Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

GEOGRAPHY **0460/11**

Paper 1 **May/June 2019**

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 syllabus is regulated for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.

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)	Over 1 million	**1**
1(a)(ii)	China…Colombia….Argentina….Australia All correct = 2 marks 2/3 correct = 1 mark 2 @ 1 mark	**2**
1(a)(iii)	Ideas such as: Mexico is closer/Spain is further away; From Spain it is necessary to travel by air/sea/Mexico has a land border/direct border; It is cheaper to travel there from Mexico; Spain has more options/neighbouring countries; Etc. Easier access^ Bigger population^ 3 @ 1 mark	**3**
1(a)(iv)	Ideas such as: Language difficulties; Difficulties finding a job; Low paid work/exploitation; Discrimination/racism; Finding somewhere to live is difficult; Missing families/friends; High cost of living/or, e.g. such as food/healthcare; Culture shock; Difficult to practice religion; Illegal entry/sent back/no green card; Etc. = 0 Not allowed in. Communication problems^ Unfamiliar^ Get lost^ 4 @ 1 mark	**4**
1(b)(i)	Overall increase during whole period/1901–2010; Decrease from 1901 to 1940 (or part of that time period, but not single year); Increase from 1941 onwards (or part of that time period, but not single year); Supporting statistic with two time periods and figures and units (1 MARK RESERVE) = 0 Biggest/bigger in 2010. 3 @ 1 mark	**3**

Question	Answer	Marks
1(b)(ii)	Ideas such as : Lack of/providing more housing/overcrowded housing/squatter settlements/slums; Lack of/providing more health care; Lack of/providing more educational facilities; Lack of/providing more food; Lack of/providing more water; Water/air pollution; Sanitation/waste disposal; Integrating international migrants; Racial/political/religious tensions; Increasing cost of benefit payments, etc. Jobs/unemployment; Traffic congestion; Strain on public transport; Loss of income due to remittances; Illegal so don't pay taxes; Checking all paperwork, etc.; Security/border controls/drug problems; Signage/leaflets in different languages; = 0 Overpopulation Disease Need more resources People/Government have to pay more taxes Poverty Crime^ but okay as development 5 @ 1 mark or development	**5**

Question	Answer	Marks
1(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which describe a population policy used to influence growth rate. e.g. One child Policy; Level 2 (4–6 marks) More developed statements which describe how a population policy is used to influence growth rate NOT the impacts. Note: Credit different approaches within a policy, so for example, when marking a China One Child Policy answer, ideas will often cover the following: Incentives; Penalties; Exceptions; Enforcement; Note: Credit only 1 L2 mark for each of these four ideas above, although credit should also be given for other ideas such as developing the idea such as applying to have a child/increasing the age of marriage which do not fit the four ideas above. e.g. one child policy and free education L2; one child policy and use of fines if more than one child L2; one child policy and parents not penalized if they have twins or a child is disabled L2 one child policy and Granny police check if couples are conforming to law L2 Note: If another country is given generally apply the same principle, but other ideas in the Content Guide will be relevant, e.g. gender equality acts or educating women etc. (**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 which can be named parts of the chosen country, Population data, reference to a specific named policy/specific details about it etc.	**7**

Question	Answer	Marks
2(a)(i)	25 (%)	**1**
2(a)(ii)	Ideas such as: Burning fossil fuels/oil/coal/petrol; Smelting/processing raw materials in factories; Congested roads/heavy lorries add to air pollution; CO_2/SO_2/Nitrous oxide; Exhaust fumes; Smoke/chimneys; Lots of cars^ Work all the time^ 2 @ 1 mark	**2**
2(a)(iii)	Ideas such as: Greater percentage from traffic in Western Europe/or statistics; Greater percentage from industry in Western Europe/or statistics; Greater percentage from domestic/homes in Africa/or statistics; Greater percentage from electricity generation in Western Europe or statistics; Greater percentage from other sources in Africa or statistics; Electricity generation is highest in W.Europe but domestic usage is highest in Africa; Domestic usage is lowest in W.Europe but industry is lowest in Africa; Note: Statistics must use units for credit. = 0 More even proportions in Africa. 3 @ 1 mark	**3**
2(a)(iv)	Ideas such as: There are more vehicles used in Western Europe; There are more factories/industries in Western Europe; Western Europe is richer/more developed/MEDCs; Many homes in African cities will burn wood/cleaner sources of fuels will be used in homes in Western Europe; More people use electricity in W.Europe; More gadgets/appliances/air von units in W.Europe; etc. 4 @ 1 mark	**4**

