Cambridge Assessment International Education

Cambridge IGCSE™

GEOGRAPHY **0460/12**

Paper 1 **February/March 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.

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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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Question	Answer	Marks
1(a)(i)	The difference between immigrants and emigrants/immigrants minus emigrants 1 mark	**1**
1(a)(ii)	120 000 (or 43 000 + 77 000: no tolerance) – 30 000 (1 mark) 90 000 (1 mark)	**2**
1(a)(iii)	Ideas such as: More/higher paid/better employment/jobs/shortage of workers; Better education/to go to/schools/universities; Better health care/doctors/hospitals; Water/electricity supplies/better sanitation; More food supplies; War/drought/natural disasters/persecution Better housing Facilities/services Resources Standard of living/quality of life etc. 3 @ 1 mark	**3**
1(a)(iv)	Problems such as: Finding somewhere to live/stay/poor quality housing/housing problems; Language problems; Jobs are hard to obtain/low paid/exploitation; Racism (Racial/religious) discrimination/hostility/people complain about them taking their jobs; They miss/they are away from family/friends/don`t know people/loneliness; Hard to adapt to different religion/culture/traditions; High cost of living/can`t afford food/schooling/healthcare/food etc.; Threat of deportation/difficult to get legal documents/citizenship etc. 4 @ 1 mark	**4**
1(b)(i)	Ideas such as: Decrease of 0–14/young dependents/children; Working population/15/64/little change/stays the same; Increase of 65 and over/old dependents/elderly; 3 @ 1 mark	**3**

Question	Answer	Marks
1(b)(ii)	Ideas such as: 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 eg schools 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 the problems caused by overpopulation. Level 2 (4–6 marks) Uses named example. More developed statements which describe the problems caused by overpopulation. (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: – raw materials/minerals – Employment – Food supply – Provision of health care – Provision of housing/shelter – Water supply – Sanitation – Provision of education – Air/water pollution – Deforestation etc. – Crime – Traffic congestion – Spread of disease Place specific reference is likely to consist of: Named parts of the chosen country, Population data Not enough resources/resources run out = 0 Emigration =0 (can use as DEV)	**7**

Question	Answer	Marks
2(a)(i)	Fig. 2.1 1 mark	**1**
2(a)(ii)	Fig 2.2……..2.3…….2.1 All 3 in correct order = 2 marks 1 in correct order = 1 mark 0 in correct order = 0 marks	**2**
2(a)(iii)	Ideas such as: There are few of them; High order services are widely spaced/far apart/not close to home; Items are high cost; Services are used infrequently; They sell comparison goods/specialist items; It is worth the expense of travelling to them; They have a high threshold population etc =0 Large variety of goods 3 @ 1 mark	**3**
2(a)(iv)	Ideas such as: A settlement hierarchy is a way of arranging settlements in order of their size or importance/the way settlements vary in size from hamlet to city; Numbers of settlements decrease with increasing size/increase as you go down the pyramid; there are less large cities than small towns; there is only one capital city but lots of villages; MAX 1 for use of a specific example (e.g. in France there is one capital, Paris` while there are more cities the size of Marseilles) 4 @ 1 mark	**4**
2(b)(i)	Ideas such as: Positive relationship/generally the greater the population size the more services; Loughton has all the listed services and the larg**est** population; Sewardstone has the small**est** population and the least number of services; Two named comparative examples comparing population size **and** services; The fire station is only in Loughton which has most population etc 3 @ 1 mark	**3**

Question	Answer	Marks
2(b)(ii)	Ideas such as: Larger settlements (or example) are able to support/have a demand for/need more services/meet the threshold population; Services will not be viable/make a loss/less profitable if there are few people; Larger settlements (or example) have a larger sphere of influence; People will travel from elsewhere to use services in larger settlements (or example); Many people will travel to work in larger settlements (or example) and use their services; Larger settlements (or example) are better served by transport network so people will be able to travel there to use services etc 5 @ 1 mark or development =0 people can afford the services in the city because there are more services	**5**
2(c)	Levels marking <u>Level 1</u> (1–3 marks) Statements including limited detail which describe the impacts of urban sprawl. <u>Level 2</u> (4–6 marks) Uses named example. More developed statements which describe the impacts of urban sprawl. (**Note:** Max 5 if no named or inappropriate example) <u>Level 3</u> (7 marks) Uses named example. Comprehensive and accurate statements, with some place specific reference. <u>Content Guide:</u> Loss of agricultural land Deforestation Loss of habitats Atmospheric/noise pollution Need for more road transport/traffic congestion Loss of recreational areas Visual impact etc. Noise pollution <u>Place specific reference is likely to consist of:</u> Locational details/named areas within/around the urban area, Specific details of impacts etc. =0 Crime Lack of jobs	**7**

