CAMBRIDGE
International Education

Cambridge IGCSE™

GEOGRAPHY **0460/22**

Paper 2 Geographical Skills **May/June 2024**

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.

Cambridge International is publishing the mark schemes for the May/June 2024 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 descriptions 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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Marking annotations

Examiners must use the following annotations:

Annotation	Meaning
	Correct point
	Incorrect point
BOD	Benefit of the doubt given
IRRL	Irrelevant to the question being asked
NAQ	Material that does not answer the question
REP	Point has been repeated
TV	Point is too vague
LNK	Two or more ideas or paired data have been linked together for credit
^	Omission mark; the answer does not go quite far enough to gain a mark
Highlight	Highlight used to show a significant part of the response or can be used with another annotation e.g. IRRL
[ ]	Brackets used to show a significant part of the response or can be used with another annotation e.g. LNK
SEEN	Used to show that questions with no response have been checked and all additional pages have been checked

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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>1(a)(i)</td><td>(R. S.) Silvestro</td><td>1</td></tr>
<tr><td>1(a)(ii)</td><td>Mule-track or wide easy path with signs</td><td>1</td></tr>
<tr><td>1(a)(iii)</td><td>Minor road</td><td>1</td></tr>
<tr><td>1(a)(iv)</td><td>1468 (m)
Note: also allow 1458 (m)</td><td>1</td></tr>
<tr><td>1(b)</td><td>
<table>
<tr><th></th><th>Area in Fig. 1.2 Graubőden</th><th>Area in Fig. 1.3 Toblacher Felder</th><th>Both of these areas</th><th>Neither of these areas</th></tr>
<tr><td>parking</td><td></td><td></td><td></td><td>✓</td></tr>
<tr><td>camping</td><td>✓</td><td></td><td></td><td></td></tr>
<tr><td>main road</td><td></td><td></td><td>✓</td><td></td></tr>
<tr><td>mostly flat</td><td></td><td>✓</td><td></td><td></td></tr>
<tr><td>mostly gently sloping</td><td>✓</td><td></td><td></td><td></td></tr>
</table>
</td><td>5</td></tr>
<tr><td>1(c)(i)</td><td>3150–3350 (metres)
Note: Allow 3.15–3.35 km</td><td>1</td></tr>
<tr><td>1(c)(ii)</td><td>113–115 (degrees)</td><td>1</td></tr>
<tr><td>1(c)(iii)</td><td>876784
877784</td><td>1</td></tr>
<tr><td>1(d)(i)</td><td>Wood</td><td>1</td></tr>
<tr><td>1(d)(ii)</td><td>Valley with lowest point 1150–1300 m to include the bottom of the lake.
Note: no part of the drawn section should rise above 1400 m.

Lake/lake name labelled with arrow OR flat area for lake if no label;
Note: must be between 49–53 and 59–63 mm from western edge of cross section.

Note: The lake’s edges must be clearly defined if no label and each side must fall within the measurements given (49–63 mm).</td><td>2</td></tr>
<tr><td>1(e)(i)</td><td>Road junction</td><td>1</td></tr>
<tr><td>1(e)(ii)</td><td>Mining</td><td>1</td></tr>
<tr><td>1(f)</td><td>Land over 2000 m;
Cliffs and very steep slopes;
Small streams.</td><td>3</td></tr>
</table>

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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>2(a)(i)</td><td>900–1000 (per km^2)
Note: Need whole range not a single figure.</td><td>1</td></tr>
<tr><td>2(a)(ii)</td><td>Dense(r) in west;
Dense(r) on the coast/by North Sea/sparser inland;
Dense(r) on west coast = 2;
Dense(r) in centre;
Sparse(r)/(second) least in south-west;
Sparse(r) in north/north-east/north-north-east/(North Sea) islands;
Moderate/medium/average density in the south/east/south-east;
Uneven distribution.

