Cambridge Assessment International Education

Cambridge IGCSE™

GEOGRAPHY **0460/11**

Paper 1 Geographical Themes **May/June 2022**

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 May/June 2022 series for most Cambridge IGCSE, Cambridge International A and AS Level and Cambridge Pre-U 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.

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.

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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)	The way the population is divided up into/made up of/proportion/percentages of different age groups/gender 1 mark	**1**
1(a)(ii)	Completion of pie chart: Dividing line at 60 (1 mark) Shading (1 mark) 2 @ 1 mark	**2**
1(a)(iii)	Ideas such as: Decrease in 0–24. Increase in 25–49. Increase in 50+. 3 @ 1 mark	**3**
1(a)(iv)	Ideas such as: Reduction in birth rates/less children/smaller families; Reduction in infant mortality; Availability of abortions; Later marriage; Greater access to/use of contraception; Education about contraception/problems of having large family; Mechanization in agriculture/do not send children to work; Young not needed to look after elderly; More females in employment/careers; More females educated; Female emancipation; People living longer/reduction in death rates so percentage of young is lower; No need for elderly to be looked after by younger family members; Anti-natalist policy; Desire for material possessions or examples; Impact of HIV/Aids; etc. 4 @ 1 mark	**4**
1(b)(i)	Ideas such as: Pyramid/triangle shape/concave; Wide base/large percentage/lots of young dependents; Narrow apex/top/small percentage of/few old dependents; Decreasing size bars/bands within centre section/economically active/less economically active than young dependent; 3 @ 1 mark	**3**

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Question	Answer	Marks
1(b)(ii)	Ideas such as: Death rate will be low; People live a long time; Good health care/hospitals; Lots of doctors/low patient to doctor ratio; Lots of medicines/cures for diseases/medical knowledge; Pensions/more money in savings; Good food supply/nutrition; Water supply available; Electricity available; Good sanitation/hygiene; Social care facilities/care homes; Educated about, e.g., hygiene; Less young born so elderly proportion of population higher; etc. 5 @ 1 mark or development	**5**
1(c)	**Levels marking** Level 1 (1–3 marks) Statements including limited detail which describe the problems caused by a large dependent population. Level 2 (4–6 marks) Uses named example. More developed statements which describe the problems caused by a large dependent population. (**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.	**7**

Question	Answer	Marks
1(c)	Content Guide: Answers are likely to refer to: Burden on economically active (or the country)/higher dependency ratio/they do not make money/pressure on working population; Reduction in size of workforce/not enough workers/skills lost; Many people are not contributing to economy/producing; Less innovative workforce; Need for immigration/problems caused by immigration; Immigration could cause tension; People cannot work due to having to care for elderly; Less taxpayers/they do not pay tax; Workforce needs to pay higher taxes; Spending on pensions/government payments for elderly; More pressure/higher spending on health care/hospitals; Cost of social care/care homes/need to employ more people in care homes; More difficult to defend country/recruit forces; Lack of investment in education/services for young people/ closure of/problems for specified services for young/or, e.g., schools; **Note:** Allow food idea if related to young population Place specific reference is likely to consist of: Named parts of the chosen country/details of country location, e.g., Western Europe, but not Europe; Population data/statistics;	

Question	Answer	Marks
2(a)(i)	Movement (from one place to another) within the same country/from one state to another. 1 mark	**1**
2(a)(ii)	Michoacan…Jalisco…Chiapas All 3 in correct order = 2 marks 1 or 2 in correct order = 1 mark	**2**
2(a)(iii)	Ideas such as: Guerrero is closer/Baja California is further away; Cost of migrating will be lower from Guerrero; Baja California is closer to USA/people are more likely to migrate to USA from Baja California; Baja California will be more likely to need air/sea transport to Mexico City than Guerrero/road and rail can be used to Baja California; etc. **Note:** Must be comparative 3 @ 1 mark	**3**
2(a)(iv)	Ideas such as: Loss of working population/economically active/shortage of workers (or example, to run businesses); Mainly women/elderly/ children/dependent population are left behind; There are not enough people to do heavy work/manual work/skilled work (or example, doctor, teacher); Less people to farm/less food produced/crops grown/famine/starvation/land remains uncultivated; Family break up/nobody to care for elderly/no father figure to act as role model for boys/less partners; etc. Insufficient numbers to support/closure of services/businesses (or example such as schools/hospitals); Lack of development/(government) investment (or example – installing electricity/building roads); etc. 4 @ 1 mark	**4**

