

METHODIST GIRLS' SCHOOL

Founded in 1887



PRELIMINARY EXAMINATION 2025 Secondary 4

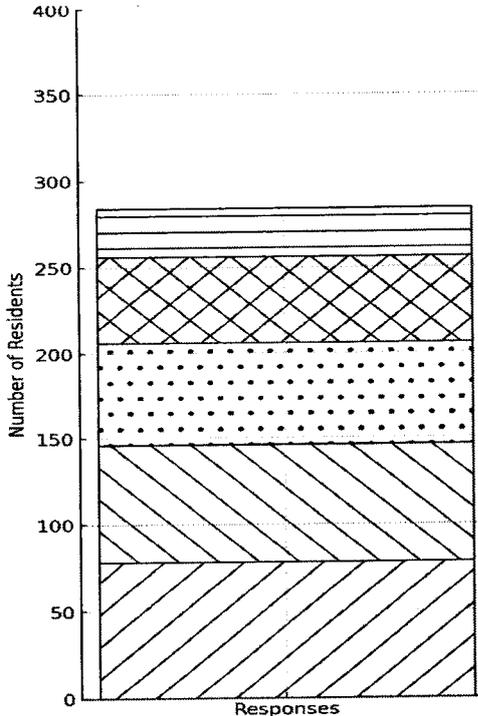
GEOGRAPHY Paper 1

Monday
18 August 2025

2279/01
1 hour 45 minutes

MARK SCHEME

Answer all questions.

1	<p>Cluster 1: Geography in Everyday Life</p>
	<p>Bath is a UNESCO World Heritage Site located in southwest England, known for its Roman Baths, Georgian architecture, and historic city centre. The Roman Baths are a well-preserved ancient bathing complex in, built by the Romans over natural hot springs for bathing, worship, and socialising. The city of Bath attracts millions of tourists each year.</p> <p>Study Fig. 1.1 (Insert) which shows a map of the city of Bath.</p> <p>A group of students in UK were interested in the effects of tourism on the city of Bath. Their hypothesis was: <i>The advantages of tourism are greater than the disadvantages.</i></p>
(a)	<p>The students used a questionnaire to investigate the hypothesis which is shown in Fig. 1.2 (Insert).</p> <p>Study Fig. 1.3 (Insert), which shows the responses to Question 1 'What do you think are the main advantages of tourism in Bath?' and Question 2 'What do you think are the main disadvantages of tourism in Bath?'.</p>
	<p>(i) Using Fig 1.3, complete the bar graph below. [4]</p> <p><i>Award 1m for each reason correctly plotted.</i></p>  <p>AO2</p>
	<p>(ii) Using Figs. 1.3 and 1.4, what conclusions can you make about the hypothesis '<i>The advantages of tourism are greater than the disadvantages?</i>' [4]</p> <p><i>Award 1 mark for each conclusion, to a maximum of 4 marks.</i> <i>Award a maximum of 1 additional mark for further development of each conclusion where applicable.</i></p>

		<ul style="list-style-type: none"> • The hypothesis valid/accepted/supported (compulsory 1m) • The most frequently mentioned advantages include job creation (125 responses) and income opportunities for businesses (115), which are higher than any of the disadvantages • In contrast, the most common disadvantage (litter) was mentioned by only 78 residents, which is significantly lower. • Other negative impacts like noise (68), traffic (60), and high prices (50) were mentioned less frequently than the top advantages. • Additionally, cultural and economic benefits such as building preservation and market opportunities also highlight positive long-term impacts. <p>AO2</p>
	(iii)	<p>Study Fig. 1.5 (Insert) which shows the three locations – A, B and C – where the students administered the questionnaire.</p> <p>With reference to Figs. 1.1 and 1.5, evaluate the appropriateness of the three locations chosen to administer the questionnaire. [6]</p> <p><i>Award 1 mark for each evaluation of the suitability of locations, to a maximum of 6 marks.</i></p> <p><i>Award 1 maximum of 1 additional mark for further development of each evaluation, where applicable.</i></p> <p>Possible responses include:</p> <p><u>Appropriate:</u></p> <ul style="list-style-type: none"> • A - The Circus is close to Royal Crescent, a major tourist attraction, hence there is a high volume of tourist traffic. It is a scenic area where tourists often stop to take photos or rest, making it convenient for students to approach them for surveys. • B - Bath Abbey/Roman Baths is the historic and commercial heart of the city, with constant pedestrian traffic throughout the day. As it is the most popular tourist site in Bath, students are likely to encounter a high number of tourists and local workers in the tourism industry. • These 2 locations are accessible and safe. Being in pedestrian-friendly zones with open spaces, The Circus and the area near the Abbey allow students to conduct surveys without obstructing traffic or putting themselves at risk. • Because of their central location, students can approach a diverse pool of respondents —tourists, shopkeepers, street performers, and residents—which strengthens the validity of the results and helps avoid sampling bias. <p><u>Not appropriate:</u></p> <ul style="list-style-type: none"> • C- Pulteney Road is away from the central tourist circuit and is likely to have more vehicles than pedestrian traffic. It may be difficult to find respondents willing to stop and answer a questionnaire here, reducing the effectiveness and safety of data collection. • Pulteney Road may present safety issues as it lacks adequate pedestrian space and resting areas, making it challenging for students to approach people without causing disruptions or putting themselves in potentially dangerous situations. <p>AO3</p>

