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* 0000800000001 *

Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

* 1988302044 *

GEOGRAPHY **0460/42**

Paper 4 Alternative to Coursework **May/June 2025**

1 hour 30 minutes

You must answer on the question paper.

You will need: Insert (enclosed)
Calculator
Ruler

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- If additional space is needed, you should use the lined pages at the end of this booklet; the question number or numbers must be clearly shown.

INFORMATION

- The total mark for this paper is 60.
- The number of marks for each question or part question is shown in brackets [ ].
- The insert contains additional resources referred to in the questions.

LEDCs – Less Economically Developed Countries
MEDCs – More Economically Developed Countries

This document has **16** pages. Any blank pages are indicated.

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1 Students who were studying the topic of weather used a variety of traditional instruments to collect weather data in their city.

(a) Some of the measuring instruments were kept in a Stevenson Screen like the one shown in Fig. 1.1 (Insert).

Describe **two** features of a Stevenson Screen. Explain why each feature is important.

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2 .....

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[4]

(b) **Complete Table 1.1**, by naming the instruments used to measure sunshine hours and wind speed and state whether they should be used inside or outside a Stevenson Screen.

Table 1.1

weather feature measured	measuring instrument	used inside or outside a Stevenson Screen
atmospheric pressure	barometer	inside
rainfall	rain gauge	outside
sunshine hours	.....	.....
temperature	maximum-minimum thermometer	inside
wind speed	.....	.....

[3]

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One group used their data about atmospheric pressure, temperature and rainfall to test the following hypotheses:

Hypothesis 1: *Temperature increases as atmospheric pressure rises.*

Hypothesis 2: *The amount of rainfall increases as atmospheric pressure falls.*

(c) The students used a barometer shown in Fig. 1.2 (Insert) to measure atmospheric pressure. What information will the students get from the measuring hand and the moveable pointer?

measuring hand

.....

.....

moveable pointer

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[2]

(d) The students recorded their measurements at 13.00 (1.00 pm) each day. Their results for atmospheric pressure and temperature are shown in Table 1.2 (Insert).

(i) Plot the results for day 7 and day 15 on Fig. 1.3. [2]

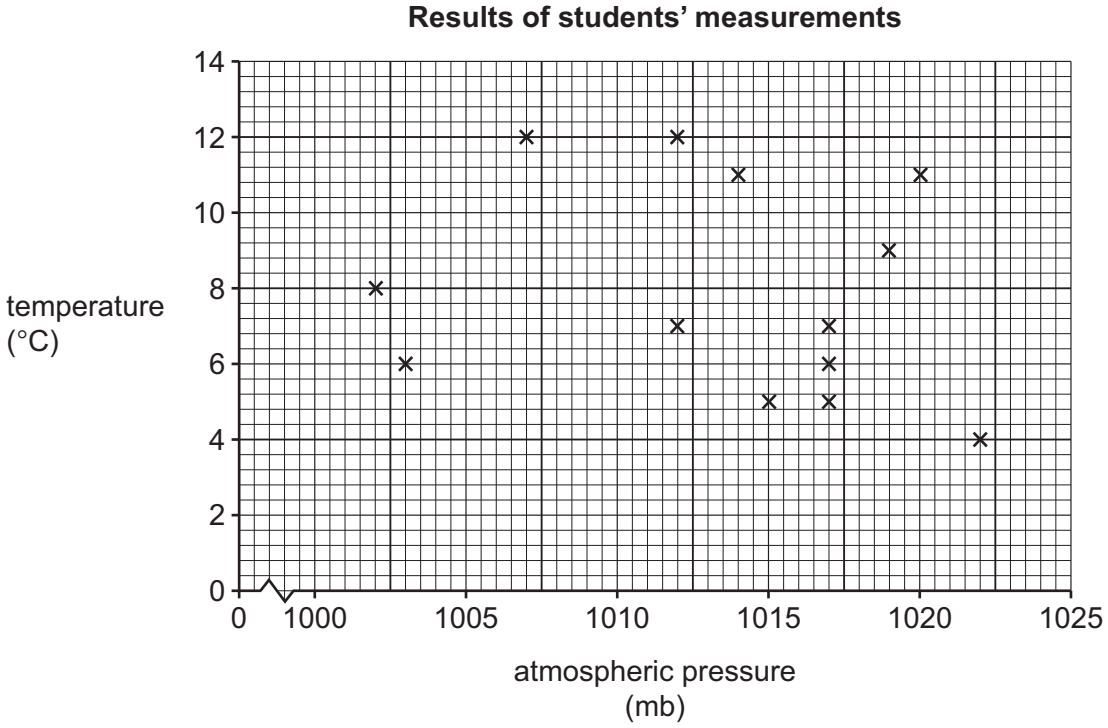


Fig. 1.3

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(ii) What conclusion did the students make about **Hypothesis 1:** *Temperature increases as atmospheric pressure rises*? Support your answer with evidence from Fig. 1.3 and Table 1.2.

