TANJONG KATONG GIRLS' SCHOOL
PRELIMINARY EXAMINATION 2024
SECONDARY FOUR EXPRESS

HUMANITIES **2260/02**

Paper 2 Geography **7 August 2024**

INSERT **1 hour 45 minutes**

READ THESE INSTRUCTIONS FIRST

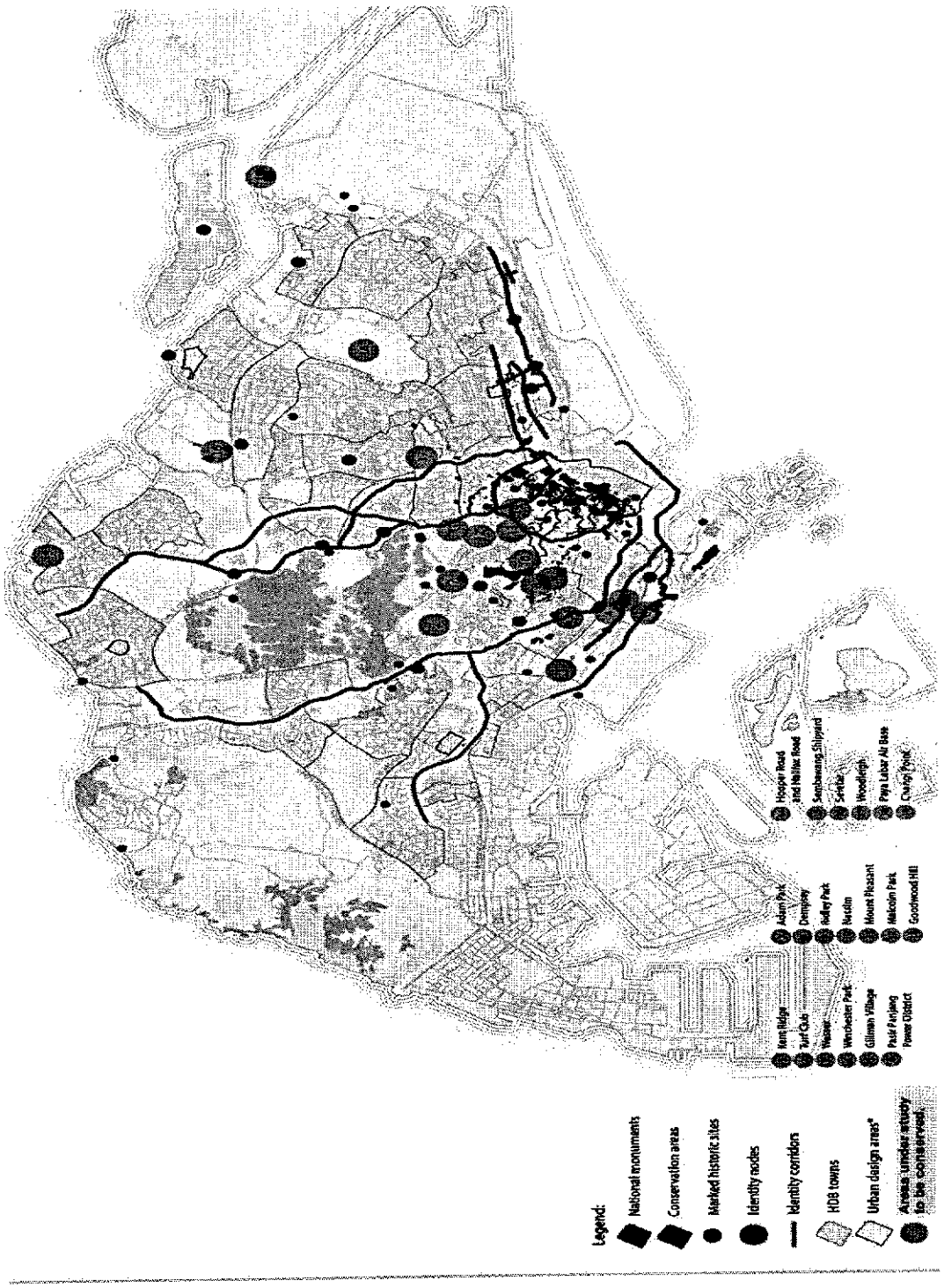
This Insert contains additional resources referred to in the questions.

This document consists of **3** printed pages.

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Fig. 1.2 for Question 1

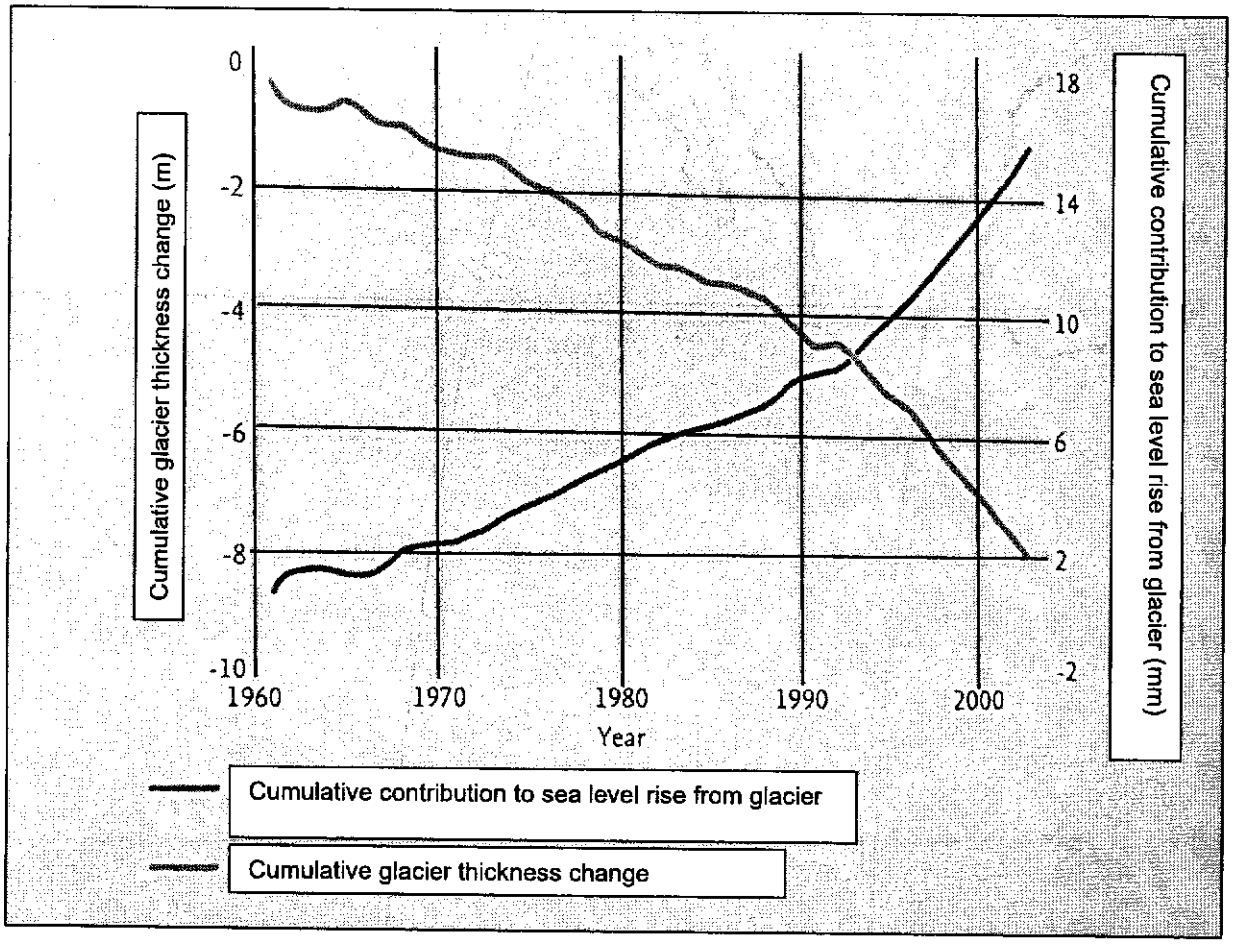
The Heritage and Identity Structure Plan by Urban Redevelopment Authority (URA)



