



VICTORIA JUNIOR COLLEGE

JC2 PRELIMINARY EXAMINATIONS 2025

H2 GEOGRAPHY
Paper 2

9173/02

3 hours

READ THESE INSTRUCTIONS FIRST

Write your name and index number 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.

The Insert contains all the Resources referred to in the questions.

You should make reference to appropriate examples studied in the field or the classroom, even where such examples are not specifically requested by the question. Diagrams and sketch map should be drawn whenever they serve to illustrate and answer.

You are reminded of the need for good English and clear presentation of your answers.

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.

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

Section A

Cluster 4 Fieldwork

- 1 Bidadari Park is a 13-hectare park, situated near a densely built-up area with historically high flood risk due to insufficient drainage capacity. The park was designed with innovative nature-based flood management features to alleviate flooding in the nearby Macpherson Estate, with bioswales, marshlands, terraced wetlands and a huge retention pond, Alkaff Lake, which discharges into the nearby Pelton Canal which feeds the Kallang River.

6 junior college Geography students were tasked to study the effectiveness of the nature-based flood management features in lowering flood risk and the flood risk perception of residents of Bidadari Estate. In particular, they decided to focus the study on bioswales as these were plentiful and easily accessible in the park.

The hypothesis of their study was as follows:

Residents of Bidadari Estate feel nature-based flood management features are effective in lowering flood risk in the area.

The students visited the park on 2 occasions during the June holidays- on a completely dry day and a wet day, spending 6 hours on the dry day and 1 hour on the wet day.

On the dry day, the students carried out a site audit to document the different types of nature-based flood management features found in the park. In particular, they identified 3 bioswales and noted their conditions on the dry day with brief notes. They also surveyed 100 park users via convenience sampling, asking them some questions about flood risk perception.

On the wet day, the students decided to observe pooling of water in the park, studying in particular, the 3 identified bioswales. They quickly recorded the conditions in their notebook, with accompanying photographs, as it was raining lightly intermittently.

Resource 1 is a map of Bidadari Park. Resource 2 is the site audit recording sheet. Resource 3 shows a sample of the questionnaire survey. Resource 4 are results for Question 6 from the questionnaire survey. Resource 5 shows the brief notes taken down by the students and accompanying photos on the wet day.

- (a) Explain **one** strength and **one** weakness of this hypothesis. [4]
- (b) With reference to Resources 1 and 2, explain the usefulness of conducting a site audit. [4]
- (c) With reference to Resources 1 and 2, describe some risks the students could have encountered in conducting the geographical investigation and suggest how these risks can be minimised. [6]
- (d) Explain the limitations of the sampling method used by the students. [4]
- (e) Using Resource 3, suggest **three** improvements to the questionnaire survey. [6]

- (f) Using a suitable data representation method, present the results to Question 6 in the questionnaire survey in Resource 4 and justify your choice. [6]
- (g) Evaluate the validity of this study in assessing how nature-based flood management features have lowered flood risk in Bidadari estate. [10]

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

- 2** Resource 6 shows the changes in sources of carbon emissions and carbon emissions absorbed by carbon stores between 1900 and 2017. Resource 7 shows a cartoon about challenges related to implementing strategies to respond to climate change. Resource 8 shows a PepsiCo India's Special Mobile Van that collects post-consumer plastic waste from local establishments as part of its Tidy Trails program in New Delhi.
- (a)** With reference to Resource 6, describe the changes in sources of carbon emissions and carbon emissions absorbed by carbon stores, between 1900 to 2017. [6]
 - (b)** Explain **two** reasons for the increased carbon emissions seen in Resource 6. [4]
 - (c)** Explain how the absorption of carbon by ocean carbon sinks and the atmosphere seen in Resource 6 could impact aquatic ecosystems. [4]
 - (d)** With reference to Resource 7, explain the **two** challenges in implementing strategies to respond to climate change. [4]
 - (e)** With reference to Resource 8, explain the potential of achieving sustainable urban development in New Delhi. [6]
 - (f)** Explain why women may face issues relating to their social well-being in cities. [6]

Section C

Answer **EITHER** Question 3 **OR** Question 4

- 3** “Housing problems in cities in countries at lower levels of development can never be solved.”

Evaluate this statement. [20]

- 4** “Contemporary climate change impacts everyone in the same way.”

Evaluate this statement. [20]