

INNOVA JUNIOR COLLEGE
JC2 MID YEAR EXAMINATIONS
in preparation for General Certificate of Education Advanced Level
Higher 1

GEOGRAPHY

8813/01

Paper 1

24th August 2017

3 hours

Additional Materials: Answer Paper
 1 Insert
 World outline map (upon request)

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.

Answer **four** questions in total

Section A

Answer Question 1.

Section B

Answer Question 2.

Section C

Answer two questions, each from a different theme.

The Insert contains all the Resources referred to in the questions.
You should make reference to appropriate examples studied in the field or classroom, even where such examples are not specifically requested by the question.
Diagram and sketch maps should be drawn whenever they serve to illustrate an answer.
The world map may be annotated and handed in with relevant answers.
You are reminded of the need for good English and clear presentation in your answers.

At the end of the examination, fasten Section A, B separately from Section C.
The number of marks is given in brackets [] at the end of each question or part question.

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



Section A

Theme 3 – Geographical Investigation

- 1 As part of your overseas geographical investigation project to New Zealand, you and your classmates were tasked with undertaking a field exercise to ascertain the flood risk in a predetermined segment along a tributary stream of the Waikato River in the North Island. After some discussion, the following hypothesis was selected for investigation.

Hypothesis : The sites which have low-lying farmland and town in the lower course are more vulnerable to flooding.

The group was divided into 5 teams of eight members each to measure the cross-sectional area and river velocity of the 10 survey sites shown in Resource 1. Discharge is calculated by multiplying the cross-sectional area of the channel by the river velocity.

Teams were each given the following equipment to gather the primary data on river velocity :

- Tape measure
- Metre ruler
- Stop watch
- Flow metre
- 4 ranging poles

Your team was assigned to study sites 1 and 2 as shown in Resource 1 and completed your investigation in slightly more than an hour because it started raining and your group had to stop the fieldwork investigation. Although your team was able to complete the investigation, one of your team member realised that the ranging poles were not used for the investigation.

Resource 1 shows the location of the survey sites along a tributary stream of the Waikato River. Resource 2 shows the plan sketch and river cross section that your team has compiled. Resource 3 shows the data collected on river velocity along the 2 selected sites. Resource 4 is a protected environment in Singapore.

- (a) With reference to Resource 1, evaluate the suitability of the chosen hypothesis. [4]
- (b) With reference to Resource 1 and 2, suggest ways to minimise the risks in conducting the river investigation. [4]
- (c) Assess the usefulness of the data collected in Resource 2 to ascertain flood risk along sites 1 and 2 of the Waikato River. [5]
- (d) Suggest two limitations of the data representation method shown in Resource 3 and sketch an appropriate diagram to represent velocity of sites 1 and 2 over time. [5]
- (e) As an extension of your geographical investigation back in Singapore, your group is tasked to examine infiltration rate in a protected environment (Resource 4).
Discuss how you would plan to conduct a study of infiltration rate in the area. [7]

Section B**Theme 2 : Urban Change****Urban Reimaging**

- 2** Resource 5 shows photographs of 2 regions in Bangkok, Thailand.
Resource 6 shows a poster of Singapore's strategy to reimage itself as a 'smart city'.
Resource 7 shows a run-down place facing social and economic issues in Flint Street in Nottingham, UK.
- (a)** Using Resources 5A and 5B, explain the contrast in liveability in Bangkok. [6]
- (b)** Using Resource 6, account for Singapore's reimaging strategy into a 'smart city'. [6]
- (c)** With reference to Resource 7, suggest **one** appropriate strategy to improve the image of Nottingham, UK. [5]
- (d)** Using all the resources and your knowledge, explain how reimaging can affect different social groups. [8]

Section C

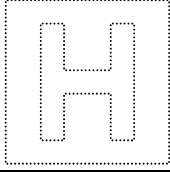
Answer **two** questions from this section. **Either** Question 3 **or** Question 4 and **Either** Question 5 **or** Question 6.

