



Cambridge IGCSE™

GEOGRAPHY

0460/42

Paper 4 Alternative to Coursework

May/June 2021

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 2021 series for most Cambridge IGCSE™, Cambridge International A and AS Level components and some Cambridge O Level components.

This document consists of **10** printed pages.

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:

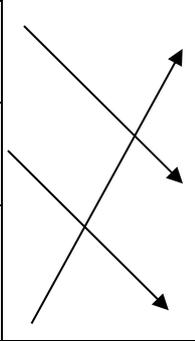
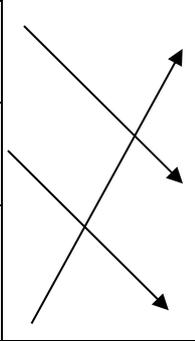
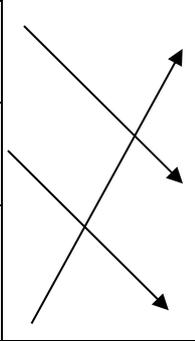
Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

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.

Question	Answer	Marks
1(a)(i)	<p><u>Row 1</u>: Away from trees to reduce interception by leaves (1)</p> <p><u>Row 5</u>: Remote from people or animals which may interfere with the rain gauge (1)</p> <p>(1 + 1)</p>	2
1(a)(ii)	<p>Diagram of traditional rain gauge:</p> <p>1 mark max. for diagram with <u>funnel, collecting jar & outer casing</u> (1D)</p> <p>3 marks max. for labels which show <u>measuring process</u>:</p> <p>Measuring jar / cylinder / bottle / beaker (1)</p> <p>Funnel (1)</p> <p>Outer casing / layer / external or outer container/ metal container (1)</p> <p>Scale / measurement / mm / cm / <u>labelled</u> graduations or readings or calibrations or markings (1)</p> <p>If diagram is a pluviometer</p> <p>Credit 1 mark for diagram as appropriate & 3 marks for labels such as scale / container / stand or post which show measuring process</p> <p>(1 Diagram + 1 + 1 + 1)</p>	4
1(a)(iii)	<p>The letters (N,E,S,W) show... directions / compass directions/ cardinal points / North, East, South, West (1)</p> <p>The pointer (arrow) shows ... which direction the wind is coming <u>from</u> (1)</p> <p>The wind vane is located on the roof so that there is no obstruction or interference / it gets maximum wind strength (1)</p> <p>(1 + 1 + 1)</p>	3
1(b)(i)	<p>Plot day 3: 5mm from W</p> <p>Plot day 16: 2mm from N</p> <p>No marks for shading, just plots.</p> <p>(1 + 1)</p>	2

Question	Answer	Marks
1(b)(ii)	<p>Hypothesis is true / support – 1 mark reserve</p> <p><u>Data evidence</u></p> <p>The <u>four days with highest rainfall</u> is when wind is from W (1D)</p> <p>Highest rain on days 3,8,9,19 from west (1D)</p> <p>Credit <u>1 max/reserve</u> mark for comparing rainfall data</p> <p>e.g. from W = 8mm and from N = 2mm (1RD)</p> <p>e.g. from W = 8mm, more than any other direction where 3mm or less (1RD)</p> <p>e.g. Total of 24mm from west higher than total 2mm from NE (1RD)</p> <p>No credit if Hypothesis conclusion is false / not supported / partially.</p> <p>If no hypothesis conclusion credit evidence</p> <p>(1 HA + 1D + 1 RD)</p>	3
1(c)(i)	<p>Primary data is collected by student herself / direct source / first hand / from fieldwork (1)</p> <p>Secondary data is obtained from other sources / already exists / books / internet / second hand (1)</p> <p>(1 + 1)</p>	2
1(c)(ii)	<p><u>Examples: no need to compare with traditional instruments</u></p> <p>Easier to read / less chance of error / no skill needed (1)</p> <p>Gives exact / precise reading / uses decimals / more accurate / reliable (1)</p> <p>Quick / saves time measuring / faster / instant (1)</p> <p>Continuous recording of data / data is stored / kept up-to-date (1)</p> <p>Don't have to be present to make recording / does not need resetting (1)</p> <p>(1 + 1)</p>	2
1(c)(iii)	<p>Plot 4mm cross at university</p> <p>Plot average line = 3.2mm at university. No need to label <u>Average</u></p> <p>(1 + 1)</p>	2

