Cambridge Assessment International Education

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.

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[Turn over

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

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

<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>1(c)(iv)</td><td>Hypothesis is false – 1 mark reserve

<u>Evidence</u>

Credit 2 marks for paired data from the two locations to show difference

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)

e.g. <u>Highest</u> daily rainfall at school = 8mm & at university = 10mm (1) OR 2mm higher at university (1D)

e.g. 6 / more days at university with rainfall 5mm or more than at school with 3 days with 5mm or more (1D) <u>NOT</u> <u>refs to days with 0mm.</u>

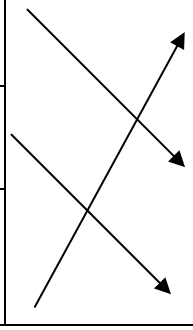
e.g. 64mm total at uni.and 42mm at school (1) or 22mm more at uni.(1)

No credit if Hypothesis conclusion is correct / true / partially

If no hypothesis conclusion credit evidence

(1 HA + 1 RD + 1 D)</td><td>3</td></tr>
<tr><td>1(d)(i)</td><td>Oktas</td><td>1</td></tr>
<tr><td>1(d)(ii)</td><td>
<table>
<tr><th>Type of cloud</th><th></th><th>Description</th></tr>
<tr><td rowspan="3">cirrus

cumulus

stratus</td><td rowspan="3"></td><td>Low altitude grey clouds which occur in layers, rainfall is usually light and is described as ‘drizzle’</td></tr>
<tr><td>High altitude white clouds which appear ‘wispy’ or look like feathers, no rain falls</td></tr>
<tr><td>Low altitude clouds which are separate from each other and appear ‘fluffy’ or look like cotton wool, rain showers may occur</td></tr>
</table>

3 correct = 2 marks (two ticks)

1 or 2 correct = 1 mark (one tick)

(1 + 1)</td><td>2</td></tr>
</table>

Question	Answer	Marks
1(e)	Examples Sunshine recorder is placed south-facing in northern hemisphere OR placed north-facing in southern hemisphere (1) 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) Make sure paper (card / sheet) is inside (1) Sun's rays scorch card (paper / sheet) / burns the card (paper / sheet) (1) Look at / determine / measure length of burn line / convert to hours / calculate the time it was sunny (1) Record every 24 hours / same time every day / at sunset / when sun goes down / record for the day (1) Remove / replace card (paper/ sheet) each day / put new card (paper/ sheet) into sunshine recorder (1) (1 + 1 + 1 + 1)	**4**
	Total marks	**30**

Question	Answer	Marks
2(a)(i)	17 (million)	**1**
2(a)(ii)	Examples Both events reduced tourist numbers (1 MAX for statement). Two marks for two examples of comparative data 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) 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) Unit of m not essential. (1 + 1 D + 1 D)	**3**
2(a)(iii)	Examples Traffic congestion / lots / more traffic (1). Tourists don't respect local culture / alcohol / drugs / religious issues / racial tension / prostitution (1) Tourist hotels take up land / knock down houses (1) Hotels spoil the view (1) Tourists add pressure to water / electricity / public transport (1) Air pollution / water pollution / waste / litter / noise (1) Seasonal jobs (1) Increased prices (1) Loss of privacy / crowded (1) May bring in disease / cause outbreak (1) (1 + 1)	**2**
2(b)(i)	Man-made	**1**

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

<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>2(c)(iii)</td><td>
<table>
<tr><th>Hypothesis</th><th>Question(s) to provide information</th></tr>
<tr><td>Most visitors to Singapore are over the age of 50.</td><td>2</td></tr>
<tr><td>Shopping is the main reason why people come to Singapore.</td><td>5</td></tr>
<tr><td>Most visitors stop in Singapore on their journey to another destination.</td><td>6</td></tr>
<tr><td>There is a positive relationship between the distance people travel to Singapore and the length of their visit.</td><td>3 and 4</td></tr>
</table>
4 rows correct = 2 marks (two ticks)

Any 1, 2 or 3 rows correct = 1 mark (one tick)

(1 + 1)
</td><td>2</td></tr>
<tr><td>2(d)(i)</td><td>Pie graph completion; must be clockwise in key order.

Restaurants = 5% (At 89% / 320°) & Other = 11%.

1 mark for dividing line at 89%. Look for clear gap 89%/90%.

1 mark for correct shading in order of key.

(1 + 1)</td><td>2</td></tr>
<tr><td>2(d)(ii)</td><td>Hypothesis is true – 1 mark reserve

<u>Evidence</u>

Credit 1 mark for data

e.g. shopping is highest / higher <u>than others</u> with 35% (1D).

No credit if Hypothesis conclusion is false / not supported / partially

If no hypothesis conclusion credit evidence

(1 HA + 1 D)</td><td>2</td></tr>
<tr><td>2(e)(i)</td><td>Plot two crosses on scatter graph

4000km & 7 days (1)

1100km & 8 days (1) (1 + 1)</td><td>2</td></tr>
</table>

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