Question	Answer	Marks
2(b)(i)	Ideas such as: Greater density/more people per metre^2 in Isidro Fabela/more space per person in Chalma; More walls made from scrap materials in Chalma/more bricks/breeze blocks used in Isidro Fabela; More roofs made from scrap materials/corrugated iron in Chalma/more tiles/concrete used in Isidro Fabela; Most use standpipe for water in Chalma but mainly tap in Isidro Fabela; Most use illegal connections for electricity in Chalma but all use legal supply in Isidro Fabela/more use of illegal connections in Chalma; etc. **Note:** Must be comparative. 3 @ 1 mark	**3**
2(b)(ii)	Ideas such as: Poor quality housing/roofing/building materials/built from scrap, etc./easily destroyed; Many have difficulty obtaining water/lack of running water/water pollution; Lack of sanitation; Many do not have electricity supply/internet connection; Can't afford food/schooling or named example; Overcrowded houses/multi family homes; Lack of privacy; Spread of disease is rapid; Lack of employment; High rates of robbery/mugging or other specified crime; Poor provision of schools/education; Lack of health care facilities; Air pollution; Garbage not removed/litter; Fire hazard; etc. 5 @ 1 mark or development	**5**

Question	Answer	Marks
2(c)	**Levels marking** Level 1 (1–3 marks) Statements including limited detail which explain why people have moved to an urban area in a developing country. Level 2 (4–6 marks) Uses named example. More developed statements which explain why people have moved to an urban area in a developing country. (**Note:** 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: Employment; Health care provision; Education; Entertainment/bright lights; To be with friends and family; Access to food; Water supply; Electricity supply; Natural disasters; etc. **Note:** Accept whether expressed as pulls or pushes but do not double credit. Place specific reference is likely to consist of: Locational details/named areas within/around the urban area/named part of country; Specific details of opportunities/disasters; Statistics;	**7**

Question	Answer	Marks
3(a)(i)	Stack 1 mark	**1**
3(a)(ii)	Labels on sketch **Note:** Correct wording is fine without arrows as long as it is clear what it refers to. 2 @ 1 mark	**2**

Question	Answer	Marks
3(a)(iii)	Ideas such as: Waves pick up/carry loose materials/rocks; Loose materials hit/are thrown into the cliff; Cliff is damaged/broken apart by being hit by/eroded by loose rocks; Sandpaper action; etc. 3 @ 1 mark	**3**
3(a)(iv)	Ideas such as: Alternate bands of hard and soft rock; Headlands are formed where rocks are resistant/hard; So, they are not easily eroded; Bays are formed where rocks are not resistant/soft/unconsolidated/ or where there are lines of weakness; So, they are easily eroded; Differential erosion has occurred; 4 @ 1 mark	**4**
3(b)(i)	Benefits such as: Development of ports/trade/export; Fishing industry/for food; Jobs in tourist industry; Low/flat land for construction/easy to build on; Sheltered area to live; Scenic beauty; Fresh air/cool sea breeze/cooler climate; etc. 3 @ 1 mark	**3**
3(b)(ii)	Ideas such as: Storms/hurricanes/cyclones/typhoons may occur; Cliffs may be eroded/collapse/landslide; Tsunamis may occur; Flooding; Housing/possessions/settlements/buildings/food supplies destroyed/damaged; Roads become impassable; Electricity supplies can be disrupted; People may suffer water borne disease or example; Workplaces may be closed down/businesses damaged; 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 conditions which are likely to lead to the development of a coral reef. **Note:** Not explanation for L1. Level 2 (4–6 marks) More developed statements which explain the conditions which are likely to lead to the development of a coral reef. **Note:** Simple description linked with explanation = L2. Level 3 (7 marks) Comprehensive and accurate statements which describe and explain the conditions which are likely to lead to the development of a coral reef including relevant statistical detail. Content Guide: Ideas such as: Warm water/temperatures between 18–27°C L1; Which encourages year round growth (explanation); Shallow water/not more than 60 metres deep; So sunlight can penetrate (explanation); Water free from sediment/clear/not polluted/clean; So growth of organisms is not inhibited/not damage coral (explanation); Plentiful supply of oxygen in water; So organisms can grow/live (explanation); Plentiful supply of plankton/plentiful supply of nutrients/food; As food supply for fauna (explanation); Calm water/no strong currents/waves/strong currents; Which prevents destruction of coral/provides food – strong currents (explanation); PH is alkaline/basic/8 or above; As acidic water will kill coral/inhibit growth (explanation); Salt water;	**7**

