



ST. MARGARET'S SCHOOL (SECONDARY)

End-of-Year Examinations 2023

CANDIDATE NAME

CLASS

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REGISTER NUMBER

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COMBINED HUMANITIES

2260/02

Paper 2 Geography

5 October 2023

Secondary 3 Express

1 hour 45 minutes

Candidates answer on the Question Paper.

Additional Materials: Insert

READ THESE INSTRUCTIONS FIRST

Do not open this booklet until you are told to do so.

Write your name, register number and class on all the work you hand in.

Write in dark blue or black pen.

You may use a pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, glue or correction fluid.

The use of an approved calculator and a mathematical set is allowed, where appropriate.

Answer **all** questions.

The Insert contains additional resources referred to in the questions.

The number of marks is given in brackets [] at the end of each question or part question.

Question Number	Marks
1	/ 12
2	/ 18
3	/ 20
Total	/ 50

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This document consists of 17 printed pages.

1 Geography in Everyday Life

A team of 5 students from a secondary school in Singapore wanted to find out how public transport facilities (e.g. bus interchanges, bus stops, LRT stations, MRT stations) would affect residents' satisfaction of neighbourhood. This led the students to develop the following research question:

How does the convenience of public transport facilities in a neighbourhood influence residents' level of satisfaction?

The students decided to compare the public transport facilities of a neighbourhood in Punggol and Queenstown, which their team members live in. Punggol is considered a younger, non-mature housing estate and Queenstown is an older, mature estate.

To investigate their research question, they intend to collect the following sets of data from the two neighbourhoods:

- Google maps showing the location of public transport facilities available in the HDB estates.
- Results from a questionnaire survey completed by 50 residents from each neighbourhood.

- (a) The students plan to conduct the questionnaire survey on a Monday at 8am in the two neighbourhoods.

Explain a limitation in their data collection process.

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- (b) To collect data for the questionnaire survey, the students decided that their team members who live in the two neighbourhoods should ask their friends and neighbours to complete the questionnaire. They would also be asking people walking down the street during their physical walkaround of the neighbourhoods to respond to the questionnaire.

- (i) Identify the sampling method used by the students.

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- (ii) Explain an advantage and a disadvantage of the method identified in 1(b)(i).

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- (c) From Google maps, the students counted the different types of public transport facilities within a 500m buffer zone around two target blocks of flats in the two neighbourhoods: Block A, Punggol and Block B Tanglin Halt Road, Queenstown.

The results of their observation are shown in Table 1.1.