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Fig. 3.1 for Question 3

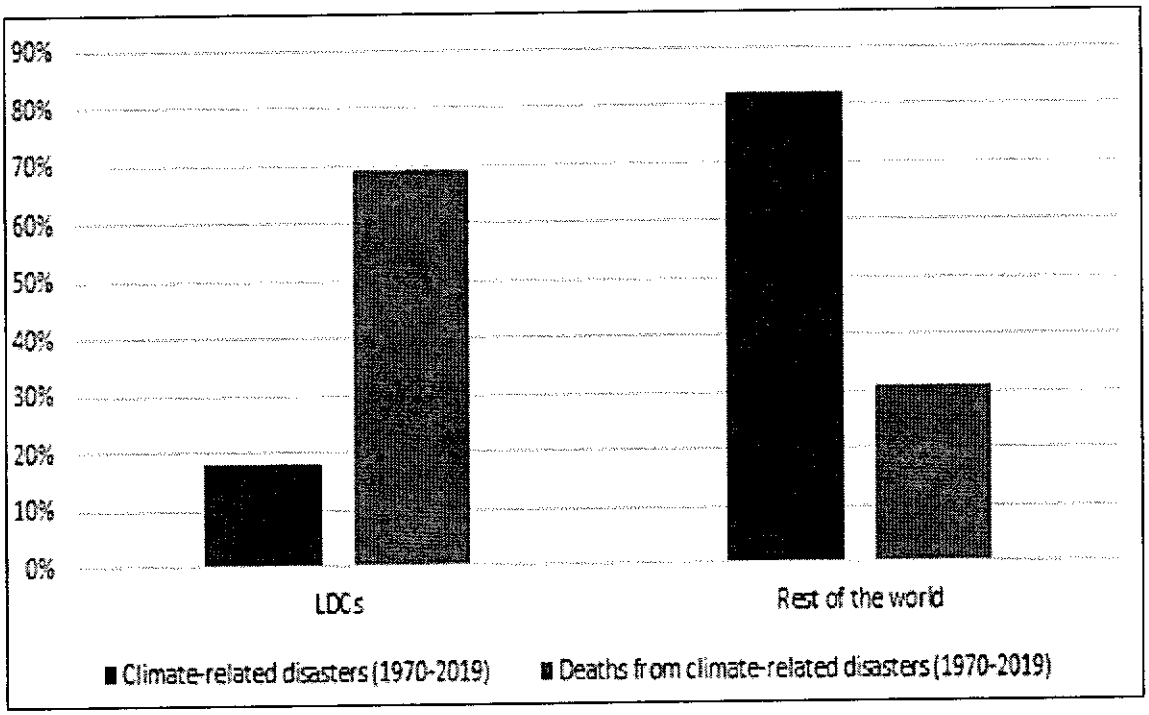
Relationship between cumulative changes in glacier thickness and cumulative contributions to sea level rise from glacier



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Fig. 3.2 for Question 3

Impact of climate-related disasters in Less Developed Countries (LDCs) and the rest of the World, from 1970 to 2019



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TANJONG KATONG GIRLS' SCHOOL
PRELIMINARY EXAMINATION 2024
SECONDARY FOUR EXPRESS

CANDIDATE NAME

CLASS

INDEX NUMBER

HUMANITIES

2260/02

Paper 2 Geography

7 August 2024

1 hour 45 minutes

Candidates answer on the Question Paper.

Additional Materials: Insert

READ THESE INSTRUCTIONS FIRST

Write your index number and name on all the work you hand in.
Write in dark blue or black pen.
You may use HB Pencil for any diagram or graphs.
Do not use staples, paper clips, glue or correction fluid.

Answer **three** questions in total.
Section A
Answer Question 1 **and** Question 2.
Section B
Answer Question 3.

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.

The total marks for this paper is **50**.

This document consists of **15** printed pages, **1** blank page and **1** Insert.

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Section A

Answer Question 1 **and** Question 2.

1 Cluster 1: Geography in Everyday Life

(a) Study Fig. 1.1, which shows an excerpt of a news article on the development of Dover Forest in Singapore as a residential and for biodiversity preservation.

Dover Forest to be used for both housing and nature; first housing project to be launched in 2022.

By Audrey Tan and Ng Keng Gene | Updated by Aug 02, 2021

SINGAPORE - The plan for Dover Forest has been revised, with public housing expected to be launched in the eastern half next year while the western half is set aside for now to preserve its biodiversity. The young secondary forest plot in western Singapore is zoned for residential use, but the plans were tweaked after scientific studies and nature enthusiasts flagged its conservation value.

To balance the country's needs for both housing and nature, only the eastern half of the 33ha site - almost eight times the size of the Padang - will be developed in the nearer term. The development of the area, which is located in the mature estate of Queenstown, will be done sensitively and also feature 5ha of greenery - including a park with a natural stream.

The western half of the site will be set aside for now and relooked at in about a decade, HDB added. But parts of this segment, which is richer in biodiversity than the eastern half, will be carved out and safeguarded as a nature park.

Fig. 1.1

With reference to Fig. 1.1, explain how nature may potentially bring about problems to people in such a residential development.