Note: For dense(r) allow high(er)/more dense/increase.
For sparse(r) allow low(er)/less dense/decrease.
Allow population for population density.</td><td>3</td></tr>
<tr><td>2(b)</td><td>Negative/inverse relationship/as relief decreases population density increases/as relief increases population density decreases;
Dense areas below S.L. /1–>4 m /1>4m below S.L.;
Sparse areas (generally) above S.L. /0–25 m/>25 m above S.L./areas above S. L., have low to moderate/medium/average population density;
Some areas/anomaly below S.L. have a sparse population;
South-west sparse but below S.L. /1–4 m below S.L.;
Sparse areas in the north/north-east all above S.L. /0–25 m above S.L.;
Moderate/medium/average populated areas are above S.L./0–25 m/ 0–>25 m/>25 m above S.L.;
No clear relationship in the east;

Note: Allow lower for sparse and higher for dense.
If the candidate refers to data, use the following table:

Population Density
<table>
<tr><td>Dense/High</td><td>Moderate/Medium</td><td>Sparse/Low</td></tr>
<tr><td>900 – >1000/>1000 per/sq.km</td><td>200 – 399/200 – 899/400 – 899 per sq.km</td><td>0 – <200/200 – 399/0 – 399 per sq.km</td></tr>
</table>
Note: Allow population for population density.
Credit ranges of figures.
Do not double credit e.g. using the same figures for sparse and moderate population.</td><td>3</td></tr>
</table>

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Question	Answer	Marks
2(c)	Trade/exports/imports/access to shipping routes/providing harbours; Rich/fertile land/soils; Mineral wealth or named mineral (e.g. iron ore/coal); Moderate climate; More accessible/more roads and railways/transport by ship; Passenger/ferry ports/port development/hinterland for port; Fishing; Manufacturing industry/oil refineries; Beaches/tourism; Water supply from rivers; Flat/low land for construction; Capital city.	**1**

Question	Answer	Marks
3(a)	Fig. 3.1 linear. Fig. 3.2 dispersed/isolated/scattered.	**2**
3(b)	2/3/4/5 storeys/multiple stories/floors/more than one storey/tall/high; Apartments/flats; Similar (design or size); Concrete/cement; Different colours/bright/colourful/red/blue/white/yellow/ green/brown; Rectangular/cubic/square; Flat /pitched/slanting/terracotta/tiled/mixed types of roofs; Terraced houses/some detached; Balconies/terraces; Gardens; Many windows.	**4**
3(c)	Contour ploughing; Terracing/(farming) in layers/different levels/steps; Grass strips/rows; Banks/walls to support plots/retain water/use of bunds.	**2**

Question	Answer	Marks
4(a)	X = crater Y = vent/pipe/conduit Z = magma chamber	**3**
4(b)	A stratovolcano/composite/cinder cone B shield volcano	**2**

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Question	Answer	Marks
4(c)	A – unpredictable/B – continuous eruption; A – violent/explosive (eruptions)/greater blast/materials ejected with greater pressure B – non-violent/gentle; A – ejects more/a lot of/heavy ash/or ejects ash which can cause respiratory problems/burial; A – lateral blasts; A – nuée ardente/cloud of gas and ash/incandescent clouds/poisonous or toxic or dangerous gases/pyroclastic flow/(difficult to outrun/escape); A – (the explosive nature melts snow and can) cause lahars or mudflows; A – ejects (volcanic/lava) bombs (which can kill people); A – steeper so landslides more likely; A – has parasitic or secondary cones which can erupt in different directions. Note: No need to compare both A and B. If not stated, assume candidate is talking about A.	**3**

Question	Answer	Marks
5(a)(i)	A = Rain gauge B = Wind/weather vane C = Anemometer	**3**
5(a)(ii)	2.2 mm (From the) south (wind)/to the north	**2**
5(b)(i)	9 (mm)	**1**
5(b)(ii)	5 (°C)	**1**
5(b)(iii)	Friday	**1**

Question	Answer	Marks
6(a)(i)	B/Sacramento A/Colorado	**2**
6(a)(ii)	Irrigation will be most needed in the south	**1**
6(b)(i)	30 (million)	**1**
6(b)(ii)	42 (billion m^3)	**1**
6(c)	Cost will be a problem if desalinated water is used for agriculture	**1**

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Question	Answer	Marks
6(d)	Run out of water/ground water; Plants/animals may die/loss of habitat/reduction in biodiversity/extinction/plant roots die/decay/photosynthesis is hindered; Lowering of water table/plants can't access groundwater; Rivers/streams/lakes dry up (flows to groundwater reservoir)/reduced river flow/less surface runoff (more rainfall percolates into the ground); Soil erosion/soils washed away/reduced soil fertility/soils dry out/desertification/(soil) leaching; Decomposition of dead vegetation/matter to produce methane; Poor quality/contaminated water/water pollution; Land may subside/sink/lower/sink holes; Soils become saline/incursion of seawater/salinisation; Waterlogging/flooding.	**2**

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