Question	Answer	Marks
3(a)(i)	37/38 (metres) One mark	**1**
3(a)(ii)	A = canopy; B = shrub layer 2 @ 1 mark	**2**
3(a)(iii)	Ideas such as: Some are able/not able to climb/fly; Some need shelter/protection/safety from predators; Different food supplies above/below 25 metres; Different habitats/nesting areas etc. 3 @ 1 mark	**3**
3(a)(iv)	*Buttress roots*: Because the trees are so tall; To provide support/to prevent them falling over/being blown over; They are better able to obtain nutrients from near the surface etc *Drip tip leaves:* Because rainfall is heavy/constant; To remove water rapidly/excess water from the leaves/allow water to run off quickly; To prevent them being broken off; To prevent fungus/bacteria growing on them etc =0 Wide leaves for maximum sunlight Note: 2 + 2 4 @ 1 mark	**4**
3(b)(i)	Ideas such as: Uneven/clustered; More deforestation in southern/south east/south west/east part; Lots of deforestation close to coast/sea/small amounts/none inland Lots of deforestation/more in Indonesia etc =0 Boundary/edge Near water Note: Could refer to deforestation, palm oil or pulpwood 3 @ 1 mark	**3**

Question	Answer	Marks
3(b)(ii)	Ideas such as: For economic growth to take place/government wants to make money/to repay debt; Exploitation of land by TNCs; Weak legislation/corruption; Lumbering/export of timber/logging/or example of use; mining/quarrying (or example)/drilling for oil; railways/road building; HEP generation/dams/reservoirs; commercial crop production or e.g. Oil palm plantations, soy beans; ranching; subsistence farming/slash and burn; Plantations for pulpwood/paper making; Building settlements/housing/urbanization/lack of space in cities/increasing population; To build factories etc. 5 @ 1 mark or development	**5**
3(c)	Levels marking <u>Level 1</u> (1–3 marks) Statements including limited detail which describe the impacts of deforestation on the global natural environment. <u>Level 2</u> (4–6 marks) More developed statements which describe the impacts of deforestation on the global 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 which describe the impacts of deforestation on the global natural environment, including some place references. <u>Content Guide:</u> Answers are likely to refer to: Build up of carbon dioxide, Enhanced global warming, Changing rainfall patterns, drought, Melting of ice caps/glaciers, Impacts on species/biodiversity Loss of habitat Impacts on food chains, Flooding etc. Rising sea level Note: Reference to flooding, loss of habitat, impact on biodiversity, species extinction etc. is acceptable providing answer does not state or imply that this is where the deforestation is occurring.	**7**

Question	Answer	Marks
4(a)(i)	Flood plain One mark	**1**
4(a)(ii)	Ideas such as: Flat land; Wide, Slightly above river level, Grassy/grazing land/pasture etc 2 @ 1 mark	**2**
4(a)(iii)	Ideas such as: Lateral erosion; River floods; Water accumulates next to river/water is not moving/water has no energy; Deposition occurs; Sediment/alluvium builds up; Flood water retreats etc 3 @ 1 mark	**3**
4(a)(iv)	*Advantages:* Fertile land/high yield/can be used for grazing/farming; Flat land for building; Water supply/water for drinking/washing etc.; Irrigation; Ease of building transport routes/roads along valley/transport along river; Fishing; HEP etc *Disadvantages:* Flooding; Erosion of land; (Stagnant water brings) Mosquitoes/crocodiles may be present; Difficult to cross etc =0 River/water pollution Water borne disease or example; 4 @ 1 mark	**4**

Question	Answer	Marks
4(b)(i)	Characteristics such as: east/north east facing; Adjacent to/flows into/joins Atlantic Ocean; Stretches from Ciudad Guayana to coast; Many distributaries; width approximately/east to west 200 km; length approximately/north to south 200–300 km; islands in channel; arcuate type etc. = 0 Curved Big/wide Tributaries Two mouths 3 @ 1 mark	**3**
4(b)(ii)	Ideas such as: River carries large/increasing amount of load; River slows/flows into still water/; Deposition of materials, As river does not have energy to transport them all; formation of distributaries/water takes new routes, flocculation, build up of new land/islands, colonization by vegetation, lack of strong currents etc 5 @ 1 mark or development	**5**

Question	Answer	Marks
4(c)	Levels marking Level 1 (1–3 marks) Diagram with descriptive labelling and/or statements including limited detail which explain how a waterfall is formed. Level 2 (4–6 marks) More developed statements which explain how a waterfall is formed. Level 3 (7 marks) Diagram with descriptive labelling and developed statements which explain how a waterfall is formed. Content Guide: Diagram is likely to show: Overhang, Plunge pool, Hard rock layer etc. Note: do not credit features unless on diagram Explanations are likely to refer to: Rock types, Types of erosion, Undercutting, Collapse of overhang, Retreat of waterfall etc.	**7**