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(b) Study Fig. 1.2 (Insert), which shows the Heritage and Identity Structure Plan by Urban Redevelopment Authority (URA) in Singapore. It reflects the authority's efforts to identify, retain and enhance the many heritage and identity sites, heritage corridors and buildings.

(i) Using Fig. 1.2, describe the spatial distribution of the areas under study to be conserved.

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(ii) State one possible reason for the spatial distribution of the areas of study.

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(c) Explain how community programmes develop community resilience in building sustainable urban neighbourhoods.

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(d) A group of Singapore students were investigating the popularity of local eco-trails as a nature-based activity for tourists. They carried out their investigation at Changi Walking Trail.

As part of their investigation, they carried out a survey to gather general information of the tourist profile such as tourists' regions of origin, average number of hours of stay and reasons why tourists are attracted to such eco-trails. The results of the survey are shown in Tables 1.1 and 1.2.

Table 1.1

General information of tourist profile

Number of tourists	Region of origin	Average number of hours of stay
45	South Asia	1.2
82	Western Europe	3.2
103	East Asia	2.1
50	United States of America and Canda	3.4
26	Eastern Europe	2.9
64	Australia and New Zealand	3.5

Table 1.2

Reasons for visit

Reasons for visit*	Number of tourists
Nature and Wildlife Viewing	290
Education and Learning	228
Relaxation and Stress Relief	145

**Tourists were allowed to select more than one reason for visit in the survey.*

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With reference to Tables 1.1 and 1.2, evaluate the validity of the students' findings regarding the popularity of local eco-trails among tourists.

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2 Cluster 2: Tourism

(a) Explain why some tourist regions are more vulnerable to negative economic impacts.

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(b) Study Table 2.1, which shows tourist arrivals to Singapore by different modes of transportation from 2016 to 2020.

Table 2.1

International tourist arrivals to Singapore, 2016-2020

Years	By air (in millions)	By land and sea (in millions)
2016	12.7	3.8
2017	13.5	3.9
2018	14.3	4.2
2019	14.9	4.2
2020	2.1	0.6

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(i) Using Table 2.1, complete the graph in Fig. 2.1 for tourist arrivals to Singapore by different modes of transportation from 2016 to 2020. [1]

International tourist arrivals by mode of transport, 2016-2020

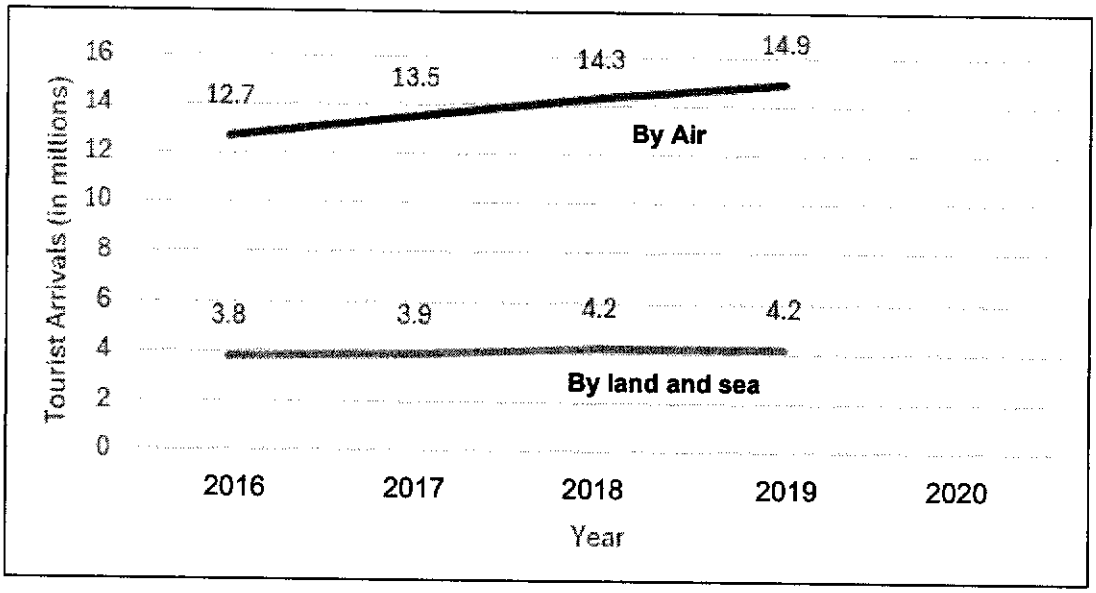


Fig. 2.1

(ii) Describe the trend of tourist arrivals to Singapore by different transportation modes between 2016 and 2020.

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(c) Study Fig. 2.2, which shows key aspects of government policy to promote tourism in Ecuador. Ecuador promotes eco-friendly tourism to protect its biodiversity and support local communities.

Tourism Policy in Ecuador

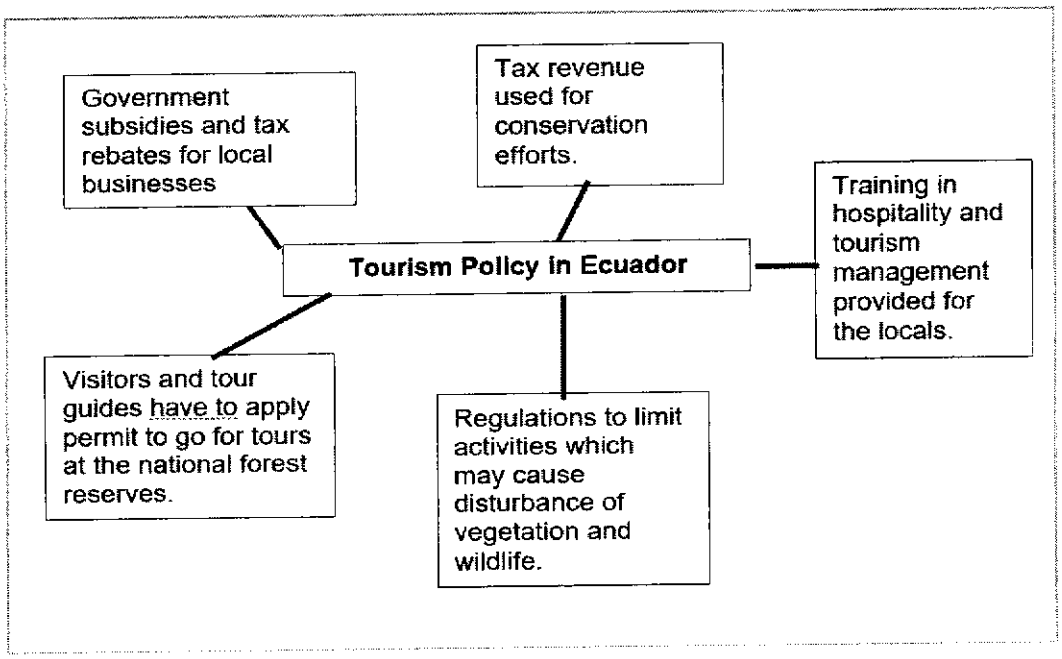


Fig. 2.2

(i) With reference to Fig. 2.2, explain how the government policy supports ecotourism and community-based tourism in Ecuador.