Theme 1 : Climate Change and Flooding

- 3 (a) Explain the role of anthropogenic activities in climate change. [9]
- (b) To what extent should the use of alternative energy sources be relied upon to mitigate the effects of climate change? [16]
- 4 (a) Explain why lag time varies between drainage basins with different land use. [9]
- (b) Human action has both increased and decreased the magnitude of floods at different locations.
- How far do you agree that human factor is the most important influence for flood occurrence? [16]

Theme 2 : Urban Change

- 5 (a) Explain the challenges faced by developing countries in the management of non-hazardous solid wastes. [9]
- (b) Assess the effectiveness of the strategies to improve the lives of the slum dwellers in low-income countries. [16]
- 6 (a) Explain why urbanisation varies across different countries. [9]
- (b) Evaluate the effectiveness of the strategies to cope with fear OR lessen crowding in the city. [16]



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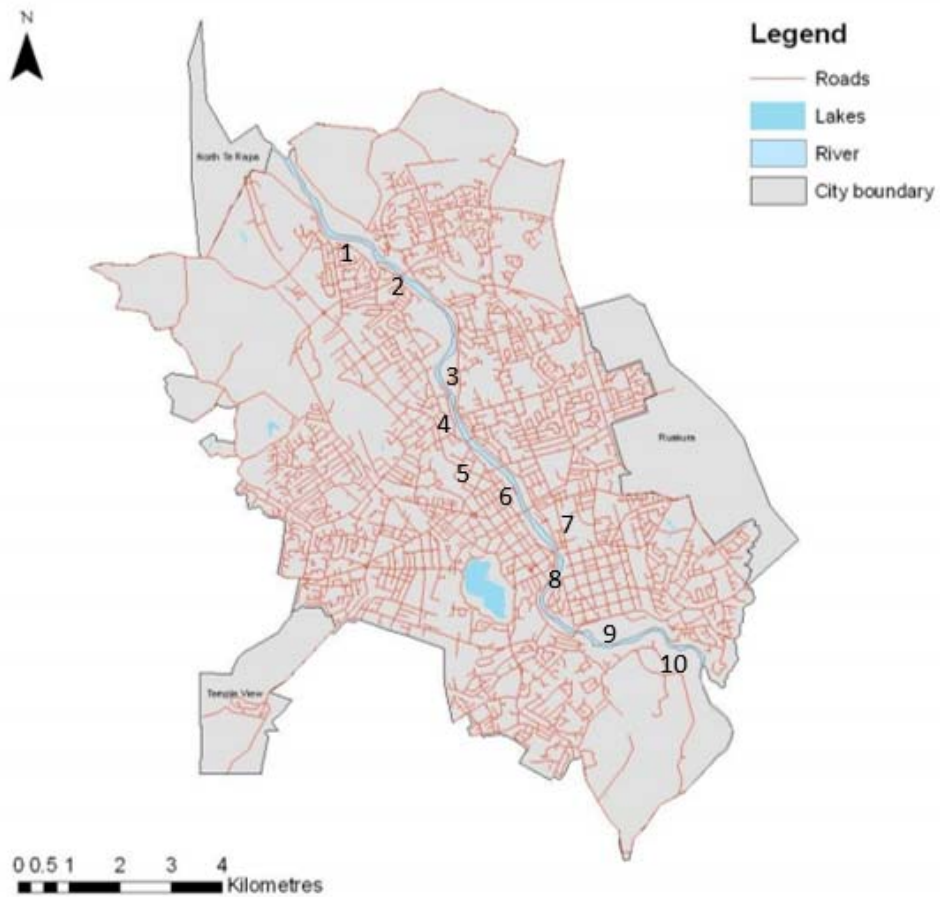
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This document consists of **7** printed pages and **1** blank page.