Question	Answer	Marks
2(b)(i)	Positive relationship/higher population density the more traffic congestion there is; Statistical evidence to support the above, e.g. those with a population density below 5000 have congestion level below 30% but with density over 25 000 the congestion level is above 50% OR statistics for highest and lowest values; However relationship is not perfect/there are anomalies Note: Statistics must use units for credit. 1 mark reserve. 3 @ 1 mark	**3**
2(b)(ii)	Ideas such as: Urban populations are growing rapidly/very large/densely populated; Enough road spaces/road systems are inadequate/built years ago; There is limited space/ lack of investment in new roads; Lack of investment in/unreliability of public transport; Car ownership is increasing/most work in urban areas; Many people commute to work; Congestion causes delays/can't get to appointments on time; People are late to work/school; Emergency services can't get through; Air pollution; Noise pollution; Stress/road rage; Rush hour/work finishes at same time; Wasted fuel Etc. = 0 Accidents. 5 @ 1 mark or development	**5**

Question	Answer	Marks
2(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which describe the strategies used to improve traffic congestion. Level 2 (4–6 marks) Uses named example. More developed statements which describe the strategies used to improve traffic congestion. (**Note:** Max 5 if no named or inappropriate example) Level 3 (7 marks) Uses named example. Comprehensive and accurate statements which describe the strategies used to improve traffic congestion, with some place specific reference. Content Guide: Answers are likely to refer to ideas such as: • New road building, • Investment in public transport, • Cycle lanes, • Park and Ride, • Congestion charging, etc. Place specific reference is likely to consist of: Locational details, Specific details of the schemes, Named parts of urban areas, etc. Statistics	**7**

Question	Answer	Marks
3(a)(i)	(Sand) dune	**1**
3(a)(ii)	Gentle slopes/steep near beach/windward side; Low level; Marram (grass) growing on it; Some bare sand/patches, etc. 2 @ 1 mark	**2**

Question	Answer	Marks
3(a)(iii)	Ideas such as: Sand blown by wind; Obstruction/pebble/litter/plant blocks wind; Causes velocity of wind to reduce/eddies; Deposition; Colonization by more plants; Gets larger over time; etc. 3 @ 1 mark	**3**
3(a)(iv)	Ideas such as: (Prevailing) wind approaches from an angle ; Swash comes in at an angle/obliquely; Backwash is vertical/straight out to sea; Material is moved in zigzag manner; (Known as) longshore drift; Spit develops where there is a change in direction of coastline; Recurved/hook by waves from other directions, etc. 4 @ 1 mark	**4**
3(b)(i)	P = Stack Q = Cliff R = Wave cut platform 3 @ 1 mark	**3**
3(b)(ii)	Ideas such as: Hydraulic action; Air compressed in crack in rocks by power of waves; Corrosion/solution; Rocks like limestone dissolved by acids in sea water; Corrasion/abrasion; Waves pick up loose materials and use them to grind the cliffs; Attrition; Materials reduced in size as they hit each other when being carried or moved around by waves, etc. Note: Max 2 for each process = 0 Cave, arch etc. Hard and soft rock. 5 @ 1 mark or development	**5**

