Cambridge Assessment International Education

Cambridge IGCSE™

GEOGRAPHY **0460/12**

Paper 1 **March 2021**

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.

Cambridge International is publishing the mark schemes for the March 2021 series for most Cambridge IGCSE™, Cambridge International A and AS Level components and some Cambridge O Level components.

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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.

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Each question carries 25 marks. Candidates cannot earn above the maximum marks available within each sub section.

The marking scheme attempts to give guidance about the requirements of each answer and lists a number of responses, which will earn marks along with the general principles to be applied when marking each question.
It should be noted that candidates can earn marks if their answers are phrased differently provided they convey the same meaning as those in the mark scheme. THE CANDIDATES DO NOT NEED TO USE THE SAME WORDING TO EARN MARKS.

The notation 'etc.' at the end of an answer in the mark scheme signifies that there may well be other correct responses or examples that can be given credit. Providing the statement is true, relevant to the question asked and not repetition of a previous point made credit should be given.

A point made within one sub-section which is an answer to the question set in a different sub-section should not be given credit as each sub-section asks different questions which require independent answers.

The mark scheme uses semi colons (;) to separate marks and diagonals to separate alternative answers.

During coordination the mark scheme is modified to add points agreed after discussion or to delete any points not allowed. All examiners should ensure that their modified scheme is fully up-to-date before marking begins.

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Marking Mechanics.

Point marking is used for sections (a) and (b) of each question, although marks are available in specified questions for development of appropriate points. Ticks should be used to clearly indicate where a mark has been allowed. Where a development point has been allowed the symbol 'DEV' should be placed adjacent to the tick. The number of ticks should always be equal to the total number of marks awarded. Only one development mark for each mark scheme point please.
Where a candidate makes a point which is not quite sufficient for credit an upturned 'V' insert symbol should be used. If after careful consideration a mark is awarded which gives 'benefit of doubt' to the candidate the letter 'J' should be placed adjacent to the tick (i.e. the candidate has 'just' achieved the mark).
Crosses are acceptable to signify wrong answers and the letters 'I/R' should be used to indicate those which are irrelevant.

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 e.g. (6 marks)

Level 3 (7 marks)
3 or more developed statements + named example with at least one piece of place specific detail.

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Question	Answer	Marks
1(a)(i)	Shading on Fig. 1.1 1 mark	**1**
1(a)(ii)	Cortes….Francisco Morazan….Atlantida….Colon All 4 correct = 2 marks 2 or 3 correct = 1 mark	**2**
1(a)(iii)	Ideas such as; • manufacturing industry (or example) in some areas; • some areas have mines/mineral extraction (or example); • some areas are important agricultural areas (or example); • areas along the coast may have ports 3 @ 1 mark	**3**
1(a)(iv)	Ideas such as: Low population density of areas of steep or high land/high density in areas of flat land or lowland; Low population density in cold areas/high density in temperate/moderate/mild/warm areas; Low density in deserts/arid areas/areas of low rainfall/high density in areas of moderate rainfall; Low density in areas of infertile soil/high density in areas of fertile soil; Low density in marshy areas; High density near rivers etc 4 @ 1 mark	**4**
1(b)(i)	Lack of living space/green space/open space Traffic congestion/air pollution/noise Water pollution 3 @ 1 mark	**3**

Question	Answer	Marks
1(b)(ii)	Ideas such as: Rapid population growth; High/increasing birth rates; Lack of contraception/knowledge about contraception/cannot afford contraception/religions discourage use of contraception; people want children to help in the home/look after siblings/to fetch water/collect wood; or to go out and earn money/to work/for labour/work on farms; or to look after them/take care of them in old age; tradition/cultural reasons/religious beliefs for large family; women not working/do not have careers; high infant mortality; early marriage; lack of abortion; falling death rates/longer life expectancy; improving health care/more doctors/more medicines; better water supply/sanitation; better food supply/diet; positive net migration/large amounts/more of immigration etc Few mineral deposits/wood/fuel; Mineral deposits/wood/fuel becoming exhausted/running out; Aridity/lack of water/low rainfall; Poor soils/low crop yields; Lack of land to farm etc 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
1(c)	Content Guide: Answers can refer to anti-natal policy, pro-natal policy or migration programmes and could include ideas such as: e.g. China one child policy/limit number of babies/restrict number of children make (free) contraceptives available examples of specific incentives (e.g. free education, free health care) examples of disincentives (e.g. if have a 2nd child e.g. fines, lose jobs reduce benefits for people having children e.g. reduced maternity leave/child benefit/child tax credits) forced sterilisation free goods e.g. radios in India marriage regulations e.g. late marriage/seek permission Other ideas: educate people about contraception legalise abortion introduce pensions for elderly educate women to encourage them to take jobs or careers gender equality acts advertise the benefits of small families (The reverse ideas would apply to pro-natal policies) Note: Development should refer to the policy itself not reasons or explanations for it.	