Question	Answer	Marks										
1(c)(iv)	<p>Hypothesis is false – 1 mark reserve</p> <p><u>Evidence</u></p> <p>Credit 2 marks for paired data from the two locations to show difference</p> <p>e.g. <u>Average</u> rainfall at school = 2.1mm & at university = 3.2mm (1) OR 1.1mm more at university (1 Reserve mark for average data)</p> <p>e.g. <u>Highest</u> daily rainfall at school = 8mm & at university = 10mm (1) OR 2mm higher at university (1D)</p> <p>e.g. 6 / more days at university with rainfall 5mm or more than at school with 3 days with 5mm or more (1D) NOT refs to <u>days with 0mm.</u></p> <p>e.g. 64mm total at uni.and 42mm at school (1) or 22mm more at uni.(1)</p> <p>No credit if Hypothesis conclusion is correct / true / partially</p> <p>If no hypothesis conclusion credit evidence</p> <p>(1 HA + 1 RD + 1 D)</p>	3										
1(d)(i)	Oktas	1										
1(d)(ii)	<table border="1" data-bbox="373 1084 1265 1496"> <thead> <tr> <th data-bbox="373 1084 577 1155">Type of cloud</th> <th data-bbox="577 1084 772 1496"></th> <th data-bbox="772 1084 1265 1155">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="373 1155 577 1256">cirrus</td> <td data-bbox="577 1155 772 1496" rowspan="3">  </td> <td data-bbox="772 1155 1265 1256">Low altitude grey clouds which occur in layers, rainfall is usually light and is described as 'drizzle'</td> </tr> <tr> <td data-bbox="373 1256 577 1357">cumulus</td> <td data-bbox="772 1256 1265 1357">High altitude white clouds which appear 'wispy' or look like feathers, no rain falls</td> </tr> <tr> <td data-bbox="373 1357 577 1496">stratus</td> <td data-bbox="772 1357 1265 1496">Low altitude clouds which are separate from each other and appear 'fluffy' or look like cotton wool, rain showers may occur</td> </tr> </tbody> </table> <p>3 correct = 2 marks (two ticks)</p> <p>1 or 2 correct = 1 mark (one tick)</p> <p>(1 + 1)</p>	Type of cloud		Description	cirrus		Low altitude grey clouds which occur in layers, rainfall is usually light and is described as 'drizzle'	cumulus	High altitude white clouds which appear 'wispy' or look like feathers, no rain falls	stratus	Low altitude clouds which are separate from each other and appear 'fluffy' or look like cotton wool, rain showers may occur	2
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Question	Answer	Marks
1(e)	<p><u>Examples</u></p> <p>Sunshine recorder is placed south-facing in northern hemisphere OR placed north-facing in southern hemisphere (1)</p> <p>Put sunshine recorder in open space / outside / not affected by shade / exposed to sun's rays / top of building / on a pedestal or stand / where the sun shines (1)</p> <p>Make sure paper (card / sheet) is inside (1)</p> <p>Sun's rays <u>scorch</u> card (paper / sheet) / <u>burns</u> the card (paper / sheet) (1)</p> <p>Look at / determine / measure length of <u>burn line</u> / convert to hours / calculate the time it was sunny (1)</p> <p>Record every 24 hours / same time every day / at sunset / when sun goes down / record for the day (1)</p> <p>Remove / replace card (paper/ sheet) <u>each day</u> / put new card (paper/ sheet) into sunshine recorder (1)</p> <p>(1 + 1 + 1 + 1)</p>	4
Total marks		30

Question	Answer	Marks
2(a)(i)	17 (million)	1
2(a)(ii)	<p><u>Examples</u></p> <p>Both events reduced tourist numbers (1 MAX for statement).</p> <p><u>Two marks for two examples of comparative data</u></p> <p>e.g. In 2003 / when Sars epidemic took place visitors = 6.1m (6.0) down from 7.7m (7.6–7.8) (1D) OR down by 1.6m (1.5–1.8) (1D)</p> <p>e.g. In 2009 / when financial crisis took place visitors = 9.5m (9.4–9.6) down from 10.2m (10.1–10.3) (1D) OR by 0.7m (0.5- 0.9) (1D)</p> <p><u>Unit of m not essential.</u></p> <p>(1 + 1 D + 1 D)</p>	3
2(a)(iii)	<p><u>Examples</u></p> <p>Traffic congestion / lots / more traffic (1).</p> <p>Tourists don't respect local culture / alcohol / drugs / religious issues / racial tension / prostitution (1)</p> <p>Tourist hotels take up land / knock down houses (1)</p> <p>Hotels spoil the view (1)</p> <p>Tourists add pressure to water / electricity / public transport (1)</p> <p>Air pollution / water pollution / waste / litter / noise (1)</p> <p>Seasonal jobs (1)</p> <p>Increased prices (1)</p> <p>Loss of privacy / crowded (1)</p> <p>May bring in disease / cause outbreak (1)</p> <p>(1 + 1)</p>	2
2(b)(i)	Man-made	1

Question	Answer	Marks
2(b)(ii)	<p><u>Examples</u></p> <p>Mostly / sites 2–7 / 6 attractions in the south (1)</p> <p>Clustered / close together / linear (1)</p> <p>One / Singapore Zoo in the north / 10km from others / NW of others (1)</p> <p>One / Sentosa Theme Park / 7 on a (separate) island / 5km from others / south of others / (1)</p> <p>Close to coast (1)</p> <p>(1 + 1)</p>	2
2(c)(i)	<p><u>Examples</u></p> <p>Students only want to ask visitors / to see if visitors / questionnaire is only for visitors / not all people will be visitors / make sure not locals(1)</p> <p>Not waste people's time / if locals no need to ask rest of questions (1)</p> <p>If they include locals or not a visitor will be unreliable / contain wrong information / inaccurate / irrelevant / false (1)</p> <p>(1 + 1)</p>	2
2(c)(ii)	<p><u>Examples</u></p> <p>Description is not systematic sampling / is random sampling (1)</p> <p>Should sample by asking every 10th person / every nth person / regular or fixed or set pattern (1)</p> <p>(1 + 1)</p>	2