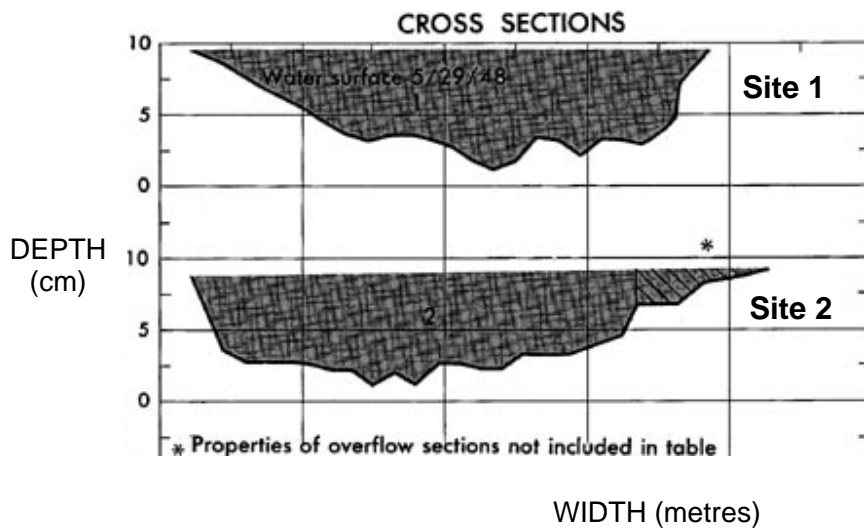
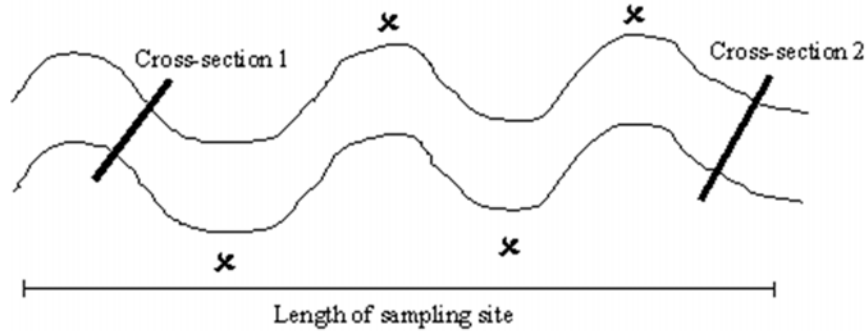
Resource 1 for Question 1

A tributary stream of the Waikato River and the 10 study sites



Resource 2 for Question 1

Plan sketch of sites 1 and 2



Resource 3 for Question 1

Data collected on river velocity at Site 1 and 2

Time	Site 1 Velocity (m/s)				Site 2 Velocity (m/s)			
	Left bank	Mid-section	Right bank	average	Left bank	Mid-section	Right bank	average
10.00	0.42	0.48	0.46	0.45	0.36	0.40	0.45	0.44
10.30	0.50	0.50	0.48	0.49	0.52	0.58	0.56	0.55
11.00	0.56	0.59	0.55	0.56	0.62	0.63	0.66	0.67

Resource 4 for Question 1

A protected environment in Singapore



Resource 5 for Question 2

Photographs of two regions in Bangkok, Thailand



Resource 5A shows Ideo O2 Condominium in Bangkok



Photograph 5B shows the slum region under a bridge in Bangkok, Thailand

Resource 6 for Question 2

A poster of Singapore's reimagining strategy to become a smart city

Smart Singapore

Singapore is expanding its use of technology to entrench its position as a leading global city and improve Singaporeans' quality of life. Here are some upcoming initiatives:

Punggol pilot: The first "smart" housing project will be launched in Punggol next year, and will include energy-efficient measures like motion sensor lights in carparks.

One ring to pay them all: An embedded chip could turn a ring, a watch or your identity card into a payment device, eliminating the need for cash or credit cards.

Remember me: A new digital platform is being developed to bypass the need for citizens to provide their personal data repeatedly for government transactions.

Mapping the future: A new 3D map project called Virtual Singapore will integrate layers of data about Singapore's buildings, land and environment. Government agencies and other organisations can use it to solve problems such as identifying the most flood-prone areas, while the public can contribute information like traffic patterns or the locations of their favourite nasi lemak stores.

Phone home: Controlling household appliances from a smart phone may be possible once HDB determines the digital infrastructure needed for an automated home. Trials start next year.

Senior sensors: Sensors in the homes of the elderly will monitor their movements and send alerts to caregivers if irregular behaviour is detected.

Virtual therapy: A "tele-rehab" system being tested at community hospitals will allow patients to perform therapy exercises at home, while sensors attached to their limbs transmit data back to the hospitals.

Where's my bus: By next March, commuters can use the MyTransport app to find out bus arrival times by the minute and how crowded each bus is.

"Public" transport: Self-driving cars will be tested on public roads for the first time come January next year, in One-North at Buona Vista.

GRAPHICS: MIKE M DEZON AND CHING CHOON HIONG TEXT: RACHEL AU-YONG

Resource 7 for Question 2**An area in Nottingham, UK which has gone through decline**

Nottingham takes over Glasgow and Liverpool as Britain's number one blackspot in unemployment.

A run-down mill in Nottingham. Constructed in the 19th century, it once provided employment to hundreds of Nottingham residents, making it an integral part of the community. Finally closed down in the late 20th century, the Victorian mill quickly decayed into a ruin.



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