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Cambridge Assessment International Education

# Cambridge IGCSE™

**GEOGRAPHY** **0460/43**

Paper 4 Alternative to Coursework **May/June 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) | Did research on the internet | **1** |
| 1(a)(ii) | 25 000 | **1** |
| 1(a)(iii) | Europe | **1** |
| 1(b)(i) | Students only want to ask tourists **/** not residents / make sure person is a tourist / find out if person is a tourist or resident / don't want locals;<br><br>Results wrong if they include residents **/** only tourists give reliable or valid results / residents will make results unreliable;<br><br>Save time / not waste people's time; | **2** |
| 1(b)(ii) | Systematic | **1** |
| 1(b)(iii) | Easy / quick / simple method to undertake;<br><br>Will not be biased / will be reliable / will be fair / don't choose who to interview;<br><br>Don't need random numbers / don't need knowledge of population to be sampled / not asking members of same group / avoid clustered results; | **2** |
| 1(c)(i) | <u>Similarity</u><br>Most / highest percentage of tourists from USA in both results / top two / three countries (USA, Japan, UK) are the same position in both results;<br><br>Same percentage from UK in both results / UK is 10% in both results;<br><br><u>Similarity / Difference</u><br>More from Asia in students' results / less from Europe in students' results / same % from N America / S America;<br><br><u>Difference</u><br>More countries in students' results / 17 in students' and 12 in internet / some countries not on internet list / 5 countries / India / Canada / Sweden / Mexico / Norway only in students' results / e.g., Norway 0 on internet and 1 in questionnaire;<br><br>Comparison of % / rank order in two countries (NOT 5 zero countries)<br>eg Germany higher % than China in internet results and China higher % than Germany in student data;<br><br>Comparative stats from one country for 1 mark max<br><br>e.g. USA 21% in internet data / Fig. 1.1 and 18% in student data / Table 1.1 OR 3% more in internet;<br>e.g. Japan 12% in internet data / Fig. 1.1 and 16% in student data / Table 1.1 or 4% more from student data;<br><br>1 mark reserve for similariities and differences | **3** |

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| Question | Answer | Marks |
|---|---|---|
| 1(c)(ii) | Draw bars on Fig. 1.3;<br>Parks and gardens = 33;<br>Musical and cultural performances = 25;<br>2 @ 1 | **2** |
| 1(c)(iii) | Hypothesis is **true**–1 mark reserve (✓HA);<br><br>Answer must be comparative<br><br>All historical buildings and areas score over 50–70 **answers but** other attractions score less than 50;<br>Lowest scoring historical building **answer** (art galleries and museums) is more than highest scoring other attractions **answer** (exclusive shopping centres);<br><br>**Total** number of **answers** for historical buildings and areas = 360 and total for other attractions = 148 OR 360 **answers** out of 508 for historical buildings;<br><br>Hypothesis conclusion is incorrect = 0 (XHa)<br>If no hypothesis conclusion ^HA and credit evidence | **2** |
| 1(d)(i) | Divided bar graph completion<br>Low risk of terrorism = 33 Yes and 67 No<br>1 mark for dividing line and 1 mark for shading | **2** |
| 1(d)(ii) | **Partially agree** with hypothesis–1 mark reserve (✓HA);<br><br>Agree in 5 topics and disagree in 3 topics / 5 out of 8 agree / 5 out of 8 have over 50% agree / 3 out of 8 disagree (accept all 8 named topics if listed without figures);<br><br>Total Yes **answers** = 454 and total No **answers** = 346;<br><br>1 **data** mark for topic which agrees<br>e.g., public transport 73 Yes (and 27 No) / 46 more Yes<br>e.g., 64 tourists say Rome has a clean environment;<br><br>1 **data** mark for topic which disagrees<br>e.g. multi-lingual residents = 46 Yes or 54 No / 8 more No<br>e.g. 67 tourists say Rome has high risk of terrorism;<br><br>Hypothesis conclusion is completely agree / completely disagree = 0 (XHa)<br>If no hypothesis conclusion ^HA and credit evidence.<br><br>No credit just for topic which supports / does not support HA without stats. | **4** |

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| Question | Answer | Marks |
|---|---|---|
| 1(e)(i) | Introduce yourself / say where you have come from;<br>Explain the purpose of the interview;<br>Be polite / kind / respectful / friendly / respect privacy;<br>Keep the interview short;<br>Work in pairs / not alone / in group;<br>Don't go into the house;<br>Check if person wants to be interviewed / leave if told no;<br>Go to different areas / different types of houses;<br>Interview at suitable **time /** not too early or late / go at weekend;<br>Take phone **for** safety / communication;<br>Go smartly dressed / wear school uniform;<br><br>3 @ 1 | **3** |
| 1(e)(ii) | Examples of questions about benefits or suitable instruction (not problems):<br><br>What are the benefits of tourism? OR<br>Name the benefits of tourism OR<br>Does tourism benefit you? OR<br>Is tourism good for Rome / you? OR<br>Why is tourism good for Rome / you? OR<br>Do you think tourism benefits / you people in Rome? OR<br>Do benefits of tourism outweigh the problems?<br><br>Are many jobs created by tourism?<br>Do you work in tourism?<br>Do tourists spend money in the local shops?<br>Do local people have more money to spend because of tourism?<br>Do you benefit financially from tourism?<br>Do you benefit from any tourist facilities?<br>Do tourists benefit the local economy?<br>Are there more flights from the airport / more local trains to the city centre?<br><br>2 @ 1 | **2** |
| 1(f) | Problems such as:<br>Disturbance to local people / noise / loss of privacy;<br>**Traffic** congestion;<br>Tourists don't respect local culture / alcohol / drugs / religious issues / racial tension / prostitution / dilution of local culture;<br>Damage historical buildings;<br>Tourist hotels / development take up space / knock down houses;<br>Hotels spoil the view / visual pollution / light pollution;<br>Tourist industry uses scarce water / electricity / water shortage;<br>Air pollution / water pollution;<br>Waste / litter;<br>Seasonal jobs / low paid jobs / long hours;<br>Increased price of goods / inflation;<br>Crowded shops / streets;<br>4@1 | **4** |

