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Cambridge Assessment International Education

Cambridge IGCSE™

GEOGRAPHY **0460/43**

Paper 4 Alternative to Coursework **May/June 2023**

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 2023 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:

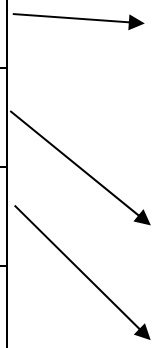
Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>1(a)(i)</td><td>Cliff collapse.</td><td>1</td></tr>
<tr><td>1(a)(ii)</td><td><u>Slipping or falling on the beach:</u>
Wear suitable / appropriate footwear / shoes / boots / wellingtons;
Avoid slippery surfaces / steep slopes;
Do not run on the beach / don’t play around.

<u>Hypothermia from getting cold & wet:</u>
Wear warm / waterproof clothes / layers of clothes / thick clothes / specific e.g., / spare clothes / change of clothes / suitable clothes.

<u>Getting lost or separated from others:</u>
Stay in groups / pairs / near each other / stay together;
Tell teacher where they are going;
Carry a cell (mobile) phone;</td><td>3</td></tr>
<tr><td>1(b)(i)</td><td><table><tr><th>process</th><th></th><th>definition</th></tr><tr><td>attrition</td><td rowspan="4"></td><td>Particles carried by the waves crash against each other and are broken up.</td></tr><tr><td>corrasion (abrasion)</td><td>Acids in the seawater dissolve chalk and limestone cliffs.</td></tr><tr><td>hydraulic action</td><td>Particles carried by the waves are thrown at the cliffs and erode them.</td></tr><tr><td>solution (corrosion)</td><td>Waves trap and compress air in cracks in the cliff which causes the rocks to break apart.</td></tr></table></td><td>2</td></tr>
<tr><td>1(b)(ii)</td><td>Ideas such as:
Strong / destructive / big waves / coast is exposed / coast is not sheltered / exposed to long fetch;
Cliffs are weak material / clay / soft rocks / easy to erode;
No defences (to protect cliff) / no protection / no management;
No <u>natural</u> barriers / no vegetation to stabilise cliff / narrow beach;
No reason to protect land (on the cliffs).</td><td>2</td></tr>
<tr><td>1(c)</td><td><u>Wind</u> drive waves / waves move in direction of prevailing wind;
Waves / swash come to the beach at an angle / oblique / diagonally;
<u>Swash / waves carries material</u> up / to the beach;
<u>Backwash / waves takes material back down the beach</u> at right angles / perpendicular / under gravity / vertically / straight down;
Process is repeated <u>with each wave;</u>
Zig-zag / saw tooth pattern <u>along beach / coast.</u></td><td>4</td></tr>
<tr><td>1(d)</td><td>They go down the beach into the sea.</td><td>1</td></tr>
<tr><td>1(e)(i)</td><td>Plotting difference in height at 12m.
West: 0.55m.
East 1.3m.</td><td>2</td></tr>
</table>

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Question	Answer	Marks
1(e)(ii)	Longshore drift is from west to east.	**1**
1(e)(iii)	Sand / sediment is more on west side of groyne / beach is higher on west side of groyne / smaller difference in height (between top of groyne and beach) on west side; **OR** Sand / sediment is less on east side of groyne / beach is lower on east side of groyne / larger difference in height between top of groyne and beach on east side; 1 mark for paired data e.g., At 2m along the groyne difference = 0.29m on west side and 0.48m on east side / difference is 0.19 more on east side; Average difference (in height) = 0.4m (0.42) on west side and 0.8m (0.78) on east side.	**2**
1(e)(iv)	Do more measurements along the groyne / measure every metre along groyne; Do measurements at more groynes / another groyne; Get other students to check accuracy of measurements / compare results with another person;	**2**
1(f)(i)	Agree what each score / description / advantage & disadvantage means; Students or group looks at / go to different defences / groyne, rip rap and sea wall; Circle groyne, rip rap or sea wall on recording sheet; Individual student decides the score / group agrees the score / rate the method; Mark score on their form / tick the box to show the score; Add up the total; Complete recording sheet for each defence / groyne, rip rap and sea wall. **Note:** If answer is the questionnaire idea – still credit; Mark score on their form / tick the box to show the score.	**4**
1(f)(ii)	Draw the bar to show attractiveness of groyne = +1.	**1**
1(f)(iii)	Total score for sea wall = –5.	**1**
1(f)(iv)	Hypothesis is **partly true** – 1 mark reserve (✓HA). True for rip rap **and** sea wall / both have negative impact / negative scores; Not true for groynes / groyne has a positive impact / positive score; Credit 1 mark for data groyne = (+)3 & rip rap = – 2, sea wall = -5.	**4**