	(iv)	<p>Outline one sampling method that may be used to select 130 respondents for the questionnaire.[2]</p> <p>Award 1 mark for method and 1 mark for description</p> <ul style="list-style-type: none"> ● Simple Random: Every member of the population is assigned a number. A random number generator is then used to generate random numbers. ● Stratified Random: Identify different sub-group such as age and gender. random number generator is then used to generate random numbers for each sub-group. ● Convenience: Selecting samples that are convenient and accessible to the researcher. ● Quota: Identify different categories such as age and gender. Samples are selected based on convenience and easy access. <p>AO2</p>
	(b)	<p>Traffic congestion was identified as a disadvantage of tourism. The students then investigated how the amount of traffic was greater in summer than in winter because of tourism.</p> <p>The students did a traffic survey at two locations where there was high foot and vehicular traffic. Data in summer was by the students, and used data collected by another group of geography students the previous winter for comparison.</p>
	(i)	<p>Identify the type of data used by these students but not collected by them. [1]</p> <ul style="list-style-type: none"> ● Secondary data <p>AO2</p>
	(ii)	<p>Suggest how the students could make sure that the traffic survey data which they collected was reliable. [3]</p> <p><i>Award 1 mark for each suggestion, to a maximum of 3 marks.</i> <i>Award a maximum of 1 additional mark for further development of each suggestion where applicable.</i></p> <ul style="list-style-type: none"> ● Collect data over a longer period of time, including different days of the week and both peak and off-peak hours, to improve accuracy and account for daily variation ● Use digital tools like traffic counting apps or video recordings to reduce human error and improve the reliability of their observations. ● Conduct more surveys in additional locations around Bath to ensure the results are representative of the whole city centre, not just one or two areas. <p>AO2</p>

[Total: 20]

2	Cluster 2: Tourism	
	(a)	Study Fig. 2.1 (Insert), which shows reasons for the growth in tourism.
	(i)	<p>With reference to Fig. 2.1, explain why global tourism has grown rapidly in recent decades. [4]</p> <p><i>Award 1 mark for each explanation, to a maximum of 4 marks. Award a maximum of 1 additional mark for further development of each explanation where applicable.</i></p> <p><u>Motivation to Travel</u></p> <ul style="list-style-type: none"> • The image shows a relaxed beach environment - suggests people travel for relaxation and self-fulfillment. • Tourists exploring a landmark site, indicating the desire for unique experiences and cultural exploration. <p><u>Ability to Travel</u></p> <ul style="list-style-type: none"> • Presence of an airport scene implies that air travel is accessible, probably due to lower transport and accommodation costs. • International connectivity shows that higher disposable incomes and more leisure time enable people to take flights abroad. <p><u>Mobility in Travel</u></p> <ul style="list-style-type: none"> • Airplane and airport infrastructure visible - indicates improvements in public and private transport, allowing mass tourism and travel to previously less reachable destinations. <p>AO1</p>
	(ii)	<p>Suggest how trends in tourism have influenced the supply of new types of tourist destinations and experiences. [3]</p> <p><i>Award 1 mark for each suggestion, to a maximum of 3 marks. Award a maximum of 1 additional mark for further development of each suggestion where applicable.</i></p> <p>The growth in tourism has encouraged small specialist operators to offer niche experiences (e.g., adventure, eco-tours) alongside mass market packages, increasing the variety of destinations and experiences available [1 mark]. Small specialist operators offer services, activities and experiences that can be purchased independently. Tourists can customise their trips that suit different group sizes, instead of sticking to a pre-planned programme [1 additional mark]. Tourism marketing has shifted to online platforms (e.g., social media, travel blogs), making it easier to promote unique destinations and reach global audiences more effectively than traditional print or broadcast media [1 mark].</p> <p>AO1</p>