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(ii) With reference to Fig. 2.2, suggest why governments play an important role for ensuring sustainable tourism development.

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(d) Study Fig. 2.3, which shows age groups of eco-tourists based on a tourism study in Trabzon City, Turkey in 2010.

Different age groups of eco-tourists based on a tourism study in Trabzon City, Turkey, 2010.

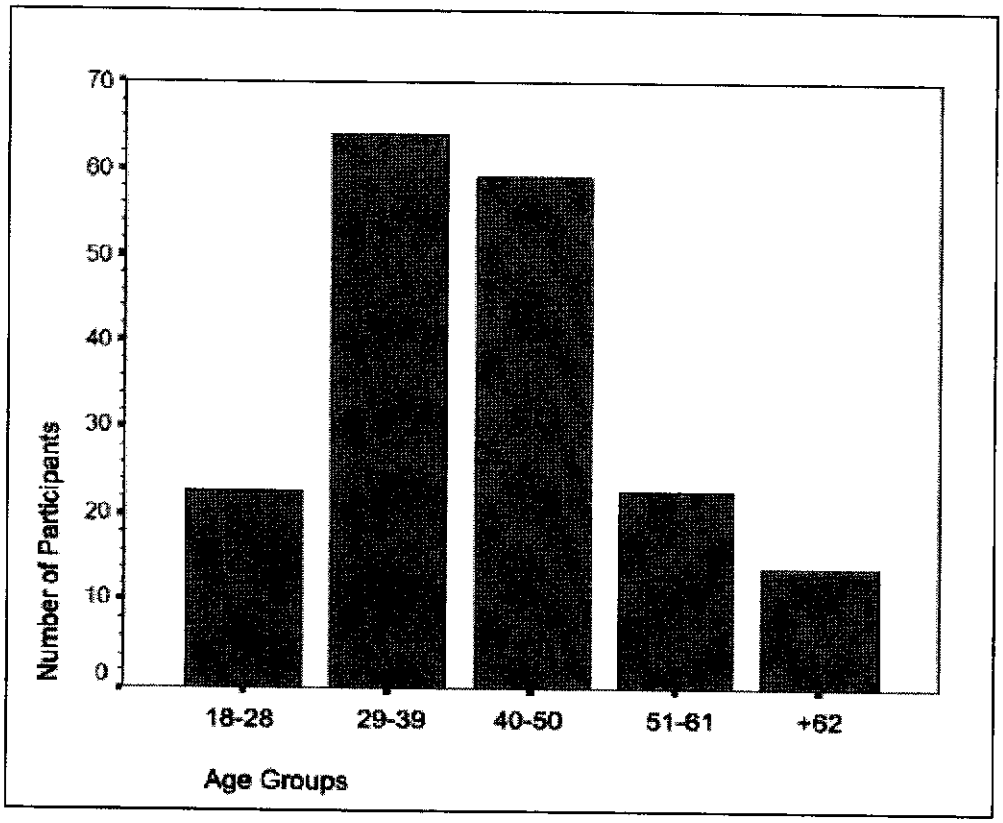


Fig. 2.3

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(i) Suggest reasons for the patterns observed in Fig. 2.3.

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(ii) Explain how different tourists' personality determine travel preferences.

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[Total: 18]

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Section B

Answer Question 3.

3 Cluster 3: Climate

(a) Study Fig. 3.1 (Insert), which shows cumulative changes in glacier thickness and cumulative contributions to sea level rise from glacier, from 1960 to 2000.

(i) Using Fig. 3.1, describe the relationship between the changes in glacier thickness and glacier contributions to sea level rise from 1960 to 2000.

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(ii) Suggest reasons why impacts of sea level rise are uneven across different regions.

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(b) Study Fig. 3.2 (Insert), which shows the impact of climate-related disasters in Less Developed Countries (LDCs) and the rest of the world from 1970 to 2019.

Using Fig. 3.2, compare the impact of climate-related disasters in Less Developed Countries (LDCs) and the rest of the world from 1970 to 2019.

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(c) 'The key mitigation strategy in building resilience to climate change is through international agreements and cooperation.'

To what extent do you agree with this statement? Explain your answer.

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Additional page

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Copyright Acknowledgements:

Question 1	Fig. 1.1	© *Adapted from The Straits Time article, titled "Dover Forest to be used for both housing and nature; first housing project to be launched in 2022".*
Question 1	Fig. 1.2	© *https://www.ura.gov.sg/Corporate/Planning/Long-Term-Plan-Review/Space-for-Our-Dreams-Exhibition/Cherish/Loveable-City*
Question 2	Table 2.1	© *https://www.budgetdirect.com.sg/travel-insurance/research/singapore-tourism-statistics*
Question 2	Fig. 2.3	© *Adapted from, https://www.researchgate.net/figure/Age-groups-of-the-eco-tourists_fig2_228616092*
Question 3	Fig. 3.1	© *Adapted from https://19january2021snapshot.epa.gov/climate-indicators/climate-change-indicators-glaciers_.html*
Question 3	Fig. 3.2	© *Adapted from https://www.undrr.org/implementing-sendai-framework/sendai-framework-action/disaster-risk-reduction-least-developed-countries*

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ANSWER SCHEME

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Section A

Answer Question 1 **and** Question 2.

1 Cluster 1: Geography in Everyday Life

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The western half of the site will be set aside for now and relooked at in about a decade, HDB added. But parts of this segment, which is richer in biodiversity than the eastern half, will be carved out and safeguarded as a nature park.

Fig. 1.1

With reference to Fig. 1.1, explain how nature may potentially bring about problems to people in such a residential development. **[2]**

Award 1 mark for each explanation on how nature may potentially bring about problems to people in such a residential development, to a maximum of 2 marks.
Award a maximum of 1 additional mark for further development of each explanation, where applicable.

Possible responses include:

- Human-wildlife encounters in Singapore are expected to increase due to reasons such as residential development in Queenstown [1 mark]. Such encounters are common due to urban expansion as population grows and demand for housing increases [1 additional mark].
- Due to the increase in wildlife sightings, local communities may not know how to react when they come across wildlife and may unintentionally provoke them, which may trigger the animals to attack and cause harm to people [1 mark].
- Another disadvantage is that preservation of the Dover Forest may be perceived to be limiting such residential development [1 mark]. Some people in local communities may feel that the protection of nature is done at the expense of their housing needs [1 additional mark].

