

NAME:

NO:

CLASS:

ADMIRALTY SECONDARY SCHOOL



END OF YEAR EXAMINATION 2022

SUBJECT : **Geography**
LEVEL/STREAM : **Secondary 1 Express**
DATE : **12 October 2022**
TIME : **0800h – 0915h**
DURATION : **1 hour 15 minutes**

READ THESE INSTRUCTIONS FIRST

Write your **name**, **class** and **index number** on the work you submit.

Write in **dark blue** or **black** pen.

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

Answer **all** questions in the spaces provided.

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

Section A	11
Section B	24
Total	35

DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

This Question Paper consists of **14** printed pages including this cover page.

Section A [11 marks]

Answer **Question 1** in this section.

1. A group of students wanted to investigate how human actions affect the cleanliness of the beach environment in Singapore.
- (a) Study Fig. 1, which shows the different stages of the Geographical Investigation (GI) process.

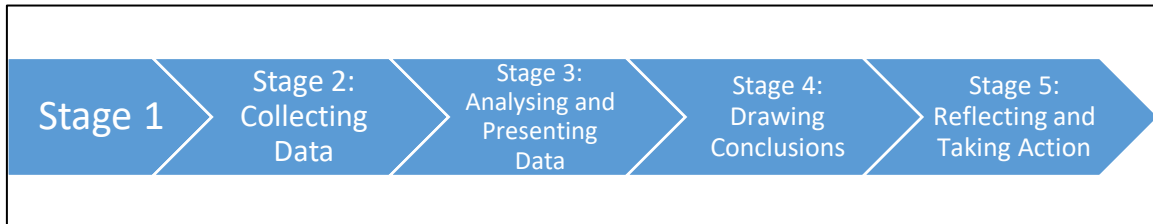
Different Stages of the Geographical Investigation Process

Fig. 1

Identify Stage 1 of the GI process and briefly describe how the students could carry it out.

[2]

- (b) Suggest a possible hypothesis for the students' investigation.

[1]

One of the students did some research and found a video on Youtube, as shown in Fig. 2. The video is about the beach clean-up efforts by Singaporeans.

Youtube video on beach clean-up efforts

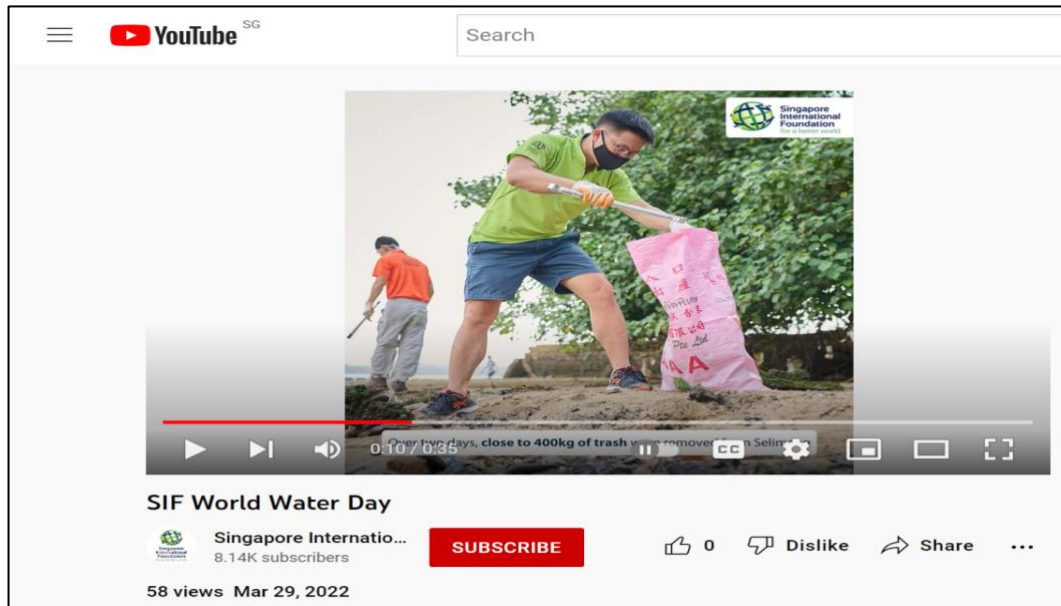


Fig. 2

- (b) State and describe the type of data that this student has collected.