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..... [4]

(e) (i) Describe how the students **used** a traditional rain gauge to get daily rainfall measurements.

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..... [4]

(ii) Why did their teacher recommend that the rain gauge should be located away from trees and a footpath which runs through the school grounds?

trees

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footpath

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[2]

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(f) The students' rainfall measurements and atmospheric pressure results are shown in Table 1.3 (Insert).

(i) On which day was the highest rainfall amount recorded?

day ..... [1]

(ii) **Plot the atmospheric pressure and rainfall for day 1** on Fig. 1.4. [2]

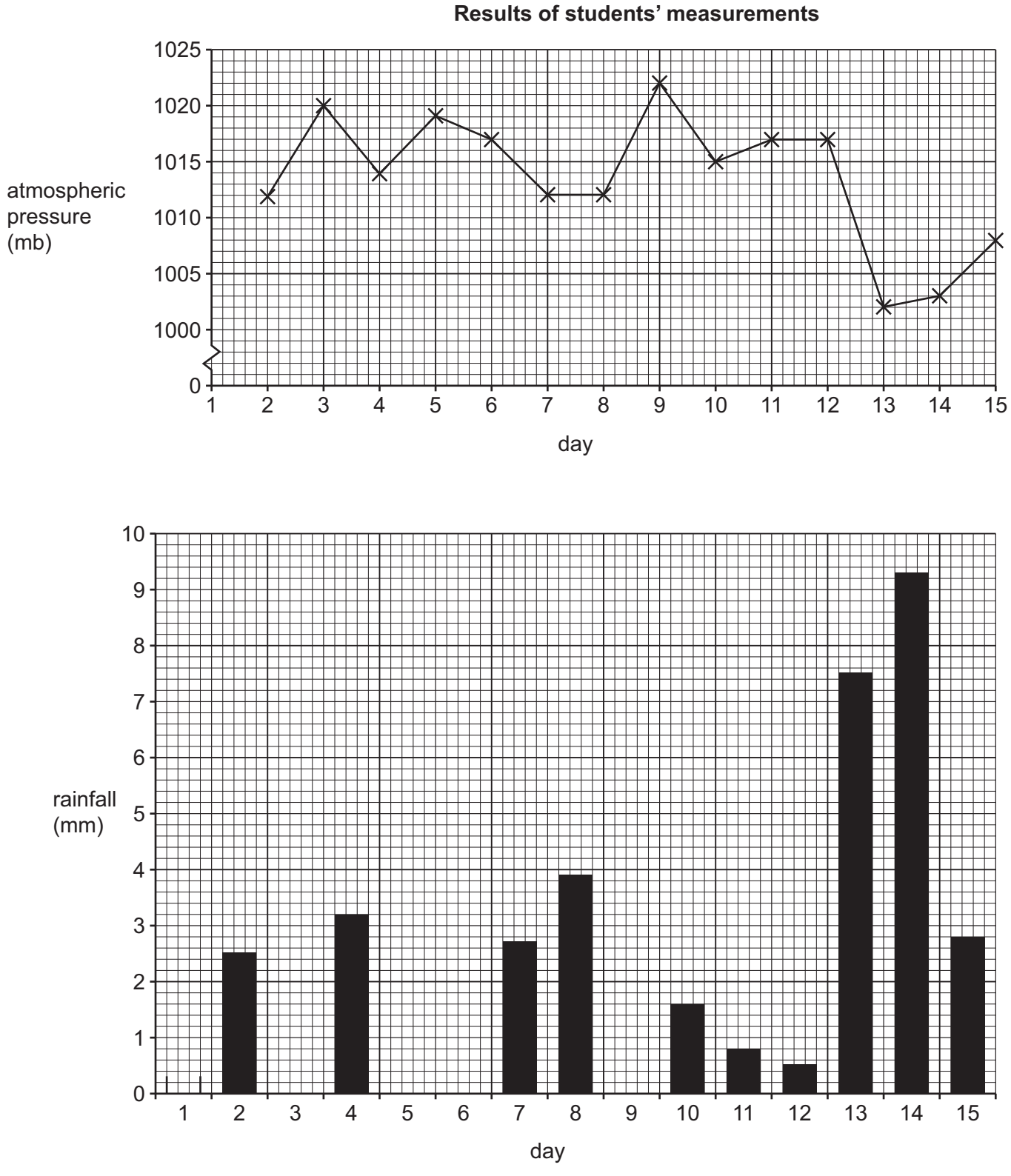


Fig. 1.4

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(iii) Do the results shown in Fig. 1.4 and Table 1.3 support **Hypothesis 2:** *The amount of rainfall increases as atmospheric pressure falls*? Support your decision with data.

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..... [3]

(g) Other students investigated whether the daily rainfall amount was related to the direction the wind was blowing from at 13.00 (1.00 pm).
Describe a fieldwork method to investigate **wind direction**.
Refer to measuring equipment and how the students would use it.

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2 Students in Tokyo, Japan (an MEDC in Asia), did fieldwork about the CBD of their city.

(a) (i) Which **one** of the following is the correct meaning of CBD? Tick (✓) your answer.

	tick (✓)
commercial business district	
cultural building district	
central business district	
community building district	

[1]

(ii) Describe **three** features of buildings found in a typical CBD.

1 .....

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2 .....

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3 .....

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[3]

The students decided to test the following hypotheses:

Hypothesis 1: *The number of pedestrians decreases as distance from the centre of the CBD increases.*

Hypothesis 2: *The height of buildings decreases from the centre of the CBD (station) to the edge of the CBD.*

(b) The teacher split the students into groups of three to do their fieldwork along roads going from the centre to the edge of the CBD.