AO2

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(b) **Study Fig. 1.2 (Insert), which shows the Heritage and Identity Structure Plan by Urban Redevelopment Authority (URA) in Singapore. It reflects the authority's efforts to identify, retain and enhance the many heritage and identity sites, corridors and buildings.**

(i) **Using Fig. 1.2, describe the spatial distribution of the areas under study to be conserved.** [3]

Award 1 mark for each description of the spatial distribution to a maximum of 3 marks. Award 1 additional mark for further support from Fig. 1.2.

Possible responses include:

- There are 15 areas of study mainly concentrated in the southern part of Singapore [1 mark] They are mostly located near numerous national monuments and significant conservation areas and historic marks [1 additional mark].
- There are other areas to be conserved that are found in other parts of Singapore such as one in the northern part of Singapore and two areas in northeastern part of Singapore [1 mark]. The areas are the Sembawang shipyard – 15, Seletar -16, Paya Lebar Air Base -18 and Changi Point – 19 [1 additional mark].

AO2

(ii) **State one possible reason for the spatial distribution of the areas of study.** [1]

Award 1m for stating one valid reason for the spatial distribution of the areas of study.

Possible responses include:

- The areas of study are selected at / along / near such heritage-related monuments, locations and identity corridors as these places are closly connected / related with one another [1 mark]. OR
- The close proximity of such heritage landmarks / areas increases convenience for the authorities who conducted / will be conducting the study [1 mark]. OR
- The close proximity of such heritage landmarks / areas also increases access to public who are interested to find out more about the heritage of these areas [1 mark].

AO1

(c) **Explain how community programmes develop community resilience in building sustainable urban neighbourhoods.** [2]

Award 1 mark for each explanation on how community programmes develop community resilience in building sustainable urban neighbourhoods, to a maximum of 2 marks. Award a maximum of 1 additional mark for further development of each explanation, where applicable.

Possible responses include:

- Community programmes such as Nationwide Gardening Movement aim to foster community cohesion and neighbourliness, so that they can depend on one another during an emergency [1 mark]. Such community programmes create informal support systems that are crucial during emergencies [1 additional mark]
- Community programs can also include educational components that inform residents about sustainable practices [1 mark]. Such practices include such as energy conservation, recycling, and sustainable transportation. This knowledge empowers individuals to make environmentally friendly choices [1 additional mark].
- Community gardens create and maintain green spaces which improve local air quality, provide habitats for wildlife, and offer recreational areas for residents [1 mark]. Access to green spaces and programs promote active lifestyle which contribute to better physical health among residents [1 additional mark].

AO1

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(d) **A group of Singapore students were investigating the popularity of local eco-trails as a nature-based activity for tourists. They carried out their investigation at Changi Walking Trail.**

As part of their investigation, they carried out a survey to gather general information of the tourist profile such as tourists' regions of origin, average number of hours of stay and reasons why tourists are attracted to such eco-trails. The results of the survey are shown in Tables 1.1 and 1.2.

Table 1.1

General information of tourist profile

Number of tourists	Region of origin	Average number of hours of stay
45	South Asia	1.2
82	Western Europe	3.2
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Table 1.2

Reasons for visit

Reasons for visit*	Number of tourists
Nature and Wildlife Viewing	290
Education and Learning	228
Relaxation and Stress Relief	145

**Tourists were allowed to select more than one reason for visit in the survey.*

With reference to Tables 1.1 and 1.2, evaluate the validity of the students' findings regarding the popularity of local eco trails among tourists. **[6]**

Award 1 mark for each evaluation of the validity of the students' findings, to a maximum of 6 marks. Award a maximum of 1 additional mark for further development of each explanation, where applicable.
Possible responses include:

- The findings are valid because the data collected addresses the purpose of investigation [1 mark]. For instance, the longer the tourists stayed at the trail, the more enjoyable the trail was to them. This shows that such trail was popular among tourists [1 additional mark] OR For instance, understanding the reasons why tourists were attracted to such trail would provide the students a better understanding on why such trail was popular among tourists.
- The findings are valid as the sample size was large and from many regions. The survey results were thus more representative of the opinions of other tourists [1 mark].
- The findings might be invalid as the students carried out their survey only on one trail in Singapore and this may be representative of other eco trails in Singapore [1 mark]. Other eco trails in Singapore may provide the tourists with a different experience and may affect the findings [1 additional mark].
- The findings might be invalid as the number of tourists from various regions are not the same and the results may be biased [1 mark]. This is so as tourists from certain regions such as Australia and New Zealand may enjoy such trail due to their lifestyle and environment compared to some other regions [1 additional mark].

AO3

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2 Cluster 2: Tourism

(a) Explain why some tourist regions are more vulnerable to negative economic impacts. [4]

Award 1 mark for each explanation of why some tourist regions are more vulnerable to negative economic impacts, to a maximum of 4 marks.
Award a maximum of 1 additional mark for further development of each explanation, where applicable.

Possible responses include:

- Tourist regions often rely heavily on imported goods and services to meet the demands of tourists, such as food, beverages, and luxury items [1 mark]. If these goods are not produced locally, the money spent by tourists leaks out of the local economy to suppliers in other regions or countries [1 additional mark].
- In some cases, large-scale tourist developments may compete with local businesses, such as restaurants and shops, leading to closures or reduced profitability for local businesses [1 mark].
- The development of infrastructure to support tourism, such as airports, roads, and utilities, often requires substantial investment. If these investments are financed by external sources, the repayment can divert local funds away to foreign companies / external sources [1 mark].
- Many tourist regions experience seasonal fluctuations in visitor numbers, with peak seasons seeing high tourist arrivals and low seasons seeing fewer visitors [1 mark]. During off-peak times, businesses may struggle to maintain revenue, leading to reduced income and potential economic instability [1 additional mark].
- Tourist regions with limited economic diversification beyond tourism have fewer alternative revenue streams. This makes them particularly vulnerable during downturns in the tourism sector [1 mark].

AO1

(b) Study Table 2.1, which shows tourist arrivals to Singapore by different modes of transportation from 2016 to 2020.

International tourists arrivals to Singapore, 2016-2020

Years	By air (in millions)	By land and sea (in millions)
2016	12.7	3.8
2017	13.5	3.9
2018	14.3	4.2
2019	14.9	4.2
2020	2.1	0.6

Table 2.1

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(i) Using Table 2.1, complete the line graph in Fig. 2.1 for tourist arrivals to Singapore by different modes of transportation from 2016 to 2020. [1]

Award 1m for an accurate plot for both air and by land and sea.