	<p>(b) Study Fig. 2.2 (Insert), which shows a night market in Taipei, a popular location for tourists. Night markets are an important part of Taipei's identity and culture, known for their local street food and vibrant atmosphere.</p> <p>With reference to Fig. 2.2, describe how tourism affects the surrounding environment or local population. [4]</p> <p><i>Award 1 mark for each description, to a maximum of 4 marks. Award a maximum of 1 additional mark for further development of each description where applicable.</i></p> <ul style="list-style-type: none"> ● Tourism increases crowds and congestion in the night market, making the area busy and noisy. ● Local businesses benefit from higher sales and income as tourists buy food and souvenirs. ● Cultural exchange occurs as tourists experience local foods and traditions, promoting cultural awareness. ● The area may face littering and waste management issues due to large numbers of visitors eating and discarding packaging. <p>AO1</p>
	<p>(c) Study Fig. 2.3 (Insert), which shows an approach to sustainable tourism development.</p> <p>With reference to Fig. 2.3, identify the type of sustainable tourism development shown and explain the benefits it brings to locals in a country. [4]</p> <p><i>Award 1 mark for each explanation, to a maximum of 4 marks. Award a maximum of 1 additional mark for further development of each explanation where applicable.</i></p> <ul style="list-style-type: none"> ● Community-based tourism. (compulsory 1 mark) ● It provides employment opportunities for local people (e.g., performing, tour guides), improving their income. ● It helps preserve cultural traditions by showcasing local dance, crafts, and customs to visitors. ● The income generated can be reinvested in community services like schools or infrastructure, benefitting the wider population. <p>AO1</p>

[Total: 15]

3	Cluster 3: Climate	
	(a)	Study Fig. 3.1 (Insert), which shows coastal cities vulnerable to climate-related hazards.
	(i)	<p>Describe the global distribution of coastal cities vulnerable to climate-related hazards. [3]</p> <p><i>Award 1 mark for each description, to a maximum of 3 marks.</i></p> <ul style="list-style-type: none"> • High-risk cities are concentrated in South and Southeast Asia (e.g., Bangladesh and Philippines). • Moderate-risk cities are found along coasts of Africa and South America (e.g., Mozambique or Brazil). • Low-risk cities occur in developed regions such as Europe and North America (e.g., Venice, Italy and Miami, USA). <p>AO2</p>
	(ii)	<p>Suggest why coastal cities are likely to be more exposed to climate-related hazards and describe the hazards associated with this exposure. [3]</p> <p><i>Award 1 mark for each suggestion, to a maximum of 3 marks.</i></p> <p><i>Award a maximum of 1 additional mark for further development of each suggestion where applicable.</i></p> <ul style="list-style-type: none"> • They are located directly on or near coastlines / close proximity to the sea, making them exposed to climate-related hazards. • Coastal cities are built close to sea level, making them directly exposed to rising sea levels from climate change. • Their location along coasts makes them vulnerable to storm surges generated by tropical cyclones and strong winds. • Low-lying areas are prone to flooding when heavy rainfall combines with high tides and surges. <p>AO2</p>
	(b)	<p>Study Fig 3.2 (Insert), which shows the estimated potential reduction in carbon dioxide emissions by 2050.</p> <p>‘Prioritising renewable energy is the most impactful strategy for mitigating climate change.’</p> <p>With reference to Fig. 3.2, to what extent do you consider this statement to be true? Explain your answer. [9]</p> <p><u>Relevant Content</u></p> <p>Renewable energy</p> <ul style="list-style-type: none"> • Figure 3.2 shows renewable energy has one of the largest potentials (~15 GtCO₂) for reducing emissions by 2050. • It directly replaces fossil fuels in electricity generation and transport (e.g., electric vehicles powered by solar/wind). • Other renewable energy: geothermal, hydroelectric, nuclear

- Limitations: renewable energy technologies is expensive. It depends heavily on government policies and financial support. Some of these energy sources may lead to negative environmental impact

Carbon Capture, Utilisation and Storage (CCUS)

- Process of separating and capturing carbon dioxide from power plants and other industrial sources of emissions.
- Direct dissolution of captured carbon dioxide into the ocean or injecting captured carbon dioxide into deep water.
- Use of carbon dioxide as a raw material to produce useful materials, e.g. cement can be made from stored carbon dioxide
- Limitations: expensive and requires public funding. Stored carbon may leak out over time.

International agreements

- Foster global cooperation (e.g., Paris Agreement 2015 aiming to limit warming below 2°C).
- Encourage nations to commit to net-zero targets and share technology/funding.
- Limitations: Non-binding nature and varied commitment levels between countries. Lack of enforcement mechanisms; success depends on national implementation.

Behavioural change

- Shifting to plant-based diets, buy local produce, reduce food waste
- Reduce plastic waste
- Reduce fashion waste
- Limitations: It takes a long time to change people's mindsets and consumption patterns. Commitment of companies to change the resources used in the production of goods.

A possible approach:

The answer makes clear a judgement on whether prioritising renewable energy will mitigate climate change more effectively than other strategies such as carbon capture and storage, international agreements, or behaviour change. For example, renewable energy can cut around 15 GtCO₂ by 2050 (Figure 3.2), offering significant reductions by replacing fossil fuel use in power generation. However, behaviour change measures show even higher potential (~20 GtCO₂) and may deliver quicker results at lower cost. International agreements, such as the Paris Agreement (2015), provide a global framework but rely on countries implementing pledges effectively; their impact is often limited by enforcement issues. CCUS can complement renewables by addressing industrial emissions, but high costs and technological barriers limit its scale. A balanced evaluation may conclude that while renewable energy is critical, a combination of strategies, supported by international cooperation and societal behaviour change, is likely to be the most effective path to mitigate climate change. The evaluation could weigh the arguments discussed, arriving at a reasoned conclusion.