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Question	Answer	Marks
2(a)(i)	Area served by a settlement or service.	**1**
2(a)(ii)	Bread.	**1**
2(a)(iii)	Laptop computer.	**1**
2(b)(i)	Question / answer may be too vague / too specific / will not provide a distance travelled / may be a city or region / difficult to process / difficult to map / does not give useful data / not necessary for the fieldwork / to test hypothesis; Question is too intrusive / too personal / too private / people will not give their address / impolite / rude / offensive; People will not answer because afraid of burglary / the safety of person answering.	**2**
2(b)(ii)	Work in pairs / groups / not alone; Don't block pavement / entrance to shops; Be polite / respectful / kind to interviewees / thank them; Accept that some people won't want to answer questions / check if people are willing to talk / don't force people to answer / don't ask people if they are busy / in a hurry; Ask a range of people / get a representative sample of age / gender / get a random sample / ask every 10th person / use a sampling method to pick people; Choose a time when there are plenty of people shopping / busy time / different times / weekdays and weekends; Explain what questionnaire is about / introduce yourself; Make sure people are shoppers (not workers at the centre); Do the questionnaire at entrance / exit / busy area / various parts / spread out across centre.	**3**
2(c)(i)	Choropleth shading on Fig. 2.2. 10 people from Tijuca. 1 person from Madureira.	**2**
2(c)(ii)	Sao Cristovao – Ramos – Botafogo – Jacarepagua.	**2**

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Question	Answer	Marks
2(c)(iii)	Hypothesis is **correct / supported** – 1 mark reserve (✓HA). Credit 2 marks for statements: People travel from greater distances to Barra (or reverse for Norte); People travel from more boroughs / areas / regions to Barra (or reverse for Norte); People travel from E and W side / whole area to Barra **and** from E side to Norte; Credit 1 mark for paired examples which show more people travel from more distant neighbourhoods to Barra: e.g., between 3 and 9 to Barra and 0 to Norte from Pavuna (only credit boroughs with 0 people going to Norte). Need to name the borough not the number; **OR** Credit 1 mark for comparison of number of boroughs where people come from – 21 to Barra and 15 to Norte; Barra has 4 boroughs with no people & Norte has 10; **OR** Credit 1 mark for comparative maximum distances – Barra 29 – 30km and Norte 21 - 23km.	**4**
2(d)(i)	Completion of divided bar for Barra: Dividing line at 28 = 1 mark. Correct shading of clothes and shoes, and jewellery = 1 mark. **Note:** Credit 1 mark if wrong way around – dividing line at 22 and appropriate shading.	**2**
2(d)(ii)	Hypothesis is **false** – 1 mark reserve (✓HA). Credit 1 mark for statement: People buy similar goods from both centres / no difference in percentage of goods bought / same percentage of goods bought / less than 2% difference; Most popular purchases / examples (clothes & shoes / jewellery / electronic products / electrical goods) are the same for both centres / clothes and shoes are top for both centres; Rank order of types of purchases is similar / same for top 5; Credit 1 mark for paired data to support above statement. E.g., clothes & shoes = 28% for Barra and 27% for Norte; Credit paired data for any item.	**3**

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Question	Answer	Marks
2(d)(iii)	Ideas such as: Larger / wider choice of goods / more variety / bigger range / more stores selling them; Easy to travel to / good accessibility / good transport links / good parking / undercover / indoor shopping environment; Competitive price / cheaper goods; Cannot buy them locally / only place that sells them; Can see the product / not a scam / not a fake / easier to get repaired or serviced; Can compare product / prices.	**2**
2(e)(i)	Completion of pie graph for Barra: Between 61 and 90 mins = 23. More than 90 mins = 11. 1 mark for dividing line at 89. 1 mark for shading. **Note:** Credit 1 mark if wrong way around – line at 77 and correct shading.	**2**
2(e)(ii)	More / larger percentage travelled by car / motor bike to Barra; Over half to Barra & less than half to Norte; More / larger percentage went by subway train to Norte; People travel to Norte by subway train but not to Barra; Over half to Norte & none to Barra.	**2**
2(e)(iii)	Ideas such as: Distance (to travel) / how long it will take to travel to shopping centre; Likely duration of visit / how long shoppers stay; What / how much they are buying / what they are buying / type of shop they visit; Availability of regular bus service / <u>public</u> transport / taxi / convenience of bus / subway station / availability of different types of transport / cost of fares / crowded; Availability / cost of car parking / price of fuel; Availability of bike lanes / pavement / secure parking for bike; Weather conditions / weather forecast / more likely to travel by car if raining; Level of car ownership / do shoppers own a car / can shoppers afford car; Number of people travelling / travelling with family; Traffic congestion / amount of traffic; How much time they have / in a rush / in a hurry; Risk of crime / safer to drive; Level of income; Person's disability; Time of visit to shopping centre; Privacy / anxiety of travel.	**3**

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