[2]

- (c) Other than obtaining data via Youtube videos, suggest and describe **one** other method that the students can use to collect data.

[2]

The students collected data on the number of beach clean-ups and the amount of litter at East Coast Park, Singapore, over the years. This is shown in Table 1.

Data collected by the students

	Number of beach clean-ups	Amount of litter (kg) per year
1980	10	19.0
1990	15	18.0
2000	20	14.0
2010	30	8.0
2020	45	7.0

Table 1

- (d) (i) Using Table 1, plot a simple line graph on Fig. 3 to show the relationship between the number of beach clean-ups and amount of litter (kg) per year at East Coast Park, Singapore.

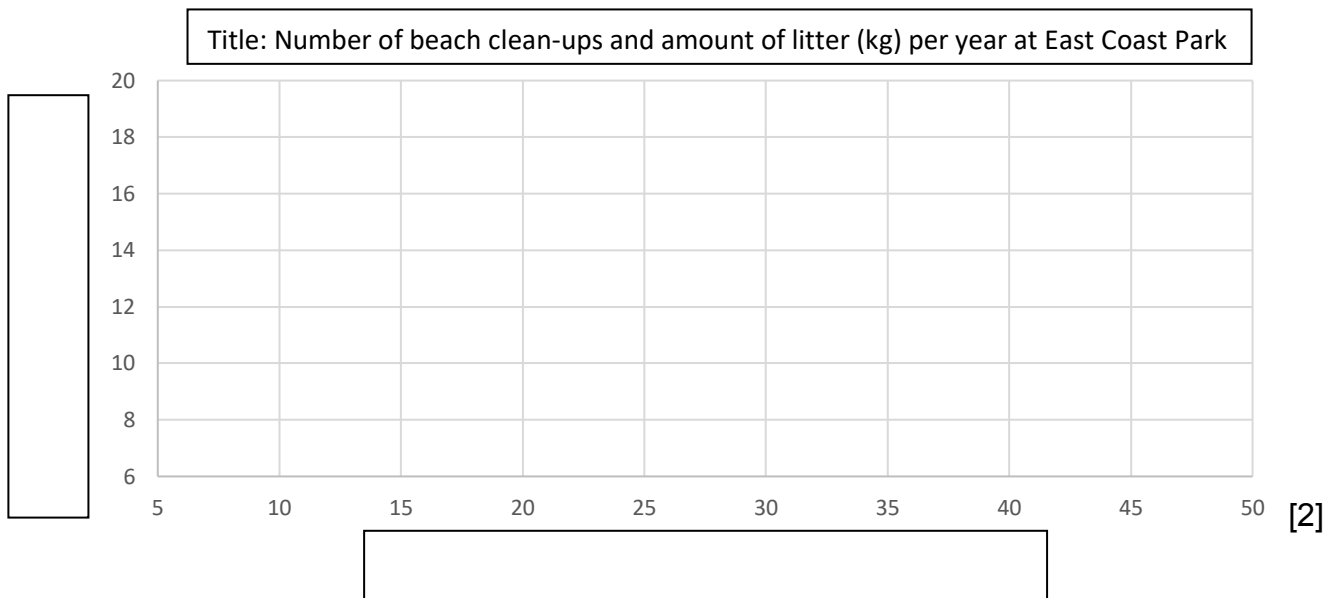


Fig. 3

- (ii) Using evidence from Table 1 and the graph you have drawn in Fig. 3, state and describe a possible conclusion on the number of beach clean-ups and amount of litter (kg) per year at the beach.

[2]

[Total: 11 marks]

Section B [24 marks]

Answer any **two** questions in this section.

2(a) Study Fig. 4, which shows a natural resource.

Natural resource

Fig. 4

State and explain if the natural resource shown in Fig. 4 is renewable or non-renewable.

[3]

- (b) Describe the difference between the terms 'resource' and 'natural resource'.

[2]

- (c) A student said, "Renewable natural resources can become non-renewable due to human actions".

Using an example, explain what the student's comment means.

[4]

- (d) Study Fig. 5, which shows a strategy to conserve resources in Singapore.

