CAMBRIDGE
International Education

Cambridge O Level

GEOGRAPHY **2217/32**

Paper 3 Geographical Investigations **May/June 2025**

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 2025 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 descriptions 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.

Annotations guidance for centres

Examiners use a system of annotations as a shorthand for communicating their marking decisions to one another. Examiners are trained during the standardisation process on how and when to use annotations. The purpose of annotations is to inform the standardisation and monitoring processes and guide the supervising examiners when they are checking the work of examiners within their team. The meaning of annotations and how they are used is specific to each component and is understood by all examiners who mark the component.

We publish annotations in our mark schemes to help centres understand the annotations they may see on copies of scripts. Note that there may not be a direct correlation between the number of annotations on a script and the mark awarded. Similarly, the use of an annotation may not be an indication of the quality of the response.

The annotations listed below were available to examiners marking this component in this series.

Annotations

Annotation	Meaning
	Correct point
	Incorrect point
	Hypothesis answer used with another annotation e.g. tick, cross or inverted v
Highlighter	Highlighting areas of text
	More information required
	Just enough information to answer the question
	Two statements are linked
	Repetition
	Open bracket
	Close bracket
	Page or response seen by examiner

Question	Answer	Marks
1(a)	Screen is painted white (1F) **so that it** reflects heat or sunlight/reduces direct heating by the sun/does not absorb sunlight/heat/avoid heat conduction (1W); Sides are made of slats/louvres/have spaces/gaps/not solid (1F) **so that** air can circulate (1W); Screen/box is made of wood (1F) **so that** heat is not conducted into it (1W); Roof is made of a double layer of wood (1F) **so that** airspace provides insulation (1W); Screen stands @ 1 m–1.5 m/raised on legs/has a stand/on sticks(1F) **so that** instruments are not affected by heat from the ground (1W); Screen has a sloping roof (1F) **so that** rain runs off (1W); 2 × (1F + 1W)	**4**
1(b)	Sunshine recorder (1) Anemometer (1) Both instruments **are outside** – (1) mark for both correct. (1 + 1 + 1)	**3**
1(c)	**Measuring hand:** The (atmospheric) pressure OR millibars/mb at the time/current/now/ (approx) 1012 **mb**/pressure **being** recorded **OR is** recording (1); **Moveable pointer:** The (atmospheric) pressure on the previous day/previously OR indicates if atmospheric pressure is rising or falling (1); (1 + 1)	**2**
1(d)(i)	Plot 1012 mb and 10°C (day 7) 1008mb and 5°C (day 15) (1+ 1)	**2**

Question	Answer	Marks
1(d)(ii)	Hypothesis is **false** – 1 mark reserve (✓HA) There is no (direct/positive) relationship/correlation (between AP and temperature) OR results are scattered/random/spread all over OR go up and down/increase and decrease/not proportional (1); <u>Credit 2 marks to show the hypothesis is false</u> OR evidence for negative relationship e.g. 1022 mb = 4° (1D MAX) (**AP highest = lowest temp**) **Note**: only use above figures once**.** e.g. Both 1012 mb and 1017 mb AP = 7°(1D) (**Diff AP = same temp**) e.g. 1017 mb = 5°and 7° (1D) (**Same AP = diff temp**) e.g. 1007 mb = 12°and 1017 mb = 5°(1D) (**Negative rel.**) (1HA + 1 + 2D) **Note:** Yes/hypothesis true/partially true = 0 (XHA). This conclusion is wrong but credit any relevant evidence supporting the correct conclusion. If no hypothesis conclusion ^HA and credit evidence supporting correct conclusion.	**4**
1(e)(i)	<u>Examples</u> <u>Site features:</u> in open area/away from buildings/unobstructed; Stand rain gauge **in** ground/keep tip or lip above ground/above ground/raised off ground; **Note:** *ignore refs to actual height e.g. 30cm* Make sure rain gauge is empty (at start); Put funnel and jar or beaker in casing/gauge; Pour collected water into measuring cylinder; Read the scale OR measure in <u>cm/mm/ml</u>; Empty cylinder/jar after measuring (at end); Take reading every day/same time/fixed time period/24 hrs/particular time/ specific; (1 + 1 + 1 + 1)	**4**
1(e)(ii)	**Trees**: so that there is no interception of rainfall/blocks the rain; Inaccurate if water falls from leaves; Falling leaves may block rain; **Footpath**: so rain gauge is not interfered with/knocked over/damaged; Possibility of rain splashing into gauge; (1T + 1P)	**2**
1(f)(i)	Day 14	**1**
1(f)(ii)	Plot 1007mb as <u>cross</u> **AND** line (1) Plot 4.1mm for day 1 as bar (1) (1 + 1)	**2**