(i) Suggest **two** reasons why their teacher split the students into groups of three to do their fieldwork.

1 .....

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2 .....

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[2]

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(ii) The students did a pedestrian count at five sites along each road, about 175 m apart, to test **Hypothesis 1:** *The number of pedestrians decreases as distance from the centre of the CBD increases.*
In the space below, draw a recording sheet the students could have used at each site.

[3]

(iii) Describe an appropriate method to ensure the students obtained reliable results from the pedestrian count.

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(iv) The results of the pedestrian count are shown in Fig. 2.1 (Insert).
Which conclusion would the students make about **Hypothesis 1:** *The number of pedestrians decreases as distance from the centre of the CBD increases*? Tick (✓) your decision.

	tick (✓)
The hypothesis is **true for all** roads going from the centre to the edge of the CBD.	
The hypothesis is **true for some** roads going from the centre to the edge of the CBD.	
The hypothesis is **false for all** roads going from the centre to the edge of the CBD.	

Support your answer with evidence from Fig. 2.1.

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..... [4]

(c) To test **Hypothesis 2:** *The height of buildings decreases from the centre of the CBD (station) to the edge of the CBD*, the students selected five buildings at each of the sites where they did the pedestrian count. They then counted the number of storeys for each building and calculated an average.

(i) Give **one** advantage and **one** disadvantage of this method of working out the height of buildings.

advantage

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disadvantage

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[2]

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(ii) One student suggested that another way to find out the number of storeys in a shopping centre would be to look at the floor guide on a map of the centre. Which **one** of the following describes this source of data? Tick (✓) your answer.

	tick (✓)
dependent	
dispersed	
secondary	
systematic	

[1]

(iii) The students' results are shown in Fig. 2.2. Complete the map in Fig. 2.2 by **shading the results at 700 m and 875 m on road 8** shown in Table 2.1. [2]