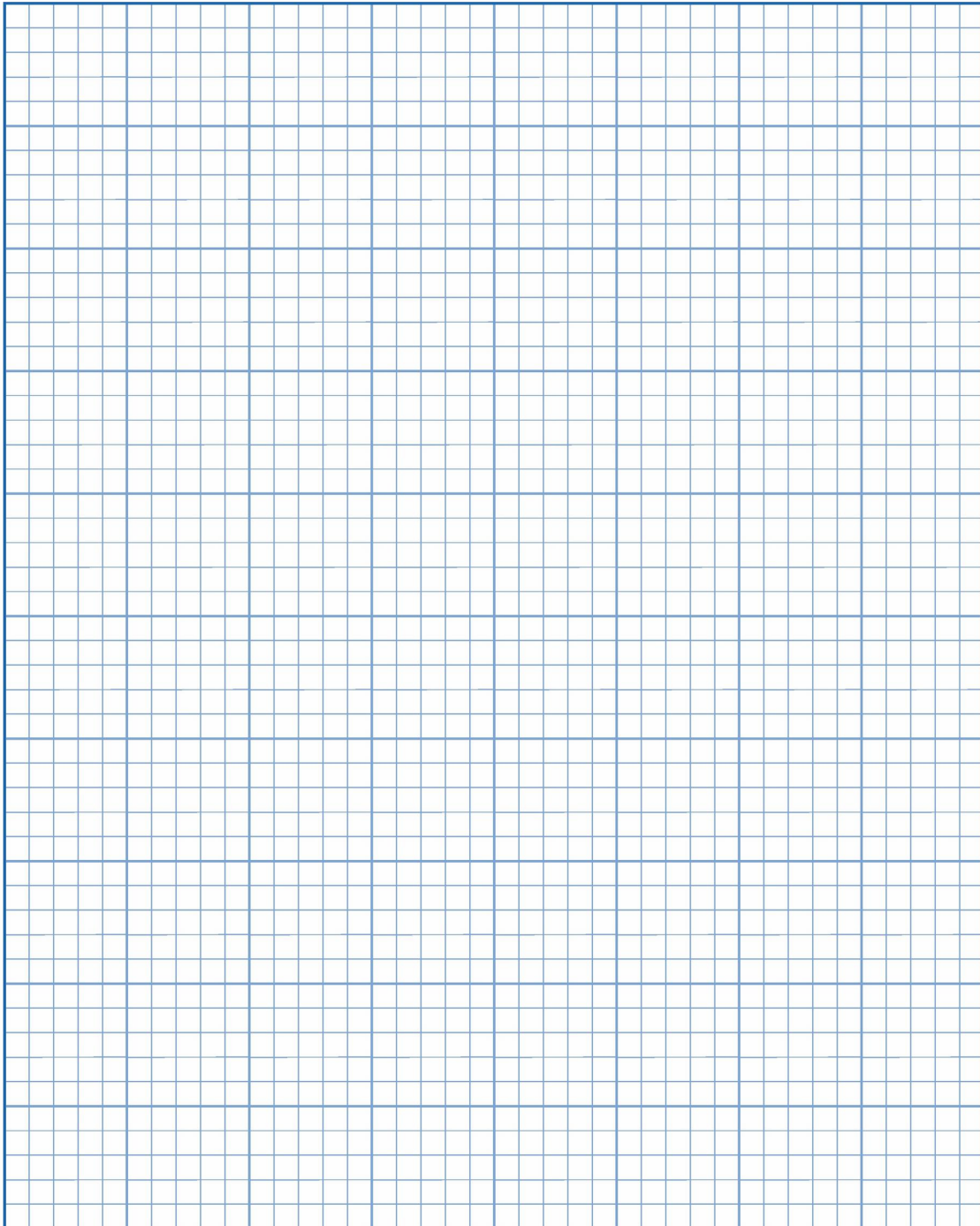
Table 1.1

Different types of public transport facilities within a 500m buffer zone around the two target blocks of flats

Distance zones from target HDB blocks [metres]	Punggol Block A			Queenstown Block B		
	Bus stops	LRT stations	MRT stations	Bus stops	LRT stations	MRT stations
0 – 100 m	0	0	0	1	0	1
100 – 200 m	1	0	0	4	0	0
200 – 300 m	2	1	0	5	0	0
300 – 400 m	3	1	0	3	0	0
400 – 500 m	2	0	1	3	0	0
Total	<u>8</u>	<u>2</u>	<u>1</u>	<u>16</u>	<u>0</u>	<u>1</u>

Using Table 1.1, construct a suitable graph to represent the different types of public transport facilities found in the two target blocks of flats in Punggol and Queenstown.

Different types of public transport facilities within a 500m buffer zone around the two target blocks of flats



[3]

- (d) The results of one of the questions from the questionnaire are shown in Table 1.2.

Table 1.2

Question: How would you rate your level of satisfaction with the accessibility to various transportation points (e.g., bus stops, LRT stations, MRT stations)?

Responses from residents at Block A, Punggol					
Accessibility to various transportation points	Level of satisfaction				
	Very dissatisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Very satisfied
Distance from your block to the nearest bus stop	2	6	19	12	11
Distance from your block to the nearest MRT station	1	7	14	15	13
Mean	1.5	6.5	16.5	13.5	12

Responses from residents at Block B, Queenstown					
Accessibility to various transportation points	Level of satisfaction				
	Very dissatisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Very satisfied
Distance from your block to the nearest bus stop	1	2	8	23	16
Distance from your block to the nearest MRT station	1	5	10	19	15
Mean	1	3.5	9		15.5

- (i) Complete the empty cell in Table 1.2 by calculating the mean for 'Somewhat satisfied' for the responses from residents at Block B, Queenstown. [1]

- (ii) Using Table 1.2, compare the levels of satisfaction made by the residents from the two target blocks in Punggol and Queenstown on the accessibility

to various transportation points.

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(e) Evaluate the reliability of the data collected by the students.

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- (a) Study Fig. 1.1 (Insert), which shows the difference in distance, travel time and project cost between the two proposed alignments of the Cross Island MRT Line.

Alignment Option 1 proposed by Land Transport Authority cuts through the Central Catchment Nature Reserve, while Alignment Option 2, proposed by Nature Society (Singapore) goes around the nature reserve to protect our largest primary forest.

With reference to Fig. 1.1, explain why environmental protection may be seen to be limiting development.

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- (b) Study Fig. 1.2 (Insert), which shows a sign put up by National Parks Board (NParks), Singapore, in a local park where wild boars are sighted frequently.

With reference to Fig. 1.2, explain the impacts of people on nature areas.

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[4]

- (c) Study Fig. 1.3 (Insert) which shows the location of 5 large childcare centres that opened between 2019 and 2020 in two housing estates, Sengkang and Punggol. These large childcare centres, with about 300 to 550 vacancies each, have intakes three to five times larger than centres at Housing Development Board (HDB) void decks.

With reference to Fig. 1.3, account for the locations of the large childcare centres in Sengkang and Punggol.

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- (d) Study Fig. 1.4 (Insert), taken at Bishan-Ang Mo Kio Park.