A strategy to conserve natural resources

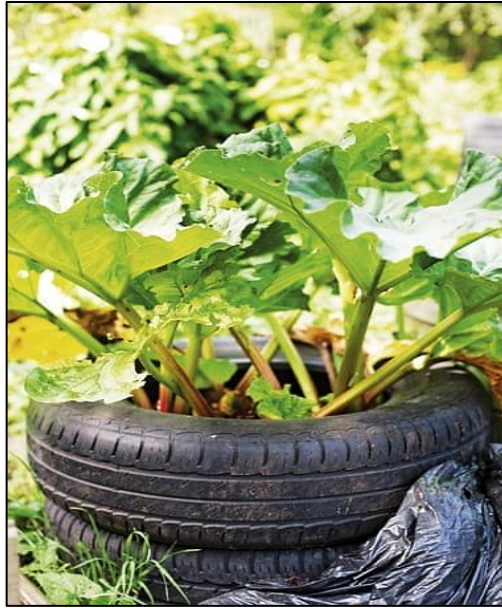


Fig. 5

Using Fig. 5, identify and describe the strategy to conserve resources.

[3]

[Total: 12 marks]

3(a) Study Fig. 6, which shows an adaptation of a leaf in a tropical rainforest.

Leaf in a tropical rainforest



Fig. 6

Using Fig. 6, identify and explain how the leaf has adapted to survive in the tropical rainforest.

[3]

- (b) Study Fig. 7, which shows the horizontal zonation of mangroves at a coastal area.

Horizontal zonation of mangroves at coastal area

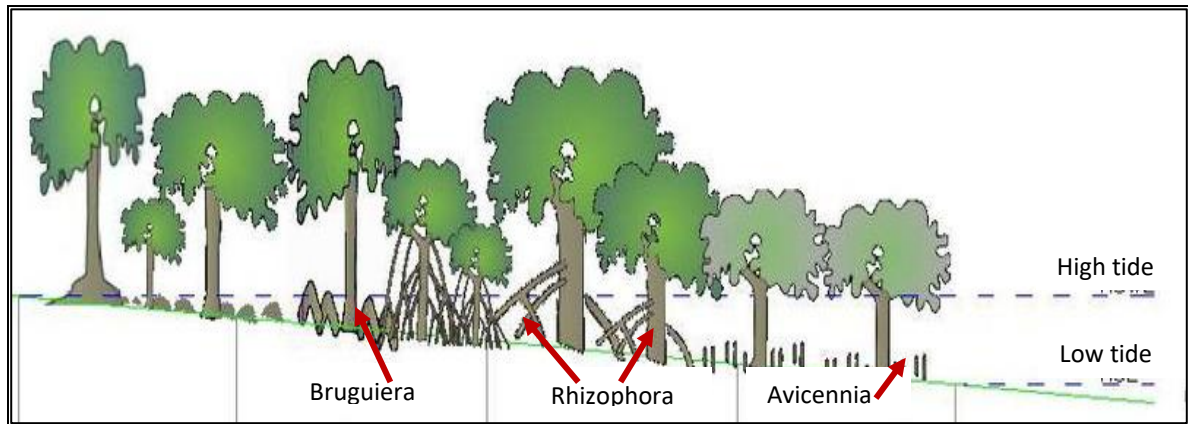


Fig. 7

Using Fig. 7, identify the mangrove species that is located closest to the low tide level and explain why it is located there.

[3]

- (c) Explain how tropical forests are used for carbon storage.

[3]

- (d) Using an example, explain how protection of forested areas allows tropical forests to be managed sustainably.

[3]

[Total: 12 marks]

4(a) Study Fig. 8, which shows the distribution of glaciers and ice sheets in the world.