Sample conclusion:

While multiple strategies contribute to mitigating climate change, prioritising **renewable energy** is likely the most impactful in the long term. Figure 3.2 shows it provides one of the highest potential reductions (~15 GtCO₂ by 2050), and unlike carbon capture or behaviour change, it permanently replaces fossil fuels in electricity and transport systems. Renewable energy also complements international agreements, enabling countries to meet emission targets more sustainably. Although behaviour change offers quick reductions, its effectiveness relies on public compliance, whereas renewable energy creates structural, lasting decarbonisation. Therefore, investing in and expanding renewable energy should be the central pathway for mitigation, supported by other measures for maximum impact.

(DL Competency: Critical Thinking: Evaluation information and arguments)

Level	Marks	Generic Level Descriptors for 9-Mark AO3 Question
4 (Accelerating)	7 - 9	Develops arguments 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.
3 (Developing)	4 - 6	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.
2 (Emerging)	1 - 3	Arguments are unclear with limited description or may be listed. No examples provided or examples are generic, demonstrating a basic understanding of the issue or phenomenon. Evaluation is simple, missing or unclear.
1 (Limited Evidence)	0	No creditworthy response

AO3

[Total: 15]

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PRELIMINARY EXAMINATION 2025

Secondary 4

GEOGRAPHY

Paper 2

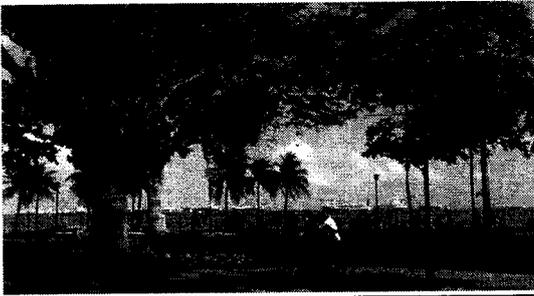
Friday
29 August 2025

2279/02
1 hour 45 minutes

ANSWER SCHEME

Section A

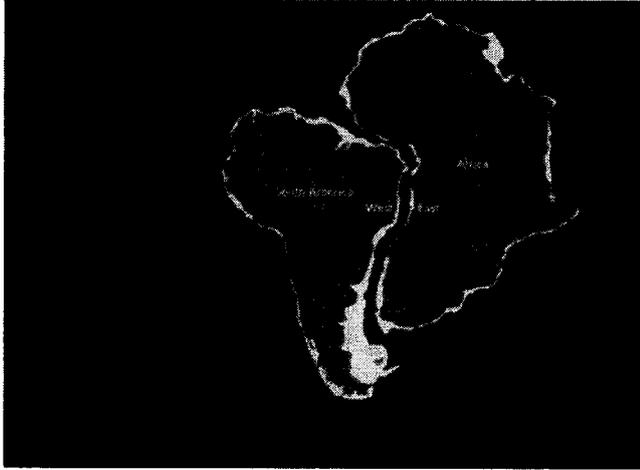
Answer all questions from this section.

1	Cluster 1: Geography in Everyday Life
	<p>(a) Study Figs. 1.1 and 1.2 (Insert), which show recreational areas in Singapore.</p> <div style="display: flex; justify-content: space-around;">   </div>
	<p>(i) Using Figs. 1.1 and 1.2, suggest two types of ecosystem services that recreational areas provide. [4]</p> <ul style="list-style-type: none"> ● Supporting services: Dried leaves that fall from those tall trees in the photo contribute to organic matter that decompose and break down into soil, which is essential for the health of the terrestrial ecosystems, providing a habitat for billions of organisms and contributing to biodiversity. ● Supporting services: The trees in the photo also photosynthesize by taking in carbon dioxide and giving out oxygen, reducing global warming as carbon dioxide is a greenhouse gas which traps heat. An excessive amount of carbon dioxide in the atmosphere will lead to heat being trapped in the atmosphere, causing global warming. ● Cultural services: Both areas in the photo provide recreational activities like hiking/trekking/walking that improves people's physical and mental health. ● Regulating services: The trees in the photo provide shade for the users of the park, making the microclimate more suitable for daily activities by lowering temperatures in the immediate area. <p>AO2</p> <p>Award 4m for any 4 points. At 3 least types of ecosystem services should be covered for full marks. Max 3 marks if only 2 or less types covered. Accept other possible answers.</p>
	<p>(ii) With reference to Fig. 1.2, explain how a sense place can develop through the use of shared spaces. [3]</p> <ul style="list-style-type: none"> ● A sense of place is developed when people associate importance, meanings and memories with specific locations in their neighbourhoods through interactions with their natural and built environments, ● And when individuals repeatedly encounter people and objects along familiar paths or roads during regular travel ● Sense of place also develops when individuals experience significant or memorable events at local landmarks and gathering places <p>AO1</p>