Describe the regulating ecosystem services provided by Bishan-Ang Mo Kio Park to the urban neighbourhood.

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- (e) (i) Study Fig. 1.5, which is an infographic from SCDF showing statistics about fire

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occurrences in Singapore- between 2021 to 2022.

Statistics about fire occurrences in Singapore, 2021 to 2022

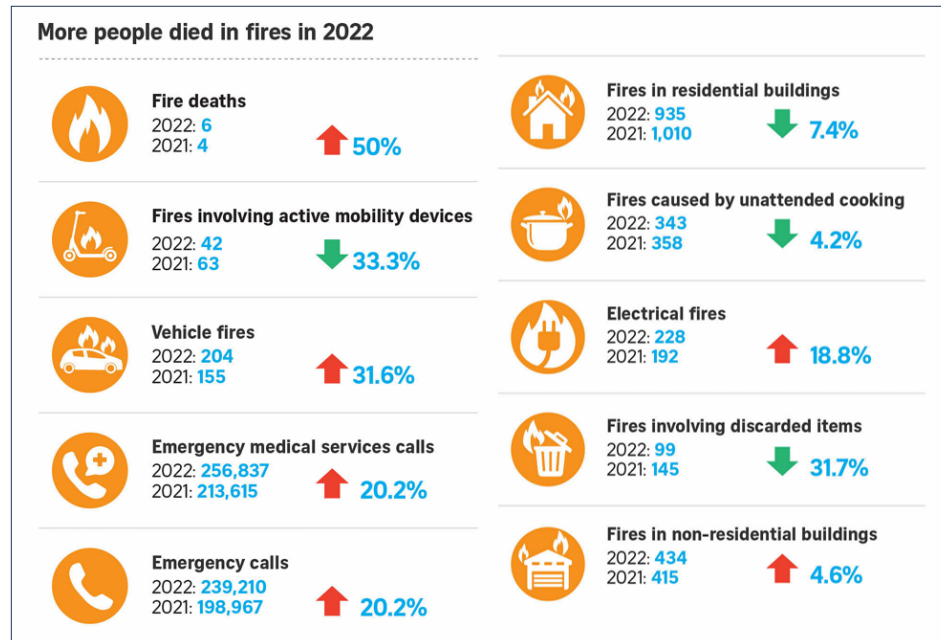


Fig. 1.5

Using Fig. 1.5, describe the changes in the causes of fires in Singapore between 2021 to 2022.

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(ii) Study Fig. 1.6 and 1.7 (Insert), which show scenes during and after a fire

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outbreak in Singapore.

Using evidence from Fig. 1.6 and 1.7, explain the social and economic impacts of fire occurrences.

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[4]

- (a) Study Fig. 1.8 (Insert), which shows a climograph of Tokyo, Japan.

Using Fig. 1.8, describe the climatic characteristics of Tokyo, Japan.

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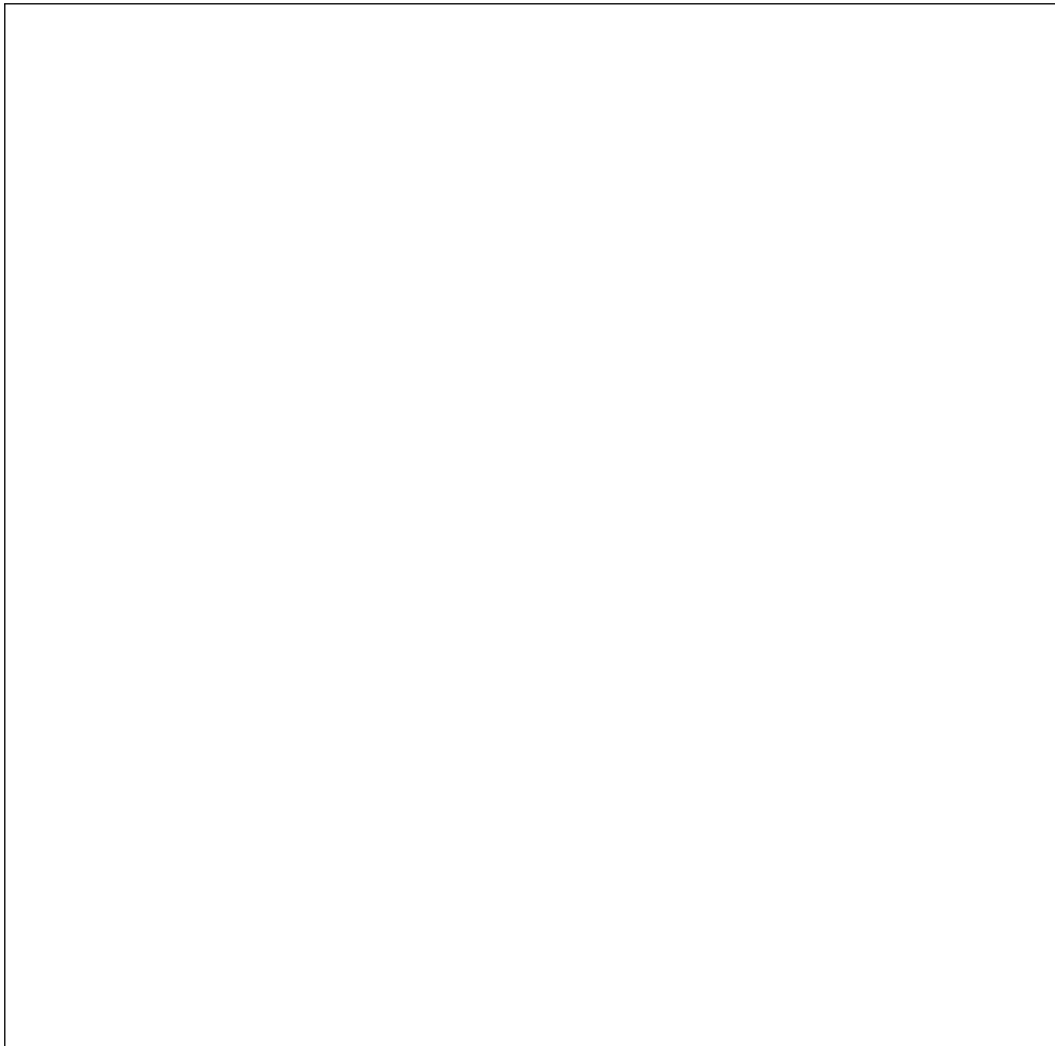
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- (b) Using a well-annotated diagram, explain the formation of convectional rain.