Distribution of glaciers and ice sheets in the world

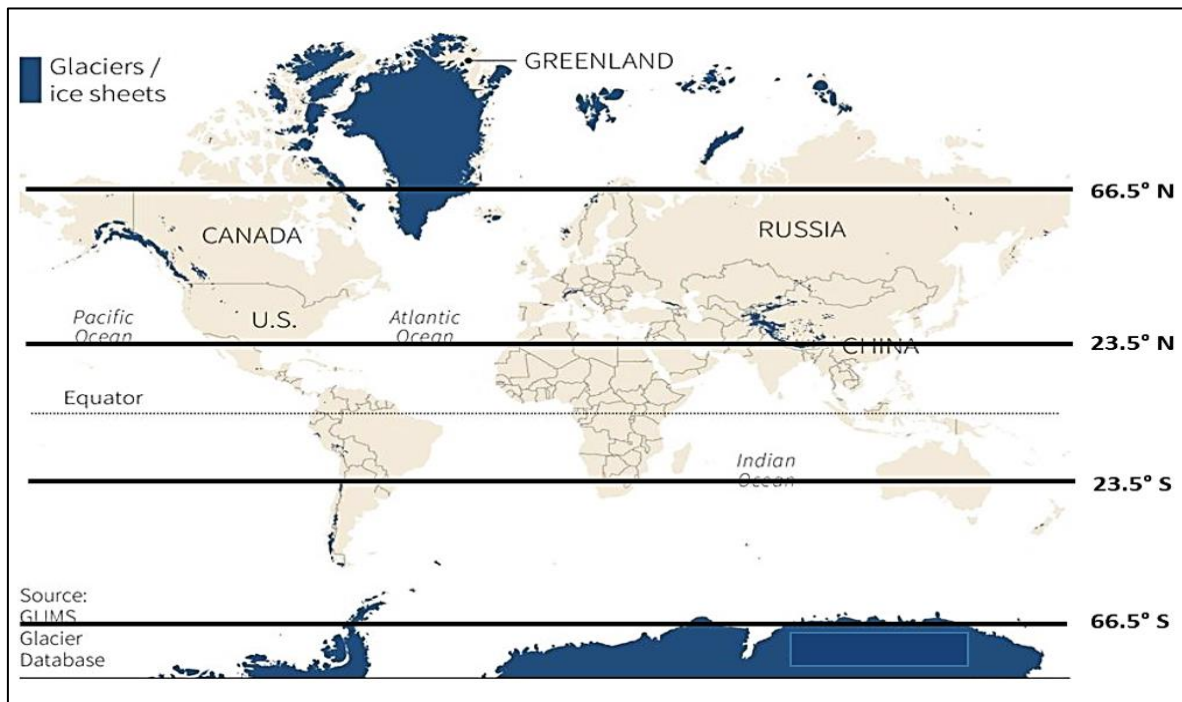


Fig. 8

Using Fig. 8, describe the distribution of glaciers and ice sheets in the world.

[3]

- (b) Study Fig. 9, which shows one way that humans use water.

One way that humans use water



Fig. 9

Using Fig. 9, identify and explain how humans use water.

(c) Using a specific example, explain how water pollution occurs.

[3]

(d) Describe and explain how improving water technologies ensures that water is managed sustainably.

[3]

[Total: 12 marks]

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Copyright Acknowledgements:

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|--------|---|
| Fig. 1 | Adapted from teacher's resource |
| Fig. 2 | https://www.youtube.com/watch?v=bjI0kqj6OzU |
| Fig. 3 | Adapted from teacher's resource |
| Fig. 4 | https://enviearth.com/ocean-water-salt-water-water-from-a-sea-or-ocean/ |
| Fig. 5 | https://www.theguardian.com/lifeandstyle/2015/jul/18/vegetable-growing-in-small-gardens |
| Fig. 6 | https://www.pinterest.com/pin/406661041322753017/ |
| Fig. 7 | https://www.researchgate.net/figure/Mangrove-zonation-pattern-at-Chua-Cape-Tien-Yen-district-Quang-Ninh-Vietnam_fig7_276327015 |
| Fig. 8 | https://www.pinterest.co.uk/pin/517773288383537310/ |
| Fig. 9 | https://www.hortidaily.com/article/9317503/iran-development-of-185-000-hectares-of-new-irrigation-systems/ |