Question	Answer	Marks
3(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which describe the strategies used to manage coastal erosion. Level 2 (4–6 marks) Uses named example. More developed statements which describe the strategies used to manage coastal erosion. (**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: Groynes, Revetments, Beach nourishment, Gabions, Managed retreat, Artificial sea walls Hard and soft engineering etc. Place specific reference is likely to consist of: Locational details, named places within the area managed, specific details of measures, etc. Statistics	**7**

Question	Answer	Marks
4(a)(i)	The annual precipitation is lower than 250 mm	**1**
4(a)(ii)	**Similarity:** Both are at similar latitude/close to Tropic of Capricorn; Both in Southern Africa; Both in Namibia; **Difference:** Namib is on the coast but Kalahari is inland; Namib extends slightly further south/north than Kalahari 2 @ 1 mark	**2**

Question	Answer	Marks
4(a)(iii)	Ideas such as: High daytime but cold night temperatures; Lack of clouds allow high insolation during day; Lack of clouds allows heat to escape at night; Inland so no moderating influence of sea; Etc. Inland ^ 3 @ 1 mark	**3**
4(a)(iv)	Ideas such as: Close to Tropic of Capricorn; High air pressure; Descending air; Air cools; Wind direction over areas of land; Cold current causes condensation/fog; Etc. = 0 Lack of water sources nearby 4 @ 1 mark	**4**
4(b)(i)	X is a cactus but Y is a tree/X lacks leves/branches; X is higher/X is 4 metres high but Y is 3 metres; Roots of Y are deeper/Y roots are 7 metres deep but X is only 1.5 metres; Roots of X extend further sideways than Y; Roots of X are sideways but Y are downwards; = 0 Thin/thick Large/small Etc. 3 @ 1 mark	**3**

Question	Answer	Marks
4(b)(ii)	Ideas such as: Seeds/plants remain dormant/lose leaves during long dry spells; Only flower for a short period of time/after rain; Waxy/narrow/spiky leaves to reduce transpiration; Spiky leaves/thorns to protect from predators; Tap roots/long roots/wide spreading roots to search for water; Light colours to reflect sunlight; Animals shelter in underground burrows to avoid heat; Animals only come out to hunt at night to avoid heat; Thick/fleshy stems/humps to store water; Stomata are small/closes at night to avoid transpiration; Note: No reserve on plants/wildlife. = 0 Can survive without water Do not credit examples alone. etc. 5 @ 1 mark or development	**5**

Question	Answer	Marks
4(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which describe the characteristics of a tropical rainforest ecosystem. Level 2 (4–6 marks) Uses named example. More developed statements which describe the characteristics of a tropical rainforest ecosystem. (**Note:** Max 5 if no named or inappropriate example) Level 3 (7 marks) Comprehensive and accurate statements which describe the characteristics of a tropical rainforest ecosystem. Note: Must consider more than one ecosystem element, e.g. plants and soil. Content Guide: Answers are likely to refer to: Types of vegetation, Types of fauna, Layers, Buttress roots, Drip tip leaves, Specified links within ecosystem eg food chains, Nutrient cycles Food chains Soil Climate, etc. Place specific reference is likely to consist of: Locational details, named flora/fauna, etc. Statistics.	**7**

Question	Answer	Marks
5(a)(i)	Completion of bar (no need to shade)	**1**
5(a)(ii)	Wind power; Solar power, Tidal power; Wave power; Biomass = 0 Nuclear HEP 2 @ 1 mark	**2**