	<p>Accept other possible answers.</p> <p>(b) Study Fig. 1.3 (Insert), which shows a comparison of fire hazards in Singapore between the first half of 2022 and the first half of 2023.</p> <table border="1"> <caption>Fire calls</caption> <thead> <tr> <th>Category</th> <th>2022</th> <th>2023</th> <th>% Change</th> </tr> </thead> <tbody> <tr> <td>Total fire calls</td> <td>918</td> <td>967</td> <td>5.3%</td> </tr> <tr> <td>Fires at residential premises (private and public)</td> <td>480</td> <td>493</td> <td>2.7%</td> </tr> <tr> <td>Fires at non-residential premises (commercial/industrial/social communal premises)</td> <td>238</td> <td>193</td> <td>18.9%</td> </tr> <tr> <td>Other fires (discarded items/vegetation/vehicles)</td> <td>200</td> <td>281</td> <td>40.5%</td> </tr> </tbody> </table> <table border="1"> <caption>Fires involving personal mobility devices (PMDs) and power-assisted bicycles (PABs)</caption> <thead> <tr> <th>Category</th> <th>2022</th> <th>2023</th> <th>% Change</th> </tr> </thead> <tbody> <tr> <td>PMDs and PABs</td> <td>22</td> <td>27</td> <td>22.7%</td> </tr> </tbody> </table> <p>Using Fig. 1.3, compare number and types of fire hazards in Singapore between the same periods of 2022 and 2023. [4]</p>	Category	2022	2023	% Change	Total fire calls	918	967	5.3%	Fires at residential premises (private and public)	480	493	2.7%	Fires at non-residential premises (commercial/industrial/social communal premises)	238	193	18.9%	Other fires (discarded items/vegetation/vehicles)	200	281	40.5%	Category	2022	2023	% Change	PMDs and PABs	22	27	22.7%
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	<ul style="list-style-type: none"> • Total fire calls increased slightly from 918 in 2022 to 967 in 2023, a 5% rise. • Most of this increase was from other fires (e.g., discarded items, vegetation, vehicles) rose significantly from 200 to 281, a 40.5% increase. This number might include the increase in fires involving PMDs. • Between 2022 and 2023, fires at residential premises rose slightly from 480 to 493, a 2.7% increase. • The only decrease was for fires at non-residential premises, which dropped significantly from 238 to 193, significant decrease. <p>AO2</p> <p>Accept other possible answers</p>																												
	<p>(c) Study Fig. 1.4 (Insert), which shows how Singapore responded to an oil spill in June 2024.</p>																												

Section B

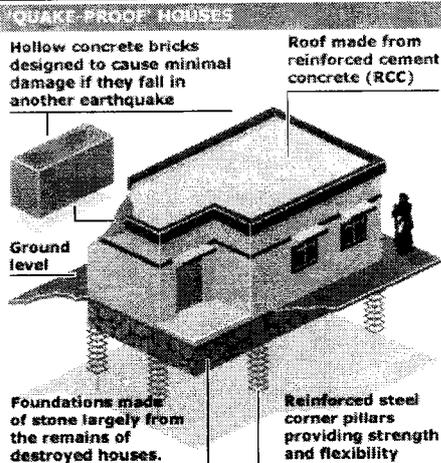
Answer **all** questions from this section.

2	Cluster 4: Tectonics
	<p>(a) Study Fig 2.1 (Insert), which shows a complementary coast, supporting evidence for the plate tectonic theory.</p> 
	<p>(i) With reference to Fig. 2.1, explain how complementary coasts support the plate tectonic theory. [3]</p>
	<ul style="list-style-type: none"> ● Matching coastlines – The east coast of South America and the west coast of Africa appear to fit together like puzzle pieces, suggesting they were once joined. ● Supports continental drift – The fit of the coastlines supports Plate tectonic theory that continents were once part of a supercontinent (Pangaea) that broke apart. ● Evidence of plate movement – The separation of these once-connected landmasses implies that tectonic plates have moved over time. (1 mark) <p>AO2</p> <p>Accept other possible answers.</p>
	<p>(ii) Elaborate on one other evidence that supports the plate tectonic theory. [3]</p>
	<ul style="list-style-type: none"> ● Fossil Evidence Similar fossils (e.g. Mesosaurus) found in both South America and Africa. ● These animals could not have crossed the vast ocean, suggesting the continents were once connected. ● Supports the idea of continental drift and that landmasses have since moved apart due to plate movement. <ul style="list-style-type: none"> ● Magnetic Stripes on the Ocean Floor. Stripes of rock on either side of mid-ocean ridges show symmetrical patterns of magnetic orientation. ● These patterns record periodic reversals of Earth's magnetic field. ● Proves seafloor spreading, a key process in plate tectonics.