Question	Answer	Marks
5(a)(i)	Producing food/farming for consumption/not for sale (profit)/producing food for family/tribe. 1 mark	**1**
5(a)(ii)	Ideas such as: Valley/flat land surrounded by steep slopes =1 Valley with flat/wide floor/steep sides = 2 etc. 2 @ 1 mark	**2**
5(a)(iii)	Ideas such as: Gentle slopes/Flat floor could be used for crops/palms/fruit trees; Soils will be more fertile of valley floor; Flat land easier to irrigate; Sides are too steep for cultivation/ steep sides are used for pasture/grazing animals; Sides may be impacted by soil erosion; Sides may be terraced in places; etc 3 @ 1 mark	**3**
5(a)(iv)	Ideas such as: They are too poor to buy food/have large families to feed; They live in remote/isolated areas/too far from markets/no nearby markets They only have small areas of land/can`t afford large areas; They do not produce enough surplus to sell/can only produce enough for themselves; Tradition; Lack of/can`t afford machinery/fertilizers/good quality seeds; Lack of education about use of fertilizers/crop rotation etc 4 @ 1 mark =0 cheaper to grow food No jobs Can`t afford labour	**4**
5(b)(i)	Ideas such as: Both fluctuate; EU shows a (general) increase in exports but US remains about the same/slight reduction; US exports more than EU up to 2014 but US exports less than EU after 2014 / EU exports less than US up to 2014 but EU exports more than US after 2014; EU and US are very different amounts in 2004 but similar in 2018 etc 3 @ 1 mark	**3**

Question	Answer	Marks
5(b)(ii)	Ideas such as: Variation in rainfall amounts/drought/flood; Temperature differences/or example e.g. late frost may damage crop one year; Variation in amounts of sunshine; seed quality/development of high yielding varieties/GM; fertilizer applications/pesticides/insecticides; Use of irrigation; Market demand/price; Grants/quotas/subsidies; Crop disease/pests; War; Change in land use or example (e.g. fell trees, fill ponds, urbanisation); Government planning of agricultural production etc. =0 Global warming 5 @ 1 mark or development	**5**
5(c)	Levels marking Level 1 (1–3 marks) Statements including limited detail which describe the impacts of food shortages. Level 2 (4–6 marks) More developed statements which describe the impacts of food shortages. (Note: Max 5 if no named or inappropriate example) Level 3 (7 marks) Comprehensive and accurate statements, including some place references. Content Guide: Answers are likely to refer to: Deaths, Famine/starvation/hunger, Malnutrition/deficiency diseases, inability to work/reduction of productive capacity, poor economic development, need for more health care, dependence on international aid war refugees/emigration higher food price food imports etc. Place specific reference is likely to consist of: Locational details/named areas within the country, Specific details of impacts/statistics etc. people die cannot be used for DEV	**7**

Question	Answer	Marks
6(a)(i)	When raw materials are made into products/things/something 1 mark	**1**
6(a)(ii)	Features such as: big / large area; high structures/tall; chimneys; modern; pipes; metal structures; conveyors etc =0 Smoke/air pollution Near water 2 @ 1 mark	**2**
6(a)(iii)	Energy Labour Raw materials 3 @ 1 mark	**3**
6(a)(iv)	Ideas such as: Transportation of raw materials (to the factory) Transportation of products/to the market; Imports/exports; Workers need transport to get to work; If raw materials/products are perishable transport must move them quickly etc 4 @ 1 mark	**4**
6(b)(i)	Completion of divided bar, two marks for correct position of dividing lines and one mark for shading/order. Line at 20 = 1 Line at 52 = 1 Shading = 1 MAX 2 if segments in wrong order but correct sizes and shading 3 @ 1 mark	**3**

Question	Answer	Marks
6(b)(ii)	Ideas such as: Air pollution; Water pollution; Kills wildlife/vegetation; Impacts on food chains/ecosystems; Deforestation/clearance of vegetation; Habitats destroyed; Acid rain; Noise scares animals etc =0 Land pollution Visual pollution 5 @ 1 mark or development	**5**
6(c)	Levels marking <u>Level 1</u> (1–3 marks) Statements including limited detail which explain how an economic activity is being managed sustainably. <u>Level 2</u> (4–6 marks) Uses named example. More developed statements which explain how an economic activity is being managed sustainably. (**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 should refer to appropriate forms of management of the activity chosen, 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). Answers can relate how any activity can be managed for environmental or economic sustainability such as: Agriculture Tourism Manufacturing industry Generation of energy Quarrying Fishing Public transport etc. <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	**7**

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