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| Question | Answer | Marks |
|---|---|---|
| 2(a)(i) | Screen is painted white so that it reflects heat or sunlight / reduces direct heating by the sun / does not absorb sunlight;<br>Sides are made of slats / louvres / have spaces / gaps / not solid so that air can circulate;<br>Screen / box is made of wood so that heat is not conducted into it / wood is an insulator;<br>Roof is made of a double layer of wood so that airspace provides insulation;<br>Screen stands more than 1m / on legs so that instruments are not affected by heat from the ground;<br><br>3 + 3 | **6** |
| 2(a)(ii) | Atmospheric pressure–barometer;<br>Temperature–maximum-minimum thermometer;<br>Wind speed–anemometer;<br><br>3 correct = 2 marks, 1 or 2 correct = 1 mark | **2** |
| 2(a)(iii) | Inside–(maximum–minimum) thermometer<br>barometer<br><br>Outside–anemometer<br>rain gauge<br><br>4 correct = 2 marks, 2 or 3 correct = 1 mark, 1 correct = 0 | **2** |
| 2(b)(i) | Stand rain gauge in ground / keep tip or lip above ground;<br>Put funnel and jar or beaker in casing / gauge;<br>Pour collected water into measuring cylinder;<br>Read cm / mm / ml off scale;<br>Empty cylinder / jar after measuring;<br>Take reading every day / same time / fixed time period (at least 12 hours) / 24 hrs;<br>3@1 | **3** |
| 2(b)(ii) | Read thermometer every 24 hours / fixed period of time / everyday;<br>Look at the indices (markers) showing the minimum **and** maximum temps;<br>Read off the meniscus / index;<br>Read at eye level (1);<br>Use magnet to reset / button to reset indices;<br>Read off in °C / °F;<br>3@1 | **3** |
| 2(c)(i) | Plot 6°on 18th (dot and line) | **1** |
| 2(c)(ii) | 11º | **1** |
| 2(c)(iii) | 11th | **1** |

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| Question | Answer | Marks |
|---|---|---|
| 2(c)(iv) | Hypothesis is **false for most days**–1 mark reserve (✓HA);<br><br>(On most days) variation is greater in Naples OR<br>(On most days) variation is less in Madrid OR<br>Madrid has more variation on **only** two days / two days out of 15 (6th and 13th);<br><br>1 mark **reserve** for data to show hypothesis is false for most days (not 6th and 13th);<br>4 stats or 2 difference stats **from the same day** (need date)<br>e.g. **November 4th**:Madrid highest temp = 23 °C and lowest temp = 17 °C and in Naples highest temp = 24 °C and lowest temp = 15 °C OR<br>Difference = 6 °C in Madrid and 9 °C in Naples;<br><br>OR Madrid daily variation is between 2 °C and 7 °C and Naples is between 3 °C and 11 °C;<br><br>Hypothesis conclusion is true for all days / true for most days / false for all days = 0 (XHa)<br>If no hypothesis conclusion ^HA & credit evidence | **3** |
| 2(d)(i) | Plot 17 mm rainfall and 1008 mb AP (plot and line) on 18th<br>2 @ 1 | **2** |
| 2(d)(ii) | Hypothesis is **true**–1 mark reserve (✓HA);<br><br>7 days / 12th–18th / 12th onwards with most / high / increasing rainfall are all under 1010 mb<br>OR<br>8 days / 4th–11th / up to 11th with least / low / decreased rainfall are all over 1010 mb;<br><br>1 mark for supporting comparative data e.g.<br>(November 12th) Rainfall = 16 mm and AP = 1009mb and (November 6th) rainfall = 2 mm and AP = 1016 mb<br>Average rainfall for days over 1010 mb / 12th–18th = 15.0 mm and average rainfall for days under 1010 mb / 4th–11th = 1.4 mm<br>Total rainfall for days over 1010 mb / 12th–18th = 105 mm and total rainfall for days under 1010mb / 4th–11th = 11 mm<br>Days over 1010mb = 0–4 mm rainfall & days below 1010mb = 7–24mm rainfall<br>On days under 1010 mb lowest rainfall is 7 mm which is higher than highest over 1010 mb = 4 mm;<br><br>Hypothesis conclusion is false = 0 (XHa)<br>If no hypothesis conclusion ^HA and credit evidence | **3** |

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| Question | Answer | Marks |
|---|---|---|
| 2(e) | Madrid has more variation in wind speed;<br><br>Madrid has higher / stronger / higher average wind speeds / more windy;<br><br>Credit data for **1 mark** max e.g.<br>In Madrid most common wind speed (highest number of days) is 16–25 / 21–25 km/h and in Naples it is 6–10 / 11–15 / 6–15 km/h<br>In Madrid winds vary from 0–35 km/h & in Naples from 0–20 km/h<br>Wind speed up to 35 km/h in Madrid and up to 20 km/h in Naples<br>In Madrid 7 days over 20 km/h and in Naples 0 days;<br><br>1 mark for comparing same bar on histogram<br>e.g., Madrid has 2 days when winds are 6–10 km/h and Naples has 6 days | **3** |

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