



National Junior College  
SH1 Promotional Examinations for General Certificate of Education  
Advanced Level  
Higher 2

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**GEOGRAPHY**

**9173/01**

**26 September 2023**

**3 hours**

Additional Materials:      Insert

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**READ THESE INSTRUCTIONS FIRST**

Write your index number and name on all 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.

Answer Question 1 in **Section A**.

Answer Question 2 in **Section B**.

Answer **one** question in **Section C**.

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 maps should be drawn whenever they serve to illustrate an answer.

You are reminded of the need for good English and clear presentation in 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 A group of 4 students from NJC undertook an investigation to study flood risk in Malaysia at two sites, Sungai Melaka (Malacca) and Sungai Simpang Kiri (Johor), during the June school holidays. The students came up with the following hypothesis:

“There is higher flood risk at Sungai Melaka than Sungai Simpang Kiri.”

The students collected data from Sungai Simpang Kiri on a Sunday afternoon. They then travelled to Sungai Melaka the next day and collected data from the area on a Monday afternoon. The two rivers are about 90km apart and require a 2-hour drive to get from one river to the other.

For safety reasons, the students were not able to take measurements in the river and had to focus on collecting data on flood risk perceptions instead. At each site, they collected data from 10 people living or working in the area.

Resource 1 shows a map showing the location of the 2 rivers in Malaysia. Resource 2A shows a photograph of Sungai Melaka. Resource 2B shows a photograph of Sungai Simpang Kiri. Resource 3 shows the questionnaire created by the students. Resource 4 shows the results to one of the questions from the questionnaire.

- (a)** With reference to Resource 1, explain why the students' hypothesis is suitable. [4]
- (b)** With reference to Resources 2A and 2B, explain how potential risks can be mitigated. [5]
- (c)** With reference to Resource 2A, describe one sampling method that the students can adopt for their investigation. [4]
- (d)** With reference to Resource 3, explain how the survey might not help them to gather data accurately. [6]
- (e)** With reference to Resource 2A, 2B and 3, suggest other suitable data collection methods aid in the student's investigation. [6]
- (f)** Using a suitable mode of data representation, present the data on perception of flood risk at the two rivers as shown in Resource 4 and justify your choice. [5]
- (g)** With reference to all the Resources and your own knowledge, evaluate the usefulness of this investigation in examining the factors influencing flood risk. [10]

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

- 2** The European Environmental Agency has designed and implemented the Urban Metabolism Framework to measure sustainable urban development of cities. The Urban Metabolism Framework uses 14 indicators to measure sustainability.

Resource 5 shows the performance of two cities, Barcelona (Spain) and Freiburg (Germany) across the 14 indicators of the Urban Metabolism Framework. Resource 6 shows a news excerpt on Freiburg, Germany. Resource 7 shows urban reimagining in Hamburg, Germany.

- (a)** Compare the performance in urban metabolism of the two cities shown in Resource 5. [6]
- (b)** With reference to Resource 5, explain **two** difficulties in the measurement of sustainable urban development. [4]
- (c)** Explain possible challenges that cities in countries at high levels of development, such as those in Resource 5, face in their progress towards sustainable urban development. [6]
- (d)** Using Resource 6, explain how Freiburg is working towards sustainable urban development. [6]
- (e)** Explain the complementarity and tension between sustainable urban development and liveability. [4]
- (f)** With reference to Resource 7, describe the impact of urban reimagining on sustainable urban development. [4]

**Section C**

**Answer EITHER question 3 OR question 4.**

- 3** 'Strategies to manage non-hazardous solid waste in cities have been successful in achieving sustainable urban development.'

Evaluate the extent to which you agree with this statement. [20]

- 4** Evaluate the effectiveness of different strategies to improve the lives of slum dwellers in cities. [20]

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