- Earthquake and Volcano Distribution. Most earthquakes and volcanoes occur along plate boundaries.
- These are caused by movement and interaction of tectonic plates (e.g. subduction, divergence).
- Supports the theory that plates are in constant motion and interact dynamically.

AO1. Any of the above sets.

(b) Study Fig. 2.2 (Insert), which shows the design of earthquake proof houses in India.



'Hazard-resistant building design is the most effective in reducing the vulnerability of earthquake prone communities.'

With reference to Fig 2.2, to what extent do you agree with this statement? Explain your answer.

Relevant content

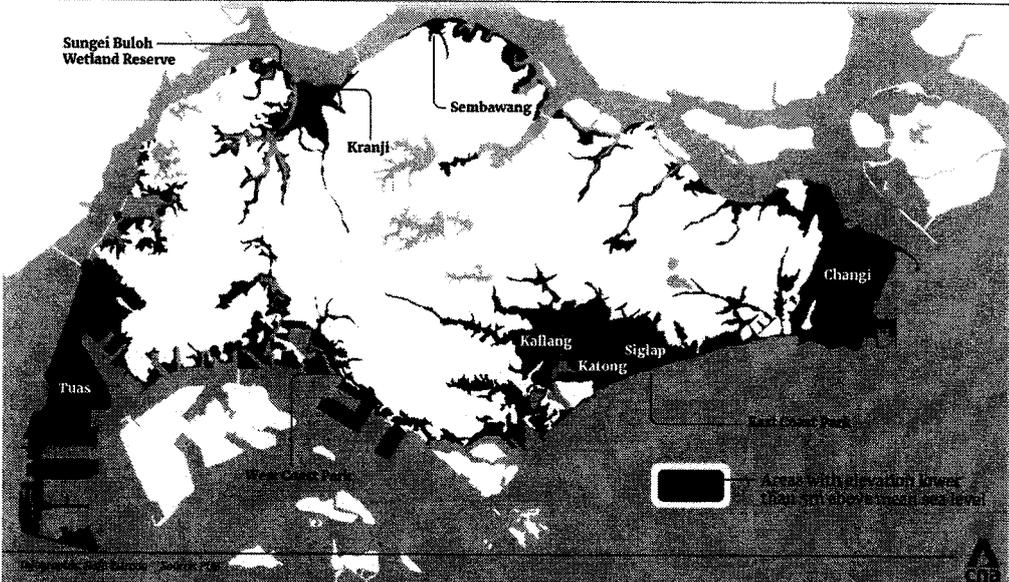
Strategies in building community resilience

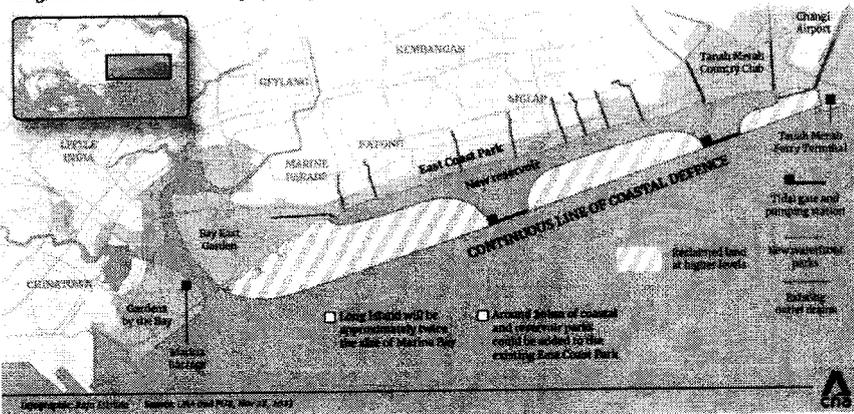
- reducing exposure including land use planning, reducing vulnerability including hazard-resistant building designs, and monitoring and warning systems
- increasing preparedness for response and recovery

Level	Marks	Generic Level Descriptors for 9-Mark AO3 Question
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2 (Emerging)	1 - 3	Arguments are unclear with limited description or may be listed. No examples provided or examples are generic, demonstrating a basic understanding of the issue or phenomenon. Evaluation is simple, missing or unclear.
1	0	No creditworthy response

(Limited Evidence)	
Possible approach	
<p>Answer should have a direct evaluation of the use of hazard resistant building design can reduce community vulnerability. Some use of the Fig and other examples will aid illustrate the answer, and since the Fig alludes to its use in housing and not commercial in India, some mention of affordability and scalability will be of great help to the answer. The answer should also include at least a comparison against another strategy such as monitoring and warning systems, and this comparison should lead to an analysis of how strategies used in tandem with each other usually has the best outcomes.</p>	