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- (c) Fig. 1.9 shows a local wind being experienced at a coastal location.

Local wind at coastal location

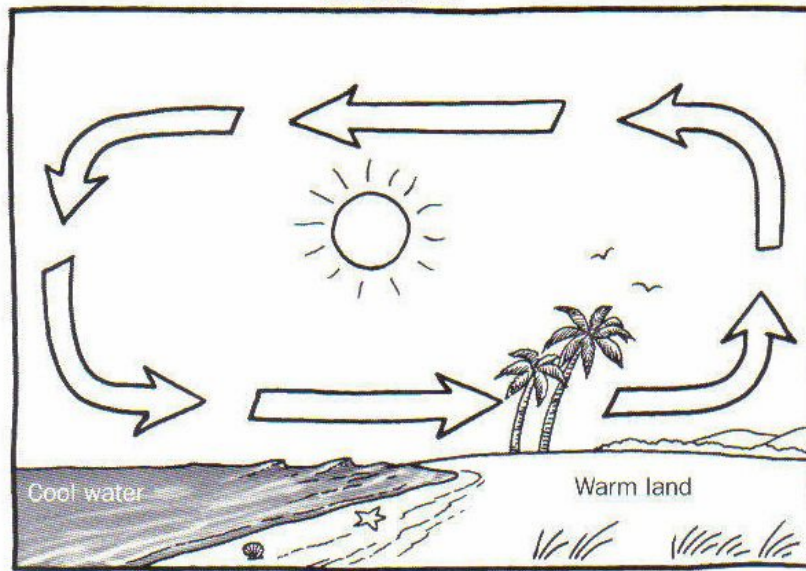


Fig. 1.9

Account for the formation of the local wind shown in Fig. 1.9.

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- (d) 'Type of surface cover is the main factor that causes higher temperatures in

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cities.' How far do you agree with this statement?

Support your answers with evidence.

This image shows a full page of white paper with horizontal dashed lines, typical of primary-ruled notebook paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

[illegible]

[illegible]

Acknowledgements	
Fig. 1.1	https://kontinentalist.com/stories/cross-island-line-final-route-impact-on-nature-reserve-explainer
Fig. 1.2	https://www.todayonline.com/singapore/some-residents-thomson-tell-how-they-live-brutish-wild-boars-and-hungry-monkeys
Fig. 1.3	https://www.straitstimes.com/singapore/five-more-large-childcare-centres-to-open-in-sengkang-and-punggol-by-2020-offering-2600
Fig. 1.4	https://www.timeout.com/singapore/things-to-do/bishan-ang-mo-kio-park
Fig. 1.5, 1.6 & 1.7	https://www.straitstimes.com/singapore/more-fire-deaths-in-2022-although-fewer-blazes-reported-spike-in-vehicle-fires-but-fewer-pmd-cases
Fig. 1.8	https://en.climate-data.org/asia/japan/tokyo/tokyo-3292/
Fig. 1.9	https://i.pinimg.com/originals/7b/db/12/7bdb12dea52362ae6ac7a7d15ab6b623.jpg