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Cambridge Assessment International Education

Cambridge IGCSE™

GEOGRAPHY **0460/23**

Paper 2 Geographical Skills **October/November 2022**

MARK SCHEME

Maximum Mark: 60

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)	B(714)/secondary road/(ground survey/spot height) 94 (m)	**1**
1(a)(ii)	Coniferous and non-coniferous trees/mixed woodland/forest	**1**
1(a)(iii)	School/important building/school building	**1**
1(a)(iv)	66 (metres)	**1**
1(a)(v)	Stanley Burn	**1**
1(b)(i)	2280–2380 (metres)	**1**
1(b)(ii)	107–113(°)	**1**
1(b)(iii)	South-west aspect for growing crops/shelter; Gently sloping since easy to build/use of machines; On a stream/river for water supply; Woodland for fuel/building; Along a road/track/drive for access/to coast/town; On a slope to avoid flooding; Fields for agriculture; Elevated/high for defence/view; Away from town since less noise/air pollution/peaceful.	**3**
1(c)(i)	Arrow 63–67 mm from the left-hand margin (accept if no label). Use the ruler devise to measure distance. Arrows should end within 1cm of the cross-section. Measure to the point that the arrow projects to. The arrow should project to the profile and not the base line. There should be no ambiguity.	**1**
1(c)(ii)	Land descends to 75–88 (metres) above sea level (needs to meet axis).	**1**
1(d)(i)	Ferry/ferry terminal; Harbour; Marina; Groynes; Breakwater; Coast path/national trail/recreational route; (Traffic free) cycle route; Picnic site; Nature reserve; Lighthouse; Parking; Public toilets; Pools (Saltcoats); Slipway.	**3**

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Question	Answer	Marks
1(d)(ii)	Sand/beach; Rocky/outcrops/wave-cut platform/(loose)rocks/boulders; Dunes/bracken/heath/rough grassland; Headland; Pools/lakes/lagoon; Bay/curved coastline/cove; Island(s)/stacks/stumps; River mouth; Natural harbour; Flat/gentle slope.	**5**

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Question	Answer	Marks
2(a)(i)	5377 (per km²)	**1**
2(a)(ii)	High rise/tall buildings/multi-storey; Buildings crowded together/clustered/compact/nucleated; Little open/green space.	**2**
2(a)(iii)	Little development on highland/mountains/hills/development concentrated on low land; Little development on steep slopes/cliffs/unstable slopes/little flat land; (Dense) forest prevents expansion; Water/sea surrounds city preventing expansion.	**3**
2(b)	Air pollution causes asthma/breathing difficulties/health problems/ sickness; Noise pollution causes hearing loss/stress/reduces sleep; People late to work/longer travelling time cause road rage/stress/affects people's mental health; Deliveries/freight delayed; Speed of response to emergencies (hospital/fires) causes increased risk to life; More accidents cause more injuries/insurance claims/vehicle repairs.	**2**

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Question	Answer	Marks
3(a)(i)	12 861	**1**
3(a)(ii)	Gauteng Western Cape Northwest Northern Cape	**2**
3(b)	Both (Limpopo and Eastern Cape) have negative net migration/higher number of emigrants than immigrants; Both have high numbers of emigrants/people moving away; However, Limpopo also has a large number/proportion of immigrants.	**3**
3(c)	Large numbers of immigrants/too many migrants/high(est) net migration; Lack of space to build housing/Gauteng small(est) province/high population density; Who live in informal/squatter settlements/overcrowded housing; Shortage of housing/only poor-quality housing available/can't build housing fast enough/authorities cannot afford to provide housing for them/provides low quality cheap housing; Lack of services e.g., running water/schools etc.	**2**

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Question	Answer	Marks
4(a)(i)	Strato-volcano; Active.	**2**
4(a)(ii)	Steep sided; Concave/steeper top, gentle(r) base; Conical; Crater/caldera; Vent; Ash/lava/magma; Smoke/steam/gases; Dissected slopes/gullies/ridges.	**3**
4(b)	Monitoring/warning/prediction; Evacuation; Land-use zoning/exclusion zones/building codes; Emergency shelters (protection from ash); Spraying lava flows with sea water/lava channels/tunnels; Reroute aircraft; Emergency response planning/drills/education; Aid/medical resources/rescue equipment/food supplies.	**3**

Question	Answer	Marks
5(a)	Solar/sun/light; Wind.	**2**
5(b)	Lack of sunshine; Lack of winds; Cannot afford to build/expensive to build/cost of installation/fossil fuels are cheaper/cost of energy storage; Using other renewables/nuclear/HEP/geothermal; Do not generate enough power/needs back-up; Large stock of fossil fuels; Land not available/large amount of land required.	**3**
5(c)	Both have shown fluctuations; From 1995 both have shown an overall decrease; Highest percentage use has been in high income countries.	**3**

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Question	Answer	Marks
6(a)(i)	Meets needs of present/allows development now; Without compromising the needs of the future/don't use up all the resources needed in the future/continues for a long time; **OR** Achieve economic development/maintain or improve people's quality of life; Maintain the environment/don't do damage to the environment.	**2**
6(a)(ii)	Volcanoes/glaciers/whale watching/Reykjavik	**1**
6(a)(iii)	Increased; From (less than) 500 000 (in 2010) to 2 200 000 (in 2017) by 1.7 million/by 440%.	**2**
6(b)	Limit number of flights/to Iceland; Limit number/size of cruise ships to Iceland; Increase cost of holidays/tours/travel/flights/entrance fees/accommodation/tax on tourists; Decrease costs of holidays in low season; Increase number of flights to eastern Iceland/invest in new airport elsewhere; Advertise attractions outside Reykjavik; Increase tours/facilities/attractions in other parts of Iceland; Improve roads/methods of transport; Quotas/limits on number of tourists allowed in Reykjavik area; Building regulations/development controls.	**3**

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