Question	Answer	Marks
2(a)(i)	A place where people live 1 mark	**1**
2(a)(ii)	X = nucleated/clustered Y = dispersed/scattered 2 @ 1 mark	**2**
2(a)(iii)	Ideas such as: Growth along roads; Presence of valleys/land for growth restricted by high land; growth along rivers/water courses etc 3 @ 1 mark	**3**
2(a)(iv)	Ideas such as urban settlements are more likely to have: More services/shops (or example); Higher order services; Services with a larger sphere of influence/people travel further to them; Services with higher threshold population; More public transport (or example); Urban settlements may have secondary schools but rural settlements may have primary schools/more schools; Urban settlements may have hospitals but rural settlements may have clinics/more health care etc 4 @ 1 mark	**4**
2(b)(i)	Ideas such as: Defensive site; Close to springs/streams/water supply; Farmland/vines/olives grown/fertile soil; Above flood level of river etc 3 @ 1 mark	**3**
2(b)(ii)	Ideas such as: Less people work on farms/declining importance of agriculture; Mechanization of agriculture; Lack of work/to find jobs/get more pay; Movement of people to urban areas; For education/universities; For health care/hospitals; Transport network may be poor/winding roads etc 5 @ 1 mark or development	**5**

Question	Answer	Marks
2(c)	Levels marking Level 1 (1–3 marks) Answer identifies function of the settlement and/or simple statements to explain the functions. Level 2 (4–6 marks) Uses named example. Answer identifies a function (s) of the settlement and gives reasons using more developed statements to explain the function(s) of the urban settlement. (Note: Max 5 if no named or inappropriate example) Level 3 (7 marks) Uses named example. Answer identifies a function(s) of the settlement. Comprehensive and accurate statements which give reasons for the functions of the urban settlement, including some place specific reference. Content Guide: Candidates are likely to refer to specific functions of settlements such as: Tourist resort port market town administrative centre industrial town mining settlement In addition functions which apply to many settlements would be valid such as: residential Shopping centre Provision of education Provision of health care etc Note: Reasoning should relate to the functions stated. Place specific reference is likely to consist of: Named parts of the chosen settlement/ detail of functions/statistics Etc. Examples can be MEDC/LEDC city/town in any country.	**7**

Question	Answer	Marks
3(a)(i)	A fracture of the rocks which make up the earth's crust. One mark	**1**
3(a)(ii)	P = epicenter Q = focus 2 @ 1 mark	**2**
3(a)(iii)	Ideas such as: On/close to plate boundaries/lines of weakness/where plates meet; Where plates slide past each other (reserve); Friction/plates stick; Pressure build up/tension; Energy released/plates jerk apart; Vibrations/seismic waves released etc. 3 @ 1 mark	**3**
3(b)(i)	Ideas such as: Stronger/more powerful/higher on Richter scale in Indonesia/or statistics; Shallower focus in Indonesia/or statistics; It caused a tsunami in Indonesia/a tsunami did not occur in Venezuela; 3 @ 1 mark	**3**
3(b)(ii)	Ideas such as: Variation in quality/cost of buildings/poorer quality buildings in LEDCs; E.g. deeper foundations/pyramid shape etc; Variation in emergency services/rescue teams; Variation in health care/will be better in MEDCs; Variation in amount of education/awareness about earthquake survival/earthquake drills; Variation in evacuation planning/evacuation routes; MEDC more likely to use better land use zoning/not build strategic buildings on fault lines; Variation in access to area/roads (for rescue services); Variation in access to food/water/1st Aid kits; Variation in ability to monitor/study faultline movements; MEDCs may have tsunami warning system/tsunami defences etc 5 @ 1 mark or development Note: must either directly refer to or imply variation or specify whether referring to MEDC or LEDC. 4 @ 1 mark	

