



MINISTRY OF EDUCATION, SINGAPORE
in collaboration with
CAMBRIDGE ASSESSMENT INTERNATIONAL EDUCATION
General Certificate of Education Advanced Level
Higher 2

GEOGRAPHY

9173/02

Paper 2

For examination from 2024

SPECIMEN PAPER

3 hours

Additional Materials: Insert

READ THESE INSTRUCTIONS FIRST

If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet.
Write your Centre number, index number and name on the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.
DO NOT WRITE ON ANY BARCODES.

Answer Question 1 in **Section A**.
Answer Question 2 in **Section B**.
Answer **one** question in **Section C**.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **4** printed pages.



Singapore Examinations and Assessment Board



Cambridge Assessment
International Education

Answer Questions 1 and 2 and
EITHER Question 3 **OR** Question 4

Section A

Cluster 4 Fieldwork

- 1 Four students undertook an investigation about the flood risk along the Kallang River which flows through Bishan-Ang Mo Kio (AMK) Park in Singapore.

They examined the probability of flooding by investigating the hypothesis – Site A is more likely to flood than Site B when it is rainier.

They decided to collect the data on a weekday in June at 10 am.

At each site the students, working in groups, measured and recorded the:

- channel width, using a tape measure stretched across the river channel
- channel depth, using a metre rule at 2 metre intervals
- river velocity, using a stopwatch to time the duration taken for a floating orange to travel a 5-metre distance along the river. The velocity readings were repeated three times and then averaged.

Resource 1 is a map of Bishan-AMK Park, Singapore showing sites A and B on the Kallang River. Resource 2 shows photographs of Sites A and B. Resource 3 shows the data collection sheet used by the students. Resource 4 shows the findings of the investigation at sites A and B.

- (a) Explain one strength and one weakness in the students' hypothesis. [4]
- (b) With reference to Resources 1 and 2, suggest how the students could minimise potential risks during data collection. [6]
- (c) With reference to Resource 2, suggest how the students could minimise the impact of their investigation at the two sites. [5]
- (d) With reference to Resource 3, explain how the design of the data collection sheet could be improved. [5]
- (e) Explain the benefits of repeating the measurement of river velocity. [5]
- (f) Compare the river cross sections at site A and site B as shown in Resource 4. [5]
- (g) The students concluded that it is more probable to flood at Site A. With reference to Resources 1, 2, 3, and 4, evaluate the validity of their conclusion. [10]

Section B**Cluster 3 Sustainable Future and Climate Change**

- 2 Resource 5 shows the progress in achieving sustainable urban development in two cities, Zurich, Switzerland and Porto, Portugal. Resource 6 is a cartoon about challenges related to achieving Sustainable Development Goal 6. Resource 7A shows water collection in a slum in Nairobi, Kenya. Resource 7B shows waste management in a slum in Nairobi, Kenya. Resource 8 shows survey results before and after the completion of an improvement project in a slum in Nairobi, Kenya.
- (a) Describe **two** ways to measure sustainable urban development. [4]
- (b) Compare Zurich and Porto's progress in achieving sustainable urban development shown in Resource 5. [5]
- (c) With reference to Resource 6, describe the challenges associated with the provision of access to clean water. [5]
- (d) With reference to Resources 7A and 7B, describe three aspects of the deprivation experienced by slum dwellers in Nairobi. [6]
- (e) Cite relevant data from Resource 8 to describe the impact of the improvement project on access to clean water and sanitation in Nairobi. [4]
- (f) Explain how climate change might impact slum dwellers. [6]

Section C

Answer EITHER question 3 OR question 4.

- 3** 'Contemporary climate change is largely caused by humans.'

Evaluate this statement.

[20]

- 4** Evaluate the success of urban reimaging strategies.

[20]

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