Question	Answer	Marks
4(a)(i)	Where the river starts/begins. 1 mark	**1**
4(a)(ii)	Ideas such as: Small amount of water/low discharge/narrow/shallow/small river; Winding course/does not run in straight line; Interlocking spurs; Uneven long profile; Waterfalls; V-shaped; Rocks/boulders/stones in channel/river; etc. 2 @ 1 mark	**2**
4(a)(iii)	Ideas such as: Weight/pressure/force of water (as it hits the banks); Loose/soft/unconsolidated materials/mud are removed/washed away; Increase; Water enters cracks in rocks/forces air into cracks; Air expands/creates pressure; Increases size of crack/breaks off material; etc. 3 @ 1 mark	**3**
4(a)(iv)	Ideas such as: Uneven river bed; Turbulent/fast flowing/white water; Loose stones/rocks carried by water; Water/rocks swirl around/circular current; Scour the bed/abrasion/sandpaper action; Grind out circular hollows/hollows get deeper; 4 @ 1 mark	**4**

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Question	Answer	Marks
4(b)(i)	Ideas such as: Water supply for homes/drinking/domestic use/sanitation; Transport/trade; Roads easily built along valley/next to river; Flat land for building houses/settlement; Fishing; Water supply for industry/or example; HEP; Defence; etc. 3 @ 1 mark	**3**
4(b)(ii)	Ideas such as: Land/banks eroded/collapse/land washed away; Flooding/bursts banks; Housing/settlements/buildings/possessions/food supplies destroyed; Roads become impassable; Electricity supplies can be disrupted; People may suffer water borne disease or example; Crocodiles/mosquitoes; Workplaces may be closed down/businesses damaged; Impacts of Water pollution/river being polluted; 5 @ 1 mark or development	**5**
4(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 or linked statements which explain how an oxbow lake is formed. Level 3 (7 marks) Comprehensive and accurate statements including a labelled diagram which helps explain the formation of an oxbow lake.	**7**

Question	Answer	Marks
4(c)	Content Guide: Answers are likely to refer to: Meander forms; Fast flow on outer bend; Erosion on outer bends; Slow flow on inner bend; Deposition on inner bends; Neck narrows; River flows straight on/meander cut off; During time of flood; Sealed by deposition; etc. **Note:** Processes – max 1 × L2.	

Question	Answer	Marks
5(a)(i)	13–13.2 (%) 1 mark	**1**
5(a)(ii)	Completion of bar for Europe: Dividing line at 78 (1 mark) Shading/correct order (1 mark) 2 @ 1 mark	**2**
5(a)(iii)	Ideas such as: Greater percentage domestic in Americas/America 15% and Asia 9/9.5%; Greater percentage industrial in Americas/America 34% and Asia 9.5/10%; Greater percentage agricultural in Asia/America 50.5/51% and Asia 80/80.5%; 3 @ 1 mark	**3**
5(a)(iv)	Ideas such as: Much of Africa consists of rural areas; Most people work/most land is used in farming; Many subsistence farmers/most food from farming/to feed the people; Dry/drought/low rainfall/not enough rainfall/ need to irrigate/water crops; Industries are not as well developed in Africa; Domestic supply infrastructure is poorer in Africa; etc. 4 @ 1 mark	**4**