Question	Answer	Marks
3(b)(iii)	Ideas such as: Employment; Children are educated there; They have lived there all their lives/birthplace/ sentimental/ tradition; Friends and family live in the areas; Pressure on land/nowhere else to go; Cant afford to move; Confidence in protection methods; Don't think it will happen; 5 @ 1 mark or development	**5**
3(c)	Levels marking <u>Level 1</u> (1–3 marks) Statements including limited detail which explain the causes of a volcanic eruption. <u>Level 2</u> (4–6 marks) Uses named example Developed or linked statements which explain the causes of a volcanic eruption. (Note: Max 5 if no named or inappropriate example. Credit country names to max.5) <u>Level 3</u> (7 marks) Comprehensive and accurate statements including some place specific reference. <u>Content Guide:</u> Answers can refer to constructive or destructive margin: Location on plate boundary Plate movement (apart or together) Subduction Destruction of plate Build up of magma Pressure Creation of gap Release of magma etc. <u>Place specific reference is likely to consist of:</u> Locational details/named areas within/around the volcano, Specific details of eruption/date/time/magnitude Statistical information deaths	**7**

Question	Answer	Marks
4(a)(i)	(Sand) spit One mark	**1**
4(a)(ii)	Distance = 45–50 km Direction = North east (NE) 2 @ 1 mark	**2**
4(a)(iii)	Ideas such as: Prevailing winds blow from the north west/at an angle; Waves/swash approach the coast/go up the coast/go up beach/at an angle/go in same direction as wind; Backwash retreats/pebbles go back /down the beach vertically /straight down/at right angles; Beach materials moved in zig-zag manner/along coast; (Known as) longshore drift; Recurved/hooked as a result of wind from different direction; Deposition at end/in deeper water/at change of direction of coastline; 3 @ 1 mark	**3**
4(a)(iv)	Ideas such as: Sheltered water/protected from prevailing winds; Wave refraction; Constructive waves; Swash stronger than backwash; Deposition occurs etc 4 @ 1 mark	**4**
4(b)(i)	Fig. 4.2 Cave Fig. 4.3 (Natural) Arch Fig. 4.4 Stack 3 @ 1 mark	**3**
4(b)(ii)	Ideas such as: Hydraulic action or description; Abrasion/corrasion or description; Corrosion or description; Erosion along lines of weakness/cracks forms caves; Back to back caves forms an arch/erode through headland; Collapse of roof of arch forms stack; Wearing down of stack forms a stump etc. 5 @ 1 mark or development	**5**

Question	Answer	Marks
4(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which identify how a coastline provides opportunities for people. Level 2 (4–6 marks) Uses named example. More developed statements which explain how a coastline provides opportunities for people. (Note: Max 5 if no named or inappropriate example. Example to be smaller in size than a country.) Level 3 (7 marks) Comprehensive and accurate statements including some place specific reference. Content Guide: Answers are likely to refer to: Industry Ports Fishing Leisure activities/for surfers etc. Retirement Tourism etc. Place specific reference is likely to consist of: Locational details, Named places along coast Specific details of employment opportunities Statistics etc.	**7**