[Total: 15]

3	Cluster 5: Singapore
(a)	<p>Study Fig. 3.1 (Insert), which shows a map of low-lying areas in Singapore.</p> <p>Low-lying areas at risk if sea levels rise in Singapore</p> 
(i)	<p>Using Fig. 3.1, describe the distribution of low-lying areas in Singapore. [3]</p> <ul style="list-style-type: none"> • Concentration along coastlines Most low-lying areas are found along the coastal regions of Singapore, especially the southern and northeastern coasts. • Areas immediately next to rivers are also low lying such as in Kranji area and South of the Sungei Buloh Wetland reserve. • Eastern and western clusters. Significant low-lying zones are observed in the eastern region (e.g., Changi, Siglap, Katong, East Coast Park) and the western region (e.g., Tuas, West Coast Park). • Central and northern presence (1 mark). There are also patches of low-lying areas inland, particularly in the central (e.g., Kallang) and northern parts (e.g., Kranji, Sembawang, Sungei Buloh). <p>AO2. Any other answer.</p>

(ii)	<p>With reference to Fig. 3.1, explain the challenges Singapore faces due to climate change. [4]</p>
	<ul style="list-style-type: none"> • Rising sea levels leading to increased flood risk. As a low-lying island nation as in Fig 3.1, Singapore is highly vulnerable to coastal and inland flooding due to rising sea levels. • More frequent and intense weather events. Climate change can result in heavier rainfall, leading to flash floods, and longer dry spells, stressing water resources. • Impact on public health and well-being. Higher temperatures can increase the risk of heat-related illnesses and worsen the spread of vector-borne diseases like dengue. • Economic and infrastructural strain. There will be greater costs in upgrading infrastructure, building coastal defences, and addressing disruptions to businesses and livelihoods. <p>Accept other possible answers. AO2</p>
(b)	<p>Study Fig. 3.2 (Insert), which shows the Long Island Project that aims to protect Singapore's East coast for rising sea levels.</p> <p>What Long Island at East Coast Park could look like</p> <p>Long Island is a land reclamation project to protect Singapore's East Coast from flooding and sea level rise</p> 
	<p>With reference to Fig. 3.2, explain how Singapore adapts to challenges posed by climate change. [4]</p>
	<ul style="list-style-type: none"> • Coastal protection infrastructure. Singapore is building sea walls, tidal gates, and polders to defend low-lying areas against rising sea levels such as the tidal gates in the Fig that protect large segment of the low lying east coast area from flooding. • Urban planning and flood management. This includes upgrading drainage infrastructure, implementing flood mitigation measures, such as on-site detention: detention tanks to temporarily store rainwater before releasing it into the drainage system, reducing the initial burden on the drainage network. • Water security measures. Singapore is expanding NEWater and desalination plants to ensure a stable water supply during droughts or unpredictable rainfall caused by climate change. • Diversifying food sources and enhancing local production. To adapt to climate-related disruptions in global food supply, Singapore is investing in local