Question	Answer	Marks
1(f)(iii)	Hypothesis is **true**/correct – 1 mark reserve (✓HA) Highest/high rainfall = lowest/low AP (1S) Lowest/low OR no rainfall = highest / high AP (1S) Credit 1 **reserve** mark for paired data to show contrast – need 4 figures. e.g. 0 mm of rain = 1020 mb and 9.3 mm of rain = 1003 mb (1DR) e.g. 2.5 mm of rain = 1012 mb and 4.1 mm of rain = 1007 mb (1DR) (1HA + 1S + 1DR) **Note:** Hypothesis is false/partially true = 0 (XHA) This conclusion is wrong but credit any relevant evidence supporting the correct conclusion. If no hypothesis conclusion ^HA and credit evidence supporting correct conclusion.	**3**
1(g)	Use a **wind vane OR weather vane** – 1 mark reserve (1R); Put it in an open area/on top of building/on roof/on tall pole/unobstructed/ away from buildings/hold above head; Arrow/pointer/vane turns/spins round/pushed by wind; Arrow/vane points to compass direction **from** which wind is blowing; **OR** Use a **wind sock** – 1 mark reserve (1R); Put it in open area/on top of building/on roof/on tall pole/unobstructed/away from buildings; Sock points in direction wind blowing **to**; Use compass to work out direction; (1R + 1 + 1)	**3**

Question	Answer	Marks
2(a)(i)	Central Business District (1)	**1**
2(a)(ii)	Note: No credit for emboldened headings below. **Construction:** (Note: 1 reserve mark; can get all three marks here) High, tall, multi-storey (buildings) multiple-use buildings, skyscrapers; Lots of glass/windows/concrete/steel; Buildings are tightly packed/clustered together; Buildings being built/modern/new; Adverts/hoardings; **Shopping**: e.g. shops/specialist shops/department stores/high-order shops/ high-end shops/shopping mall/precinct/markets; **Tourism:** e.g. castle/museum/historical buildings/hotels; **Transport**: e.g. bus/railway station/public transport terminus/underground car park/multi- storey car park; **Businesses: commercial/administration** e.g. offices/finance/banks/town hall/clocktower/courtrooms/library; **Residential:** e.g. flats/apartments/penthouses; **Entertainment:** e.g. cinemas/theatres/restaurants/cafes; **Health/Education/cultural:** e.g. schools/universities/religious buildings/ hospitals; (1R + 1 + 1)	**3**
2(b)(i)	Ensure safety of students; To divide up the tasks between them; To work on different sites/roads; To collect more data/cover more area/quicker data collection; Count separately and take average/check OR compare data; (1 + 1)	**2**
2(b)(ii)	Recording sheet should include: Location/place/sample point/site number/road number/distance; Number of pedestrians/pedestrian count; Examples of tallying OR space for tallying/recording; Total number/result of tally; (1 + 1 + 1)	**3**

