements which explain land use of farm or agricultural system. (**Note:** Max 5 if no named or inappropriate example) Level 3 (7 marks) Uses named example. Comprehensive and accurate statements, which describe and explain land use of farm or agricultural system including some place specific reference. Content Guide: Description should refer to types of crops and/or livestock Explanation should refer to: Climate Relief Soil Access Demand Proximity of markets etc. Place specific reference is likely to consist of: Locational details; Specific details of sources of inputs/outputs	**7**

Question	Answer	Marks
6(a)(i)	Coal/oil/(natural) gas/lignite/peat	**1**
6(a)(ii)	Ideas such as: Melting/shrinking/retreating glaciers (or example)/less glaciers; Arctic sea ice has thinned/the area of it has reduced; Sea level has risen/more water in the sea; Less ice on Mt Kilimanjaro 2 @ 1 mark	**2**
6(a)(iii)	Ideas such as: Gives off greenhouse gases/carbon dioxide; Which build up in atmosphere/makes a blanket; Heat/sun's rays can pass through; Heat cannot escape/traps heat; (enhanced) greenhouse effect; So temperatures/global warming increases 3 @ 1 mark	**3**
6(a)(iv)	Ideas such as: Threat to wildlife/extinction of species/reduced biodiversity/animals die; Impacts on food chains/destruction of ecosystems; Habitat loss; Flooding of coastal lowlands/areas/islands/cities; Loss of cultivable land/farmland/settlement/people are displaced; Increasing cost of coastal protection; Soils become swampy/saline; Less freshwater supply from <u>glaciers/in mountainous areas</u>; Loss of income from tourism on <u>glaciers/in mountainous areas</u>; 4 @ 1 mark	**4**
6(b)(i)	Ideas such as: (General) reduction/decrease/it has declined; Especially reduction/decrease since 1960s/1970s/below average in 1970s/1980s; Fluctuation; (stated not implied) Increase/above average 1920s/1930s/1940s/1950s Note: Not a single year or anomalies 3 @ 1 mark	**3**

Question	Answer	Marks
6(b)(ii)	Ideas such as: Cultivation in marginal areas; Over cultivation; Less humus to bind the soil; Leaves areas unprotected/subject to soil erosion/removal by wind; Deforestation/excessive fuel wood collection; Removes protective vegetation cover from the soil/less roots to bind soil; Overgrazing/trampling of cattle; Causes deterioration of pasture; Removal/extraction of water (from underground)/for industry/for agriculture Leads to death of vegetation; Use of manure as fuel 5 @ 1 mark or development	5
6(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which describe methods used to manage environmental risks of chosen economic activity. Level 2 (4–6 marks) Uses named example. More developed statements which describe methods used to manage environmental risks of chosen economic activity. (Note: 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: Methods will vary depending on the economic activity chosen but are likely to include: Legislation National Parks Nature Reserves Specific measures e.g. fencing etc. Place specific reference is likely to consist of: Locational details; Names of places/species within chosen area Specific details of methods	7