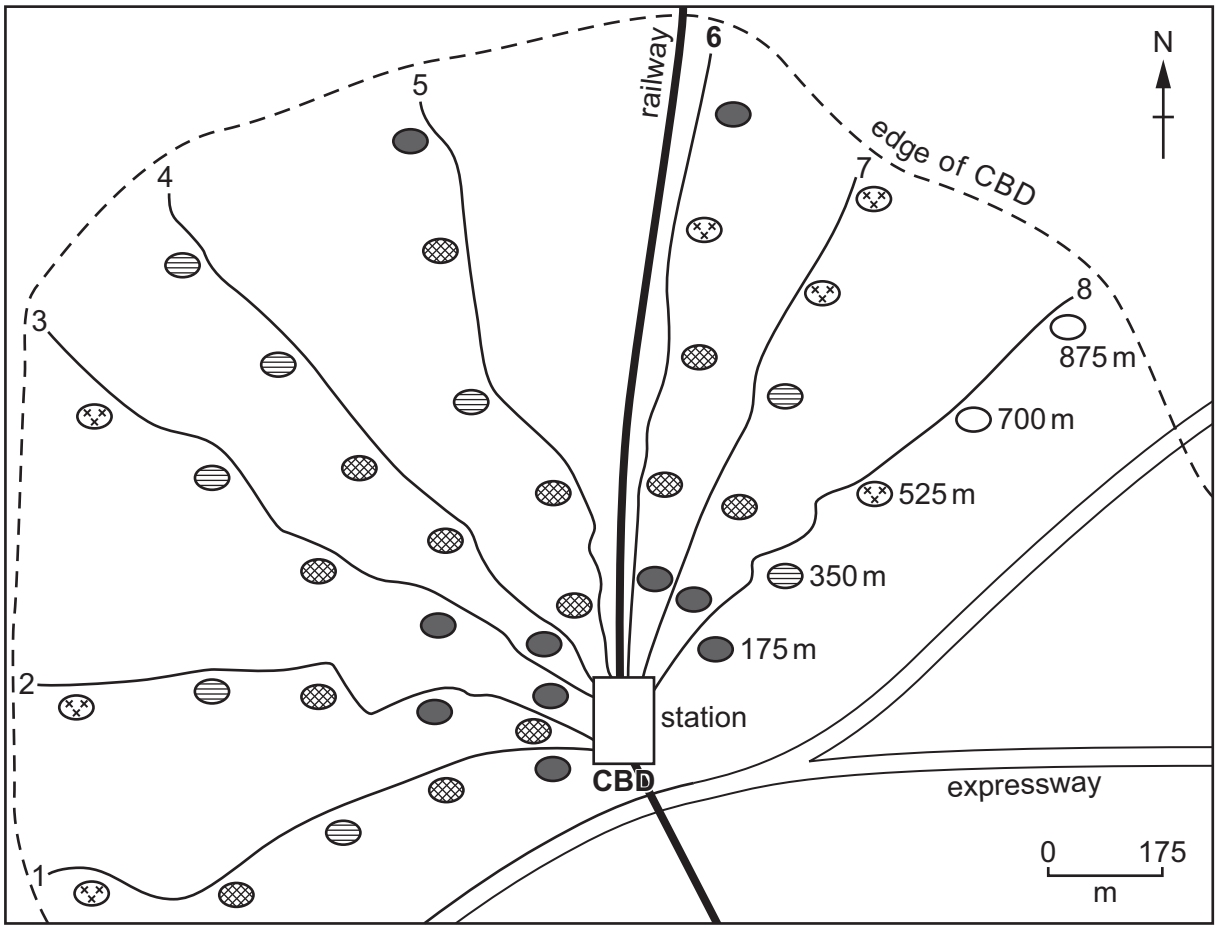
Table 2.1

distance from centre (m)	175	350	525	700	875
average number of storeys	17	10	8	**6**	**2**

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Average number of storeys at each fieldwork site



The station is located in the centre of the CBD.

Key

1 to 8 are the roads with fieldwork sites going from the centre of the CBD to the edge of the CBD

average number of storeys

more than 16 | 13–16 | 9–12

4–8 | less than 4

Fig. 2.2

(d) The students decided that **Hypothesis 2:** *The height of buildings decreases from the centre of the CBD (station) to the edge of the CBD* was **true** for most of the roads.

(i) The students identified that road 3 was one example where the evidence supports **Hypothesis 2**. From Fig. 2.2, give the evidence which supports their decision.

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..... [1]

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(ii) From Fig. 2.2, identify **one** road where the evidence does **not** support **Hypothesis 2**. Give the evidence which supports your decision.

road number .....

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..... [2]

(e) Other students investigated the distribution of high-order services in the CBD by plotting the main land use at their fieldwork sites along the main roads.

(i) Describe **one** feature of a high-order service and give **one** example of a high-order service.

feature

.....

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example

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[2]

(ii) The students plotted the results of the fieldwork on the map shown in Fig. 2.3 (Insert). Describe the distribution of the **high-order services** shown in Fig. 2.3.

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