Cambridge Assessment International Education

Cambridge IGCSE™

GEOGRAPHY **0460/43**

Paper 4 Alternative to Coursework **October/November 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 October/November 2023 series for most Cambridge IGCSE, Cambridge International A and AS Level 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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Marking annotations

Examiners must use the following annotations:

Annotation	Meaning
	Correct point
	Incorrect
HA	Hypothesis answer used with another annotation e.g. tick, cross or omission mark
Highlight	Used to link parts of an answer or show where credit has or has not been given
	Omission or further development/detail needed to gain credit
J	The point has 'just' been allowed / benefit of the doubt given
	Unclear or validity is doubted
LNK	Linking 2 or more ideas together to gain a mark
REP	Idea has been repeated
{ }	Brackets used to show where a point has or has not been awarded within a longer answer
	1. Response has been seen but no credit given 2. Additional page has been checked

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Question	Answer	Marks
1(a)	Screen is painted white …so that it reflects heat or sunlight/reduces direct heating by the sun/does not absorb sunlight/radiation. Sides are made of slats/louvres/have spaces/gaps/not solid/vents …so that air can circulate /air can get in. Screen/box is made of wood.... so that heat is not conducted into it/insulates against heat. Roof is made of a double layer of wood/ …. so that airspace provides insulation/prevents radiation affecting results. Screen stands more than 1–1.5 m/(raised) on legs/… so that instruments are not affected by heat/radiation from the ground. Has a door/opening ….. to get to instruments/can close to prevent tampering/ to protect instruments from weather. 2 + 2 + 2 marks	**6**
1(b)(i)	Gauge stood firmly/dug in ground/put in ground; Funnel placed in casing/gauge/container/cylinder; Rain enters gauge/jar through funnel/collects in jar/collects in rain gauge/it collects rainwater; Water poured into measuring cylinder; Read scale (in mm/in ml/at eye level)/measure using measuring cylinder/read how much water is collected/measure volume; Reading taken every day/at same time reach day/fixed time period/every 3 hours/certain amount of time; Measuring cylinder is emptied after measuring. 4@1 mark	**4**
1(b)(ii)	Away from trees/in open ground/in open area/amount of vegetation nearby; On grass/not on concrete/type of ground surface; Remote from people or animals/how well protected site is; Clear of buildings/away from shelter/distance from buildings; On flat land/not on a steep slope/slope of land; Accessible to read measurements/how easy it is to get to. 3 @ 1 mark	**3**
1(c)(i)	Thursday 12.00/mid-day 1 mark	**1**

Question	Answer	Marks
1(c)(ii)	Plot at 1003 mb & 1.8 mm 1 mark	**1**
1(c)(iii)	Best– fit line (curved or straight) with 4 points above & below line At roughly 45 degrees top left to bottom right. 1 mark	**1**
1(c)(iv)	Hypothesis is **true** 1 mark reserve (✓HA) OR as atmospheric pressure rises the rainfall amount falls. 1 mark for statement: Higher atmospheric pressure = little/lower rainfall/no rainfall OR Highest rainfall = low atmospheric pressure. OR Wednesday high atmospheric pressure & low rain, Thursday lower atmospheric pressure & higher rain, Friday higher atmospheric pressure & lower rain. Credit 1 reserve mark for data to show contrast (need 4 figures) e.g. 7.5 mm of rain = 997 mb & 0mm of rain = 1014 mb. 4.0 mm of rain = 996 mb & 0.3mm of rain = 1009 mb. **Note:** Accept a range of air pressure figures: allow tolerance within a range but no tolerance for single figures quoted. Hypothesis is false/partly/generally true = 0 (XHA) If no hypothesis conclusion ^HA & credit evidence. 1 HA + 1S + 1D mark	**3**
1(d)(i)	Anemometer 1 mark	**1**
1(d)(ii)	Arrow **or** pointer turns/spins round/pushed/blown/moved/shifted by wind; Arrow points to/stops at north/east/south/west OR direction from which wind is coming/source of wind. 2 @ 1 mark	**2**
1(d)(iii)	Plot east-south-east 10 km/hr 1 mark	**1**

<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>1(d)(iv)</td><td>Note: No credit for stating hypothesis is true.

Wind speed is higher/highest/strongest/increased when wind blows from east /easterly/in east/wind speed is higher from east than from west.

Note: credit 2 marks reserve for data which supports hypothesis and generally compares <u>east</u> & <u>west</u> e.g.:
Wind speed goes above 20 km/hr when wind from east & is below 20 km/hr when from west/
Highest wind speed is 29 km/hr from east & 19 km/hr <u>from</u> west/
Lowest wind speed is 8 km/hr from east & 6 km/hr from south-west/
7 measurements of 20 km/hr and above from east & 0 <u>from</u> west/
Any individual measurements <u>from</u> west & east such as NE = 19 km/hr & SW = 6 km/hr;
Highest wind speed from east = 29 km/hr & lowest wind speed from south-west = 6 km/hr;
Average wind speed = 11.6 km/hr (12km/hr) from west & 19.5 km/hr from east.