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ANSWER SCHEME

	MARKING SCHEME														
	SECTION A [11 MARKS]														
		A02	A03												
1(a)	Identify: Framing the GI [1] Describe: Students can craft/ write down a suitable hypothesis for the investigation . [1]	[2]													
(b)	As human actions at the reservoir increase , the cleanliness of the beach decreases [1] <i>Accept any other plausible relationships</i>	[1]													
(b)	Secondary data [1] which is data collected and compiled by someone else other than the investigator himself/ herself [1].		[2]												
(c)	Method: Taking photographs [1] Students can take photographs of the beach environment, such as the sand and the sea [1] to help them assess the cleanliness <i>Accept any other plausible methods</i>	[2]													
(d)(i))	Number of beach clean-ups and amount of litter over the years <table><thead><tr><th>Number of beach clean-ups</th><th>Amount of litter (kg)</th></tr></thead><tbody><tr><td>10</td><td>19</td></tr><tr><td>15</td><td>18</td></tr><tr><td>20</td><td>14</td></tr><tr><td>30</td><td>8</td></tr><tr><td>45</td><td>7</td></tr></tbody></table> Labels on x-axis and y-axis: 1m (including units) All points plotted and joined using a straight line: 1m	Number of beach clean-ups	Amount of litter (kg)	10	19	15	18	20	14	30	8	45	7		[2]
Number of beach clean-ups	Amount of litter (kg)														
10	19														
15	18														
20	14														
30	8														
45	7														
(d)(i) i)	As the number of beach clean ups increases , the amount of litter (kg) decreases . [1]		[3]												

	When the number of beach clean-ups is the highest at 45 , the amount of litter (kg) is the lowest at 7.0kg . [1] OR When the number of beach clean-ups is the lowest at 10 , the amount of litter (kg) is the highest at 19.0kg . [1]		
	SECTION B [24 MARKS]		
		A02	A03
2(a)	Renewable [1] As water is naturally replenished [1] in the same time period that it is being used [1]		[3]
(b)	Resource means a material that people identify to be useful [1] but natural resource means a useful material that is found on Earth/ produced by natural processes on Earth [1]	[2]	
(c)	An example of natural resources would be tropical forests [1] Due to people's demand for wood products many trees are being cut down [1] When resources (e.g. wood) are being used at a faster rate than they are replenished/ can grow back [1] Its availability changes from unlimited to limited , becoming non-renewable [1] <i>Accept any other examples of natural resources</i>	[4]	
(d)	Reuse [1] This means that products are being used again but for a different purpose [1] The car tires are being used again, not as car parts but as planter pots [1]		[3]
3(a)	Drip tips [1] These allow rainwater to flow off the leaf easily [1] Thus preventing the growth of fungi and bacteria which are harmful to the plant [1]		[3]
(b)	Avicennia [1] Species which are located closer to the low tide level are flooded for longer periods of time by the tide [1] These species have higher tolerance for salinity and longer periods of flooding [1]		[3]

(c)	Tropical forests absorb carbon dioxide from the atmosphere during photosynthesis [1] Absorbed carbon dioxide is stored in solid form in the plants' branches, stems and roots [1] Dead leaves and branches that fall also add carbon to the soil [1]	[3]	
(d)	An example of a protected forested area in Singapore is the Bukit Timah Nature Reserve [1] Governments put in place laws to ensure that people do not damage the protected areas, like cut down trees or poach animals [1] People who break the laws can be fined or sent to jail [1] OR Human activities in the forested area are greatly restricted thus preventing plants and animals from being negatively affected/ allows conservation of biodiversity (*Either one) [1]	[3]	
4(a)	Glaciers and ice sheets are unevenly distributed in the world [1] Most glaciers are located below the Antarctic Circle / above the Arctic Circle [1] (*Either one) Some glaciers are located in Greenland [1]		[3]
(b)	Agriculture [1] Which is when water is used to grow crops and rear animals for human consumption [1] In farms, water can be used for irrigation purposes [1] OR Different plants and animals require different amounts of water [1]		[3]
(c)	An example of water pollution would be in the Citarum River in Indonesia [1] Some people may throw rubbish into drains and factories may dump chemical waste into the river [1] This leads to water pollution when these harmful substances enter water bodies and result in water quality falling [1]		
(d)	<u>Describe:</u> Countries are using technology to develop new ways of generating and conserving water [1] <u>Explain:</u>		

	Technology allows for desalination, the process of removing salt from seawater to convert it into freshwater [1] Technology allows this to take place quickly and on a large scale [1]		
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