	<p>farms, high-tech agriculture, and alternative proteins as part of its "30 by 30" goal—producing 30% of its nutritional needs locally by 2030.</p> <p>Accept other possible answers. AO1</p>																																																
	<p>(c) Study Fig. 3.3 (Insert), which shows comparing tourist arrivals for Singapore and Thailand between 2014 and 2024.</p> <div style="text-align: center;"> <p>International Tourist Arrivals to Singapore 2014 to 2024</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Arrivals (Millions)</th> </tr> </thead> <tbody> <tr><td>2014</td><td>13.74</td></tr> <tr><td>2015</td><td>15.25</td></tr> <tr><td>2016</td><td>16.42</td></tr> <tr><td>2017</td><td>17.40</td></tr> <tr><td>2018</td><td>18.71</td></tr> <tr><td>2019</td><td>19.12</td></tr> <tr><td>2020</td><td>2.74</td></tr> <tr><td>2021</td><td>0.15</td></tr> <tr><td>2022</td><td>6.94</td></tr> <tr><td>2023</td><td>11.04</td></tr> <tr><td>2024</td><td>16.52</td></tr> </tbody> </table> <p>International Tourist Arrivals to Thailand 2014 to 2024</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Arrivals (Millions)</th> </tr> </thead> <tbody> <tr><td>2014</td><td>28.01</td></tr> <tr><td>2015</td><td>30.24</td></tr> <tr><td>2016</td><td>31.29</td></tr> <tr><td>2017</td><td>33.04</td></tr> <tr><td>2018</td><td>35.12</td></tr> <tr><td>2019</td><td>39.92</td></tr> <tr><td>2020</td><td>6.70</td></tr> <tr><td>2021</td><td>0.12</td></tr> <tr><td>2022</td><td>9.04</td></tr> <tr><td>2023</td><td>28.04</td></tr> <tr><td>2024</td><td>32.40</td></tr> </tbody> </table> </div>	Year	Arrivals (Millions)	2014	13.74	2015	15.25	2016	16.42	2017	17.40	2018	18.71	2019	19.12	2020	2.74	2021	0.15	2022	6.94	2023	11.04	2024	16.52	Year	Arrivals (Millions)	2014	28.01	2015	30.24	2016	31.29	2017	33.04	2018	35.12	2019	39.92	2020	6.70	2021	0.12	2022	9.04	2023	28.04	2024	32.40
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	<p>Using Fig. 3.3, compare tourist arrival numbers for Singapore and Thailand between 2014 and 2024. [3]</p>																																																
	<ul style="list-style-type: none"> • Overall higher tourist arrivals in Thailand than Singapore. Throughout 2014–2024, Thailand consistently received more international tourists than Singapore. For example, in 2019, Thailand had 39.92 million arrivals while Singapore had 19.12 million. • Both countries experienced a sharp decline in 2020 due to COVID-19. Tourist arrivals fell dramatically in 2020, with Singapore dropping to 2.74 million and Thailand to 6.70 million. • Tourism recovery in both countries, but Thailand rebounded faster. By 2024, Thailand is projected to reach 32.40 million visitors, closer to pre-COVID levels, while Singapore is projected to reach 16.52 million, still below its 2019 peak. <p>AO2 Award 4 marks for any of the 5 points above. Accept other possible answers.</p>																																																
	<p>(d) Study Fig 3.4, which is an article about the current challenges affecting tourism development in Singapore.</p>																																																
	<p style="text-align: center;">Tourist numbers slowing down in Singapore.</p> <p>Some travel agencies were hoping for numbers to return to pre-COVID-19 levels much earlier, especially for the Chinese, who formed the biggest proportion of tourists.</p> <p>Yet, the higher costs in Singapore compared to the region have led many tourists to spend less time in the country or look elsewhere, said observers. Oriental Travel and Tours managing director Stanley Foo said “I think business generally has been good,</p>																																																

	<p>definitely much better than last year. I think we saw an increase of about 20 to 30 per cent compared to last year.”</p> <p>However, the agency has seen a switch in the types of tourists coming to Singapore. Before the pandemic, the largest groups of tourists were from China, India and Indonesia, but these tourists are now choosing to travel to neighbouring countries instead, noted Mr Foo.</p> <p>“What happened is that hotel prices have increased, the costs of their tours have increased, and these tourists coming from China and India are actually changing their destination from Singapore to our neighbouring countries. Most recently, we have also seen our neighbouring countries coming up with new strategies to attract them to their countries,” he said.</p> <p>He believes Singapore is now less attractive to these travellers because of the accommodation prices, adding that Chinese tourists “can spend three nights in our neighbouring country instead of one night in Singapore”.</p> <p>For some tourists, however, checking Singapore off their travel list is worth the price. One Indian tourist told CNA: “Cost, of course, is a bit (on the) higher side, but ultimately, you need to go to four to five countries to see all those things which you can see in a single country in Singapore, so we thought of spending more.”</p> <p>One American tourist interviewed agreed that the country has a rich and diverse culture, but “the only thing that puts me off from coming to Singapore is the costs associated with it” and that it is a “very expensive place” to visit.</p> <p>Local attractions such as Gardens by the Bay told CNA that ticket sales are still about 80 per cent of pre-COVID-19 levels. However, the attraction is hoping that having new exhibits will help draw more people. “We showcase plants in an immersive way. We are constantly exploring how we can bring in new experience to our business,” said Gardens by the Bay senior director of business development Ong Kian Ann. “We are looking to do this by experimenting with different mediums and technologies.”</p>
	<p>With reference to Fig 3.4, evaluate the challenges and opportunities affecting tourism development in Singapore. [6]</p>
	<p>Possible points for challenges:</p> <ul style="list-style-type: none"> ● High costs deter regional tourists Singapore is now perceived as too expensive compared to neighbouring countries, especially by tourists from China and India, who now prefer cheaper alternatives in the region. ● Competition from neighbours. Recent innovation by neighbouring countries have meant that their draw factor might now change travel decisions in favour of our neighbours. countries ● Changing tourist demographics. There has been a shift in the types of tourists visiting Singapore, as core markets like China and India are no longer the top contributors who are also more cost conscious. <p>Possible points for Opportunities:</p> <ul style="list-style-type: none"> ● Higher-value tourism potential: Tourists who still choose Singapore often value its efficiency, diversity, and compactness, with some willing to spend more for a richer experience, as one Indian tourist noted. ● Innovation in attractions: Attractions like Gardens by the Bay are adapting by introducing new exhibits and immersive experiences to attract and retain visitors. <p>1 mark for point made. 1 extra mark for well elaborated point. Both challenges and opportunities should be covered, otherwise capped at 3 max marks.</p>

		AO3
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