1S + 1D + 1D mark</td><td>3</td></tr>
<tr><td>1(e)</td><td>
<table>
<tr><th></th><th>name of cloud type</th><th>description of cloud</th></tr>
<tr><td>type A</td><td>stratus
Not strato</td><td>grey cloud which occurs in layers at low altitude</td></tr>
<tr><td>type B</td><td>cirrus</td><td>white clouds which look like feathers at high altitude</td></tr>
<tr><td>type C</td><td>cumulus</td><td>clouds that look like cotton wool and are separate from each other at low altitude</td></tr>
</table>
Note:
6 correct = 4 marks
4 or 5 correct = 3 marks
2 or 3 correct = 2 marks
1 correct = 1 mark</td><td>4</td></tr>
</table>

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Question	Answer	Marks
2(a)(i)	Supermarket 1 mark	**1**
2(a)(ii)	Label Sp on building Y 1 mark	**1**
2(a)(iii)	Household goods store 1 mark	**1**
2(a)(iv)	In north (of map)/northern part of Blackburn St/next to church/NW of church/ edge of CBD/linear/in a line/ in a row; At junction of Blackburn St. and Dale St./in middle/centre (of town/map)/ nucleated/clustered/close together. 2 @ 1 mark	**2**
2(b)(i)	Data collected by other people and used by the students 1 mark	**1**
2(b)(ii)	Plot vacant shops: 3 in 1990 (x) 11 in 2019 (•) **Note:** allow plot on the line either side of gap. 2 @ 1 mark	**2**

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Question	Answer	Marks
2(b)(iii)	Hypothesis is **true** – 1 mark reserve (✓HA). Evidence such as: Most categories have increased number of shops/over half have increased/ majority have increased; Decrease in or closed down: clothes & shoes/convenience goods/specialist non-food/offices/(grouped) shops; Increase in or opened: household goods/supermarkets/personal services/ charity/catering & entertainment/vacant/(grouped) services. Credit 1-mark max **reserve** for paired data e.g. 18 convenience goods in 1990 & 14 in 2019/decreased by 4/decreased from 18 to 14; 10 personal services in 1990 & 17 in 2019/increased by 7/increased from 10 to 17; 6 categories have more shops & 4 have less shops/6 out of 10 have increased; 41 grouped shops in 1990 & 35 in 2019/decreased by 6/decreased from 41 to 35; 39 grouped services in 1990 & 44 in 2019/increased by 5/increased from 39 to 44. **Note:** Hypothesis is false/partly/generally true = 0 (XHA). If no hypothesis conclusion ^HA & credit evidence. 1HA + 1E + 1D + 1 E/D mark	**4**
2(c)	People refusing to answer questions/too busy/rude/aggressive/don't have time; Not enough people to complete the questionnaire/ finding enough people to answer/getting an equal number/40 people in each age group; Different students asking the same people; People giving incorrect/too vague answer/people lie; Difficult to estimate some people's age/some people won't give their age/age is too personal; Language difficulties/don't speak the same language/don't understand the question; Time consuming (to get 125 responses)/takes a long time; Respondents are not locals/tourists. 2 @ 1 mark	**2**
2(d)(i)	Pie graph completion: plot once a month = 22% & less than once a month = 8%. 1 mark for dividing line at 92 (28– 29– 30 degrees from north). 1 mark for shading vertical and crosses.	**2**

Question	Answer	Marks
2(d)(ii)	Wide variety of shops 1 mark	**1**
2(d)(iii)	No shelter against rain and cold 1 mark	**1**
2(d)(iv)	Draw bars on over 60 age group 'good points'. Wide variety of shops = 14 New supermarket = 21 2 @ 1 mark	**2**
2(d)(v)	**Note:** No credit for stating hypothesis is partly true. <u>Opinions differ/age groups disagree i.e. support hypothesis (1 mark):</u> Near to home/near to work/frequent bus service/wide variety of shops/gangs of youths/danger from traffic/no shelter against rain & cold/empty shops & uncared for streets; <u>Opinions are similar/age groups agree i.e. do not support hypothesis (1 mark):</u> Lots of parking spaces/new supermarket/people begging/litter & graffiti; **Note:** Can credit statement by reference to **two** age groups. Credit 1 mark max reserve for stats that **supports** any statement from **<u>three</u>** age groups, e.g. Near to home: under 30 = 5, 30 – 60 = 9, over 60 = 17 (differ); People begging: under 30 = 12, 30 – 60 = 14, over 60 = 15 (similar). 3 @ 1 mark	**3**
2(e)(i)	New businesses occupy the empty shops 1 mark	**1**
2(e)(ii)	<u>Younger</u> age group will visit entertainment venues OR Entertainment venues are aimed at <u>younger</u> age group. <u>Older</u> age group more vulnerable to traffic accident OR <u>Older</u> age group more attracted by quiet/safer town centre. 2 @ 1 mark	**2**

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Question	Answer	Marks
2(f)	Choose criteria such as: Height of buildings/number of storeys; Pedestrian numbers; Rateable value of buildings; Land use types/businesses; Traffic restrictions; Type of services; Type of shop; Absence/presence of residential buildings; Different types of buildings. **Note:** Credit to 2 marks for examples of criteria. Ideas such as: Decide on values of criteria to delimit CBD, e.g., 3 storeys; Plot results of fieldwork on map e.g. pedestrian isoline, rateable value isoline, traffic-free area; Mark edge of CBD on a map; Shade in CBD designated land uses e.g. shops/offices/public buildings; Use a land use map to …; Go out along a transect from centre. **Note:** Use more than one criteria to compare CBD boundary. 4 @ 1 mark	**4**