Question	Answer	Marks										
2(c)(iii)	<table border="1" data-bbox="395 248 1214 692"> <thead> <tr> <th data-bbox="395 248 876 313">Hypothesis</th> <th data-bbox="876 248 1214 313">Question(s) to provide information</th> </tr> </thead> <tbody> <tr> <td data-bbox="395 313 876 383">Most visitors to Singapore are over the age of 50.</td> <td data-bbox="876 313 1214 383">2</td> </tr> <tr> <td data-bbox="395 383 876 452">Shopping is the main reason why people come to Singapore.</td> <td data-bbox="876 383 1214 452">5</td> </tr> <tr> <td data-bbox="395 452 876 555">Most visitors stop in Singapore on their journey to another destination.</td> <td data-bbox="876 452 1214 555">6</td> </tr> <tr> <td data-bbox="395 555 876 692">There is a positive relationship between the distance people travel to Singapore and the length of their visit.</td> <td data-bbox="876 555 1214 692">3 and 4</td> </tr> </tbody> </table> <p data-bbox="316 725 783 759">4 rows correct = 2 marks (two ticks)</p> <p data-bbox="316 792 908 826">Any 1, 2 or 3 rows correct = 1 mark (one tick)</p> <p data-bbox="316 860 405 893">(1 + 1)</p>	Hypothesis	Question(s) to provide information	Most visitors to Singapore are over the age of 50.	2	Shopping is the main reason why people come to Singapore.	5	Most visitors stop in Singapore on their journey to another destination.	6	There is a positive relationship between the distance people travel to Singapore and the length of their visit.	3 and 4	2
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2(d)(i)	<p data-bbox="316 927 1019 960">Pie graph completion; must be clockwise in key order.</p> <p data-bbox="316 994 971 1028">Restaurants = 5% (At 89% / 320°) & Other = 11%.</p> <p data-bbox="316 1061 1126 1095">1 mark for dividing line at 89%. Look for clear gap 89%/90%.</p> <p data-bbox="316 1128 863 1162">1 mark for correct shading in order of key.</p> <p data-bbox="316 1196 405 1229">(1 + 1)</p>	2										
2(d)(ii)	<p data-bbox="316 1263 788 1296">Hypothesis is true – 1 mark reserve</p> <p data-bbox="316 1330 440 1364"><u>Evidence</u></p> <p data-bbox="316 1397 604 1431">Credit 1 mark for data</p> <p data-bbox="316 1464 1091 1498">e.g. shopping is highest / higher <u>than others</u> with 35% (1D).</p> <p data-bbox="316 1532 1190 1565">No credit if Hypothesis conclusion is false / not supported / partially</p> <p data-bbox="316 1599 879 1632">If no hypothesis conclusion credit evidence</p> <p data-bbox="316 1666 485 1700">(1 HA + 1 D)</p>	2										
2(e)(i)	<p data-bbox="316 1733 756 1767">Plot two crosses on scatter graph</p> <p data-bbox="316 1800 592 1834">4000km & 7 days (1)</p> <p data-bbox="316 1868 687 1901">1100km & 8 days (1) (1 + 1)</p>	2										

Question	Answer	Marks
2(e)(ii)	<p>No / Hypothesis is false – 1 mark reserve</p> <p><u>Evidence</u></p> <p>No relationship / correlation (1)</p> <p>Credit 1 mark for paired data which shows hypothesis is false</p> <p>e.g. 15 700km = 2 days & 3100km = 15 days (1D Max)</p> <p>e.g. <6000km can be 15 days & >6000km highest only 8 days (1D Max)</p> <p>No credit if Hypothesis conclusion is true / partially</p> <p>If no hypothesis conclusion credit evidence</p> <p>(1 HA + 1 R + 1 D)</p>	3
2(f)(i)	<p>Draw arrows <u>pointing towards Singapore</u> to show:</p> <p>1 visitor from South Africa (1)</p> <p>9 visitors from Australia (1)</p> <p>Ignore shading; arrow should start in or close to the two countries.</p> <p>(1 + 1)</p>	2
2(f)(ii)	Asia	1
2(g)	<p>Fig. 2.8: No city / airport filled in OR no answer to Q3 OR forgot to ask / answer the question (1)</p> <p>Fig. 2.9: 3 reasons / too many reasons filled in / >1 box ticked / multiple reasons (1)</p> <p>Fig. 2.10: USA is not a city / airport OR USA is a country (1)</p> <p>(1 + 1 + 1)</p>	3
Total marks		30