Question	Answer	Marks
5(a)(iii)	Ideas such as: More use of non-renewables than renewables; 535 petajoules non-renewable but 350 petajoules renewable; Main fuels used are non-renewable; Natural gas and geothermal used in equal amounts; Compare an example of renewable and non-renewable MAX 1; Statistics = max 1 mark **reserve,** must use units and be comparative Etc. 3 @ 1 mark	**3**
5(a)(iv)	Ideas such as: Worries over radiation/meltdown; Problem of disposing of waste; Expensive building/setup costs; Political issues/government ideology; Public pressure/environmental awareness/protests; Nuclear power stations could be damaged by earthquake; Etc. = 0 Dangerous/explode Lack of technology Nuclear accident/fallout/weapons^ Environmentally friendly^ 4 @ 1 mark	**4**
5(b)(i)	Higher GDP the greater the use of electricity/positive correlation; Statistical evidence to support the above, e.g. Norway has GDP of 69 300 and uses 24 621 kwh energy per person but Mexico has GDP of 18 900 and uses 2496 kwh energy per person However relationship is not perfect/there are anomalies, e.g. Australia has a higher GDP than Canada but uses less energy per person, etc. Statistics = 1 mark **reserve,** must use units 3 @ 1 mark	**3**
5(b)(ii)	Ideas such as: Electricity availability tends to increase with development; In many countries with low GDP many rural areas are not connected to grid; Countries with higher GDP likely to use energy/electricity in factories/workplaces; Countries with higher GDP likely to use more home appliances; Higher GDP will enable investment in power stations/supply infrastructure; Etc. 5 @ 1 mark or development	**5**

Question	Answer	Marks
5(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which list methods of water supply. e.g. rivers (L1), reservoirs (L1),aquifer (L1) Level 2 (4–6 marks) Uses named example. More developed statements which explain how water supply is being managed to ensure future supplies. (**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 ideas such as: Reservoirs, Use of water from aquifer, Desalination, Water transfer pipelines, Restrictions on use, Cloud seeding Water treatment Grey water Etc. = 0 Irrigation Place specific reference is likely to consist of: Locational details/named areas within country/area chosen Specific schemes, etc. Statistics	**7**

Question	Answer	Marks
6(a)(i)	(Production of crops animal products/farming) for use by family/tribe/not to sell	**1**

Question	Answer	Marks
6(a)(ii)	Evidence such as: Wood/branches on ground; Tree stumps seen; Plants are lower level than surrounding ones; Vegetation is not so dense as surrounds; Banana plants can be seen growing; Areas of bare soil/ground can be seen; Etc. = 0 Clearing 2 @ 1 mark	**2**
6(a)(iii)	Ideas such as: Rain is heavy in the tropical rainforest/there are regular storms; Bare soil is exposed/no trees for shelter; Particles of soil are washed/carried away by the water; No interception; No roots to hold soil; = 0 Wind blows away Nutrients Etc. 3 @ 1 mark	**3**
6(a)(iv)	Strategies such as: Contour ploughing; Protect the ground with vegetation cover, Avoid overgrazing/overcultivation; Add mulch; Build retaining walls; Strip cropping, Plant trees; Terracing; Irrigation; Etc. = 0 Crop rotation 4 @ 1 mark	**4**
6(b)(i)	Ideas such as: Air pollution from burning fuels; Water pollution from disposing of waste/washing clothes/sewage; Noise pollution from construction/shipbuilding/children; = 0 Boiling Machinery 3 @ 1 mark	**3**

Question	Answer	Marks
6(b)(ii)	Ideas such as: Poisoning of water sources/air; Build up of toxins; Acid rain; Loss of habitat; Kills wildlife/plants; Extinction; Noise scares wildlife; Destruction of vegetation; Impacts on ecosystems/food chains; Eutrophication/algal blooms = 0 Air pollution Water pollution Global warming etc. 5 @ 1 mark or development	**5**
6(c)	Levels marking <u>Level 1</u> (1–3 marks) Statements including limited detail which describe the impacts of global warming on the natural environment. e.g. flooding (L1) <u>Level 2</u> (4–6 marks) More developed statements which describe the impacts of global warming on the natural environment. Note: MAX 5 if no place references, MAX 6 if one place reference <u>Level 3</u> (7 marks) Comprehensive and accurate statements, including some place references. <u>Content Guide:</u> Answers are likely to refer to: Changing rainfall patterns, Carbon dioxide/oxygen balance, Melting of ice caps/glaciers, Impacts on: Species Biodiversity Food chains, etc.	**7**