Question	Answer	Marks
5(a)(i)	Russia One mark	**1**
5(a)(ii)	Ideas such as: Relationship is positive/higher GDP more internet users; Relationship is not linear/not exact etc 2 @ 1 mark	**2**
5(a)(iii)	Ideas such as in countries with high GDP: Better education/people have more IT skills; People can afford PCs/laptops/internet/electronic devices/cellphones/internet is expensive to set up; There is more likely to be better access to wifi/networks; There will be better electricity supplies; Internet is more likely to be needed for business/work use/many people in LEDCs are farmers etc. 3 @ 1 mark	**3**
5(a)(iv)	Ideas such as: Decline in primary employment/agriculture; (Initial) growth of manufacturing/secondary; (later) decrease in manufacturing/secondary; Increase in tertiary/services; Quaternary industry introduced etc 4 @ 1 mark	**4**
5(b)(i)	Ideas such as: Lowest are mostly to the south of the highest; Lowest are mostly landlocked but highest are mainly coastal; Highest are at higher latitudes/lowest at lower latitudes; Highest are in north Africa but lowest are mainly in the Sahara/Sahel; Highest in Nth/Sth but lowest in between/in centre etc. 3 @ 1 mark	**3**

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Question	Answer	Marks
5(b)(ii)	Ideas such as: Presence/absence of mineral/natural resources or example; Energy supplies or example; Availability of water supplies/drought; Mainly primary sector/agriculture low income; Development of manufacturing/secondary industry/TNCs increase wealth; Development of business/commerce/tertiary employment increase wealth; Development of tourism; Variation in accessibility/roads/railways; Historical development/impact of colonialism; Fertility of soils/efficiency of agriculture; Impacts of trade/exports; Level of education/skills/literacy Government/corruption; Whether country is landlocked or coastal etc 5 @ 1 mark or development	**5**
5(c)	Levels marking <u>Level 1</u> (1–3 marks) Statements including limited detail which explain why branches of a transnational corporation are located in a variety of countries. <u>Level 2</u> (4–6 marks) Uses named example. More developed statements which explain why branches of a transnational corporation are located in a variety of countries. (**Note:** Max 5 if no named or inappropriate example) <u>Level 3</u> (7 marks) Comprehensive and accurate statements including some place specific reference. <u>Content Guide:</u> Answers are likely to refer to: Raw material availability Markets/profit labour availability skills levels/education cost of labour government incentives efficient/cheap transport etc <u>Place specific reference is likely to consist of:</u> Specific details about TNC Named areas where TNC operates Statistical detail	**7**

Question	Answer	Marks
6(a)(i)	Running water turns a turbine to generate power One mark	**1**
6(a)(ii)	Nearest to source = Maji 100 km NNW of Baoshan = Lushui 2 @ 1 mark	**2**
6(a)(iii)	Ideas such as: Relief of land; Presence/absence of rivers; Amount of precipitation; Development of technology; Availability of capital; Presence or absence of other sources of energy (or examples); Government policy/attitude towards environment etc 3 @ 1 mark	**3**
6(a)(iv)	Factors such as: Exhaustion of fossil fuels/renewable will not run out; Fossil fuels cause atmospheric/water pollution/renewable will not cause atmospheric/water pollution; renewable do not cause global warming; Global treaties/public pressure to reduce carbon dioxide emissions Increasing concern about nuclear power; Low running costs/expense of buying fossil fuels; Reduce reliance on imports etc. 4 @ 1 marks	**4**
6(b)(i)	Ideas such as the Maji dam: is higher; has a larger reservoir behind it/flooded more land; produces more electricity; has a higher total cost; made more people homeless etc. 3 @ 1 mark	**3**
6(b)(ii)	Ideas such as: People made homeless/have to move away; Disruption of communications/roads flooded/people have to drive longer distances; Dams disrupt fish migration/breeding patterns; Farmland flooded/loss of food production; Deforestation/loss of vegetation; Habitats/food chains/ecosystems destroyed/animals forced to move; Noise/disruption/air/water pollution caused by construction/dam building; Less silt transported downstream/loss of soil fertility; Reduction in water supply downstream/less water available for irrigation 5 @ 1 mark or development	**5**

Question	Answer	Marks
6(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which explain how clean water is supplied for domestic use. Level 2 (4–6 marks) Uses named example. More developed statements which explain how clean water is supplied for domestic use. (**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: Reservoirs Pipes Groundwater/aquifer Wells Desalination Purification/treatment works, Rainwater harvesting Springs Importing water Bottled water etc. Place specific reference is likely to consist of: Locational details; Names of places within chosen area Specific details/statistics of schemes Statistics.	**7**