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Question	Answer	Marks
5(b)(i)	Ideas such as: On/near/around Tigris river; Occupies (lower part of valleys) of some of its tributaries; Long and narrow; Approx. 130–160 kms long; Width approx. 10–15 kms; Orientated West to East; etc. 3 @ 1 mark	**3**
5(b)(ii)	*Advantages* such as: Regular supply of water/water for drinking/bathing/domestic use; Can be used for irrigation/water crops/higher yield; Generation of HEP/renewable energy; Water for industry/potentially attracts industrial development; Tourism or example of benefit, e.g., jobs in hotels created by tourism; Creation of construction/maintenance employment; Reduces flooding; etc. *Disadvantages* such as: Loss of farmland; Especially high-quality land on valley floors; Settlements/Hasankey flooded/lost; Roads closed/diverted/lost; People need to be relocated; High cost of building dam/compensating people for loss of land; Conflict with Syria/Iraq over use of water/less water available for Iraq; Environmental impacts or examples of; Noise/dust during construction; etc. **Note:** 2 marks reserved on each of advantages/disadvantages 5 @ 1 mark or development	**5**

Question	Answer	Marks
5(c)	**Levels marking** Level 1 (1–3 marks) Statements including limited detail which describe methods used to supply energy. Level 2 (4–6 marks) Uses named example. More developed statements which describe methods used to supply energy. (**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 are likely to include: Fossil fuels; Renewable energy; Nuclear power; etc. Place specific reference is likely to consist of: Locational details; Names of places/species within chosen country;	**7**

Question	Answer	Marks
6(a)(i)	Completion of bar for agriculture. 1 mark	**1**
6(a)(ii)	Greater increase in jobs in finance. 240–250 000 compared with 40–50 000/190–210 000 more jobs. 2 @ 1 mark	**2**
6(a)(iii)	Ideas such as: Mechanization/automation; Import (of manufactured products)/overseas competition; Recession/economic decline; Exhaustion of raw materials (used in manufacturing); Improved skills/education; Government policy; More pay in other work/manufacturing low paid; etc. 3 @ 1 mark	**3**

Question	Answer	Marks
6(a)(iv)	Ideas such as: Jobs/income; Increased demand for local services/businesses; Taxes; Money into country/economic growth/attracts foreign exchange; Diversify economy; Improves electricity/water supply; Improves transport or example; Cultural diversify/learn languages; Protects environment or example; 4 @ 1 mark	**4**
6(b)(i)	Ideas such as: Cliffs/rock outcrops/headlands; Beaches; Sheltered areas/bays; Clear/clean/blue water/sea; Volcano/mountain; etc. 3 @ 1 mark	**3**
6(b)(ii)	Ideas such as: Low paid jobs/long hours/exploitation; Seasonal jobs/industry could decline/close; e.g., Covid. Air pollution causes asthma; Water pollution kills fish/impacts fishing industry; Noise; Dilution of culture; Rude/disrespectful/bad behaviour/racism/specified crime if impacts local people; Increased traffic/congestion; Loss of farmland for building; Have to move out of homes; Litter on streets; May not be able to access some beaches/some beaches are made private/beaches more crowded; Water/electricity restriction due to prioritising use by tourists; Lack of Government investment/money in other areas; Visual impact/destroys natural beauty; Impact on people of environmental impacts; Inflation/increase in, e.g. food or land prices; etc. 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 an economic activity may cause damage to the natural environment. Level 2 (4–6 marks) Uses named example. More developed statements which explain how an economic activity may cause damage to the natural environment. (**Note:** Max 5 if no named or inappropriate example and area) Level 3 (7 marks) Uses named example. Comprehensive and accurate statements, including some place specific reference. Content Guide: Answers could refer to any economic activity at any scale and are likely to refer to issues such as: Air pollution; Water pollution; Destruction of vegetation; Impacts on ecosystems/food chains; Impacts on climate; Soil erosion; Deforestation; Etc. Place specific reference is likely to consist of: Locational details/named areas within area chosen/reference to part of country; Statistics;	**7**