Question	Answer	Marks
2(b)(iii)	**Planning:** When to do count/how many times to do count per day/whether to do count on more than one day; How long to do each count for/5–15 mins range/count for same length of Time; All (groups) start to count at same time; **Carrying out:** Tally method/'clicker'; Timing of count/watch/timer; Students do different jobs e.g. one counts–one records-one checks OR two count people going in different directions-one records; More than one/two/three students count then take average OR only 1 student counts; **Note**: Credit either <u>planning or carrying out</u> – no reserved marks. (1 + 1 + 1 + 1	**4**
2(b)(iv)	The hypothesis is **true for some** roads going from the centre to the edge of the CBD. – 1 mark reserve (✓HA) Identifies 1 road which shows decrease in pedestrians e.g.1, 2, 3, 4, 6, OR 8 (1S); **OR** All roads support it except 5 and 7/5 and 7 don't support it (1S); Only credit stats from **175m and 875m (Centre to edge) NOT sites** <u>1 Reserve Data supporting **True**</u> e.g. Number of pedestrians decreases from 388 to 25 on road 3; OR e.g. Number of pedestrians decreases from 222 to 75 on road 8 (1DR); <u>1 Reserve Data supporting **Not True**</u> e.g. Number of pedestrians increases from 165 to 197 on road 5; OR e.g. Number of pedestrians increases from 179 to 182 on road 7 (1DR); (1HA + 1S + 2DR) **Note:** Hypothesis is true for all roads / false for all roads = 0 (XHA). This conclusion is wrong but credit any relevant evidence supporting the correct conclusion. If no hypothesis conclusion ^HA and credit evidence supporting correct conclusion.	**4**

Question	Answer	Marks
2(c)(i)	**Advantage:** Easy/quick/time-efficient to count number of storeys; Difficult to measure actual height of tall buildings; Each storey is approximately same height; No equipment needed; **Disadvantage:** Difficult to count high buildings/can't see all storeys; Storeys may be different heights; **Note:** no double credit with advantage. (Students select buildings) not systematic sampling/may be bias/ not representative/small sample/get anomalies/choose single storey buildings/only selected 5 buildings; Height includes e.g. towers/spires/pitched roofs not just storeys; (1A + 1D)	**2**
2(c)(ii)	Secondary	**1**
2(c)(iii)	Shade **6** (4 to 8) storeys at 700m on road 8 (Crosses); Shade **2** (less than 4) storeys at 875m on road 8 (Dots); (1 + 1)	**2**
2(d)(i)	**Road 3 evidence:** Number of storeys is more than 16 (at 175m) **and** 4–8 (storeys) (at 875m)	**1**
2(d)(ii)	Credit evidence from either **road 5 or road 6** – 1 mark for correct road **Road 5** Number of storeys is 13–16 at 175m/centre of CBD/near station **and** more than 16 storeys at 875m/edge of CBD/furthest point; **OR** **Road 6** Number of storeys is more than 16 at 175m/centre of CBD/near station **and** 875m/edge of CBD; (1R + 1E)	**2**
2(e)(i)	**Feature:** is used rarely/less frequently; is expensive; **Note**: not expensive equipment. has a large sphere of influence; high threshold population; **Example:** Airport/jewellers/hospital/university/solicitors/hi-tech or computer store/theatre/opera house/lawyers/designer stores or e.g. Gucci stores/5-star hotel/banks/private clinic/fine dining; (1 + 1)	**2**

Question	Answer	Marks
2e(ii)	Most/majority/many in centre/clustered or concentrated **near** CBD/station; Some/on roads 5 and 7 on the edge/north of **CBD**/furthe**st** distance from CBD /two on the edge of CBD; Some/on roads 1 and 8 between the CBD and the edge; **Examples with detail:** 1 mark MAX/RES with specific sites/distances e.g. Located at 175m and 350m on **road 1;** e.g. One located at 875m/on edge of CBD on **road 5**; e.g. One at 175m and one at 875m on **road 7;** e.g. Located at 175, 350, 525 m on **road 8;** e.g. **Road 8** has most/three within 525 m of centre; e.g. Seven at 175m around centre; e.g. Two located at 875 m from centre; (1 + 1 + 1R)	**3**