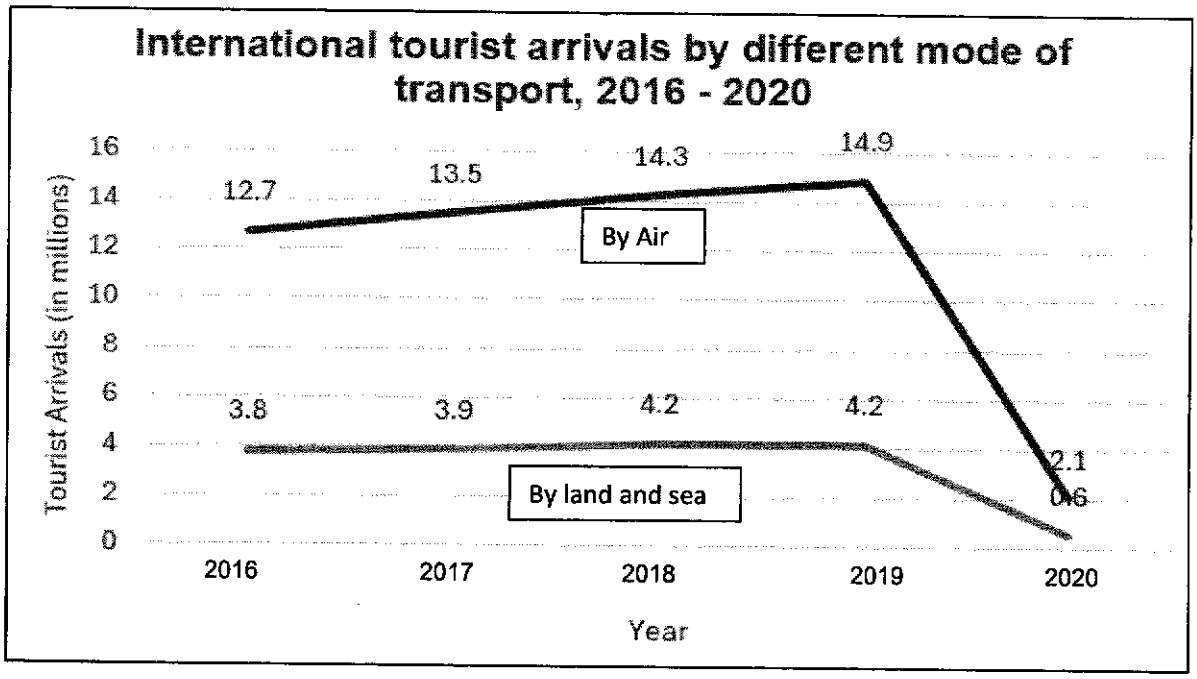


Fig. 2.1

AO2

(ii) Describe the trend of tourist arrivals to Singapore by different transportation modes between 2016 and 2020. [3]

Award 1 mark for each description of the trend, to a maximum of 3 marks.

Possible responses include:

- There is a steady increase in the number of tourists traveling by air, from 12.7 million in 2016 to 14.9 million in 2019 OR with an overall increase of 2.2 million over these four years.
- There is a slight increase / slight growth in the number of tourists traveling by land and sea, from 3.8 million in 2016 to 4.2 million in 2018 and 2019 OR with an overall increase of 0.4 million over these four years.
- In 2020, there is a significant drop in the number of tourists traveling by air to 2.1 million tourists. There was also a sharp decline in the number of tourists traveling by land and sea to 0.6 million tourists.

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(c) Study Fig. 2.2, which shows key aspects of government policy to promote tourism in Ecuador. Ecuador promotes eco-friendly tourism to protect its biodiversity and support local communities.

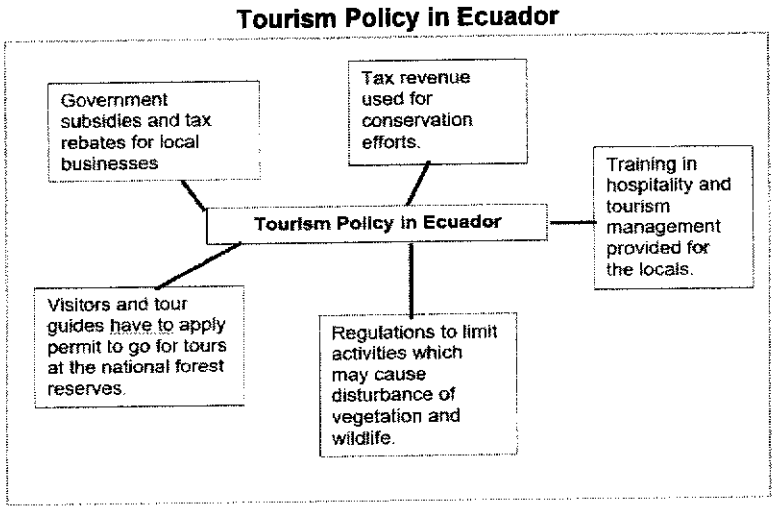


Fig. 2.2

(i) With reference to Fig. 2.2, explain how the government policy supports ecotourism and community-based tourism in Ecuador. **[4]**

Award 1 mark for each explanation on how the government policy supports ecotourism and community-based tourism, to a maximum of 4 marks. Award a maximum of 1 additional mark for further development of each explanation, where applicable. Candidates must provide at least one response for ecotourism / community-based tourism.

Possible responses include:

- **Community-based tourism**: With the support from the government by providing subsidies and tax rebates, the locals are encouraged to set up their own businesses such as homestay accommodations or local restaurants [1 mark]. This will reduce economic leakages which can increase the country's revenue and increase the income of the locals [1 additional mark].
- **Community-based tourism:** Training provided by the government will enable the locals to be equipped with relevant skills which can assist them in gaining employment in the local tourism industry [1 mark]. With employment and increase in income, the locals can improve on their standard of living and gives them empowerment [1 additional mark].
- **Eco-tourism:** Increase funding for ecological conservation and environmental protection from tourism revenue / tax revenue received [1 mark]. With more funding, more research and development can take place to improve on the ecological awareness among tourists and locals [1 additional mark].
- **Eco-tourism:** Government imposes laws and regulations to limit possible detrimental activities such as camping, littering and walking on designated pathways in order to minimise impacts on wildlife and vegetation in the nature forest reserves [1 mark].
- **Eco-tourism:** Visitors are required to apply for permit so that the local authorities can control the number of visitors to the forest reserve so as to avoid over-crowding [1 mark].

AO2

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(ii) With reference to Fig. 2.2, suggest why governments play an important role for ensuring sustainable tourism development. **[2]**

Award 1 mark for each reason suggested on why governments play an important role for ensuring sustainable tourism development, to a maximum of 2 marks.
Award a maximum of 1 additional mark for further development of each explanation, where applicable.

Possible responses include:

- Governments have the power and authority to develop and enforce regulations and guidelines that ensure tourism practices are sustainable [1 mark]. This includes environmental protection laws, building codes, and standards for waste management [1 additional mark].
- Governments can invest in infrastructure that supports sustainable tourism, such as public transportation, waste management systems, renewable energy sources, and water treatment facilities [1 mark]. For instance, by developing public transport infrastructure, governments can make tourist sites more accessible while ensuring that these developments do not damage the environment [1 additional mark].
- Governments can provide budget/funding for sustainable tourism projects, including grants, loans, and subsidies for businesses that adopt sustainable practices [1 mark]. Offering tax breaks or incentives to businesses that implement sustainable practices encourages the private sector to invest in sustainability [1 additional mark].
- Governments can run campaigns to educate both tourists and residents about the importance of sustainable tourism and how they can contribute to it [1 mark].
- Governments can make training mandatory for tourism industry workers on sustainable practices to that they have the knowledge and skills to implement and maintain these practices [1 mark].

AO1

(d) Study Fig. 2.3, which shows age groups of eco-tourists based on a tourism study in Trabzon City, Turkey in 2010.

Different age groups of eco-tourists based on a tourism study in Trabzon City, Turkey, 2010.

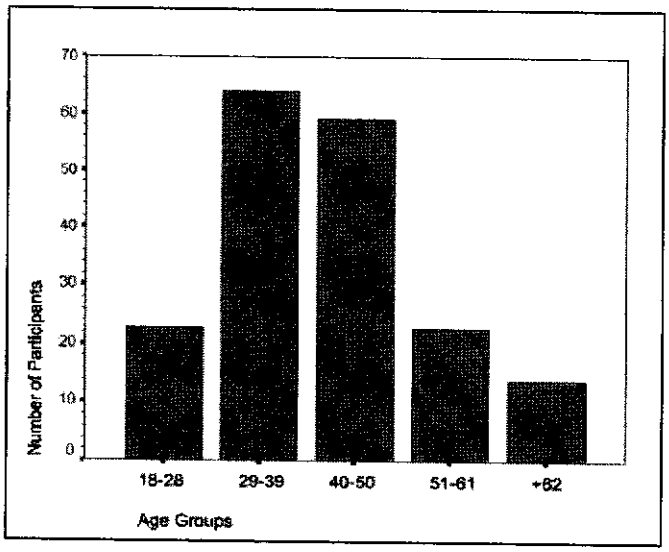


Fig. 2.3

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(i) Suggest reasons for the patterns observed in Fig. 2.3. **[2]**

Award 1 mark for each reason suggested for the patterns observed to a maximum of 2 marks.

Possible responses include:

- The age groups of 18-28 and 29-39 accounts for more than two thirds of the participants who are more aware of environmental issues such as climate change, biodiversity loss, and pollution. This awareness often translates into a desire to make environmentally responsible choices, including in their travel habit [1 mark]. Exposure to environmental education through recent / current school curriculums and media has heightened young people's understanding of the impact of their actions on environment [1 additional mark].
- Eco-tourism offers immersive experiences in natural settings, allowing young travelers to connect deeply with nature and escape the urban environment which is a big part of their life – working etc [1 mark].
- Younger travelers are attracted to destinations and activities that can be showcased to their followers via social media platforms such as Instagram or TikTok, promoting a sense of adventure and environmental stewardship [1 mark]. Social media influencers who promote sustainable travel practices and eco-tourism destinations can significantly impact the travel choices of their young followers [1 additional mark].

AO1

(ii) Explain how different tourists' personality determine travel preferences. **[2]**

Award 1 mark for each explanation on how different tourists' personality determine travel preferences, to a maximum of 2 marks.
Award a maximum of 1 additional mark for further development of each explanation, where applicable.

Possible responses include:

- Personality characteristics of travellers can determine travel preferences and patterns such as the choice of destinations and tourist activities. This is because the features of a tourist destination may appeal more to specific personality traits [1 mark]. For instance, more adventurous tourists will prefer destinations that offer excitement and novelty, and enjoy activities like extreme sports, hiking, diving, and exploring off-the-beaten-path destinations [1 additional mark].

AO1

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Section B

3

Cluster 3: Climate

(a) Study Fig. 3.1 (Insert), which shows cumulative changes in glacier thickness and cumulative contributions to sea level rise from glacier, from 1960 to 2000.

(i) Using Fig. 3.1, describe the relationship between the changes in glacier thickness and glacier contributions to sea level rise from 1960 to 2000. [3]

Award 1 mark for each description on the relationship between the changes in global glacier thickness and glacier contributions to sea level rise, to a maximum of 3 marks.

Possible responses include:

- There is an inverse relationship between changes in global glacier thickness and glacier contributions to sea level rise. When glacier thickness decreases gradually, there is also a gradual increase in sea level, from 1960 to 2000 [1 mark].
- The decrease in glacier thickness from 0 metres in 1960 to about - 4.2 metres in 1990 contributes to an increase of sea level from 1mm to about 8mm, from 1960 to 1990 [1 mark].
- Glacier thickness continued to a drop about 3.2 metres from 1990 to 2000 which results in an increase of sea level of about 6mm [1 mark]

Award 1m for any relevant supporting data.

AO2

(ii) Suggest reasons why impacts of sea level rise are uneven across different regions. [4]

Award 1 mark for each reason suggested on why impacts of sea level rise are uneven across different regions, to a maximum of 4 marks.
Award a maximum of 1 additional mark for further development of each explanation, where applicable.

Possible responses include:

- Low-lying coastal areas and islands are more susceptible to flooding and erosion compared to regions with higher elevation coastlines [1 mark].
- Highly urbanized coastal areas with dense populations and extensive infrastructure are more vulnerable to the impacts of sea level rise due to the potential for significant economic and human losses [1 mark]. For instance, the extent of damage of a large flood for a developing and heavily populated agricultural area in Bangladesh would be quite different from the damage of a flood in a more developed country such as Singapore. The economic losses might be large in Singapore due to greater infrastructural damage as there are more built-up areas such as business areas, houses and roads [1 additional mark].
- Wealthier regions can invest in adaptation and mitigation strategies, such as building barriers, improving drainage systems, and relocating vulnerable communities [1 mark]. However, poorer regions may lack the resources to implement these measures, increasing their vulnerability and risks to sea level rise [1 additional mark].
- Certain ecosystems, such as mangroves, coral reefs, and wetlands, provide natural protection against sea level rise by buffering wave action and trapping sediments. Regions lacking these natural defenses are more exposed to the effects of sea level rise [1 mark].

AO1

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(b) **Study Fig. 3.2 (Insert), which shows the impact of climate-related disasters in Less Developed Countries (LDCs) and the rest of the world from 1970 to 2019.**

Using Fig. 3.2, compare the impact of climate-related disasters in Less Developed Countries (LDCs) and the rest of the world from 1970 to 2019. [2]

Award 1 mark for each comparison on the impact of climate-related disasters in Less Developed Countries (LDCs) and the rest of the world, to a maximum of 2 marks.

Possible responses include:

- LDCs experienced lesser climate-related disasters of only about 18% as compared to the rest of the world at 82% [1 mark].
- However, LDCs experienced higher deaths from climate-related disasters of about 69% as compared to the rest of the world at 30% [1 mark].

AO2

(c) **'The key mitigation strategy in building resilience to climate change is through international agreements and cooperation.'**

To what extent do you agree with this statement? Explain your answer. [9]

Level 1 (1-3 marks)

Arguments are unclear with limited description of may be listed. No examples provided or examples are generic, demonstrating a basic understanding of the issue of phenomenon. Evaluation is simple, missing or unclear.

Level 2 (4-6 marks)

Develops arguments that support one side of the discussion well using one or two points with some elaboration. Example(s) used demonstrate a good understanding of the issue or phenomenon. Evaluation is well supported by arguments.

Level 3 (7-9 marks)

Develops argument that supports both sides of the discussion clearly using a range of points with good elaboration. Examples used demonstrate a comprehensive understanding of the issue or phenomenon. Evaluation is derived from a well-reasoned consideration of the arguments.

Sample response:

Intro

Climate change poses a significant threat to the global environment, economies, and societies. Mitigating its impacts and building resilience requires comprehensive and multifaceted strategies. Among these strategies, international agreements and cooperation stand out as a crucial component. However, it is essential to examine how this approach interacts with other mitigation strategies, such as low-carbon technologies, clean energy sources, changes in consumption patterns, and managing land use and forest regeneration. This essay argues that while international agreements and cooperation are vital, they must be supported by a range of complementary strategies to effectively mitigate climate change and build resilience.

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International Agreements and Cooperation

International agreements and cooperation are foundational in addressing climate change because they facilitate a coordinated global response. The Paris Agreement, adopted in 2015, is a prime example. It brings together 196 nations to commit to limiting global temperature rise to well below 2 degrees Celsius above pre-industrial levels, with efforts to limit the increase to 1.5 degrees. Such agreements enable the sharing of knowledge, technologies, and resources, ensuring that even the least developed nations can contribute to and benefit from climate action. Cooperation fosters accountability and transparency, essential for monitoring progress and ensuring compliance. It also allows for financial mechanisms like the Green Climate Fund, which aims to raise $100 billion per year by 2020 to support climate adaptation and mitigation projects in developing countries. However, the effectiveness of international agreements depends on the political will and commitment of individual countries, which can be influenced by domestic economic and political pressures.

Low-Carbon Technologies

Low-carbon technologies are critical in reducing greenhouse gas emissions. Innovations in energy efficiency, carbon capture and storage, and the development of electric vehicles can significantly cut emissions from key sectors like energy, transportation, and industry. For example, Norway has become a global leader in electric vehicle adoption, with electric cars making up over 54% of new car sales in 2020, supported by strong government incentives and infrastructure development. The deployment of these technologies requires substantial investment and policy support, which international agreements can facilitate through funding and collaboration. However, the diffusion of low-carbon technologies is often uneven, with developed countries having more access and capacity to implement them. International cooperation can help bridge this gap by providing technical assistance and capacity-building to developing nations. Thus, while low-carbon technologies are essential, their global impact is maximized through international support and cooperation.

Clean Energy Sources

Transitioning to clean energy sources, such as wind, solar, and hydropower, is another vital mitigation strategy. These sources produce little to no greenhouse gas emissions during operation, making them essential for reducing the carbon footprint of the energy sector. International agreements can play a crucial role in promoting clean energy by setting targets, providing financial incentives, and facilitating technology transfer. Countries like Germany and Denmark have demonstrated the potential of clean energy through ambitious national policies supported by international frameworks. For instance, Denmark's investment in wind energy has made it a global leader, with wind power accounting for 47% of its electricity consumption in 2019. However, the transition to clean energy requires overcoming significant economic, infrastructural, and political challenges. International cooperation can help address these challenges by sharing best practices, fostering investment, and supporting research and development.

Changes in Consumption Patterns

Mitigating climate change also requires changes in consumption patterns, particularly in high-income countries where per capita emissions are highest. Reducing meat consumption, minimizing waste, and embracing sustainable lifestyles can collectively lower greenhouse gas emissions. For example, initiatives like Meatless Monday, which originated in the United States and has spread to over 40 countries, encourage people to reduce their meat consumption, thereby lowering their carbon footprint. In the UK, if everyone participated in Meatless Monday, it could save the equivalent of 13 million tons of CO2 annually. International agreements can promote these changes by setting

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guidelines, raising awareness, and encouraging sustainable practices through education and incentives. Yet, changing consumption patterns is a complex and gradual process influenced by cultural, economic, and social factors. International cooperation can help by providing a platform for exchanging ideas and strategies that have been successful in different contexts. Thus, while changes in consumption patterns are necessary, they are more effectively achieved through collaborative efforts.

Managing Land Use and Forest Regeneration

Land use management and forest regeneration are crucial for sequestering carbon and maintaining biodiversity. Deforestation and land degradation contribute significantly to greenhouse gas emissions, while healthy forests and soils act as carbon sinks. International agreements, such as the United Nations' REDD+ program, aim to reduce emissions from deforestation and forest degradation by providing financial incentives to developing countries. Since its inception, REDD+ has mobilized over $10 billion in funding and supported numerous projects worldwide. Effective land use management requires local knowledge and participation, which can be supported by international frameworks that provide funding, technical expertise, and policy guidance. Forest regeneration projects, such as the Great Green Wall in Africa, demonstrate the potential of international cooperation in restoring degraded landscapes and improving livelihoods. This initiative aims to restore 100 million hectares of degraded land by 2030, sequestering up to 250 million tons of CO2 and creating 10 million jobs in rural areas.

Conclusion

In conclusion, while international agreements and cooperation are indeed a key mitigation strategy in building resilience to climate change, their success relies on the integration and support of other strategies. Low-carbon technologies, clean energy sources, changes in consumption patterns, and managing land use and forest regeneration all play essential roles. International cooperation enhances the effectiveness of these strategies by providing a platform for collaboration, funding, and knowledge exchange. Therefore, the statement is valid to a significant extent, but it is the synergy between international cooperation and other mitigation strategies that ultimately builds resilience to climate change.

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