



**BEATTY SECONDARY SCHOOL
PRELIMINARY EXAMINATION 2025
SECONDARY FOUR EXPRESS
Mark Scheme**

CANDIDATE
NAME

CLASS

REGISTER
NUMBER

HUMANITIES

Paper 2

Geography

2260/02

25 August 2025

1 hour 45 minutes

Additional Materials: Insert

READ THESE INSTRUCTIONS FIRST

Write your name, class and register number on all the work you hand in.
Write in dark blue or black pen.

For Examiner's Use		
Section A	Q1	/ 14
	Q2	/ 18
Section B	Q4	/ 18
Total		/ 50

You may use an HB pencil for any diagrams 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 either Question 3 **or** Question 4.

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.

Section A

Answer Question 1 **and** Question 2

1 Cluster 1: Geography In Everyday Life

(a)	Fig. 1.1 (Insert) shows a map of a neighbourhood in Toa Payoh.	
	Map of a neighbourhood in Toa Payoh The map shows a neighbourhood in Toa Payoh, Singapore. A red line outlines a specific area. Inside and around this area are various landmarks: Toa Payoh North, Toa Payoh Spring, Toa Payoh Bloom, Toa Payoh North Flyover, Braddell Rd, Masjid Muhajirin, Singapore Islamic Hub, Madrasah Irsyad Zuhri, Beatty Sec. Sch, Toa Payoh Teck Sean Tong Tp, Mkt & Hawker Ctr, and several bus stops (indicated by red bus icons). The map also shows residential blocks with numbers like 203, 204, 202, 201, 199, 200, 240, 239, 238, 236, 237, 106, 105, 103, 104, 98, 98A, 95, 94, 93A, 92, 52A, 52, 39, 40, 216, 214, 213, 212, 211, 3A, 3, 2, 1, 39, 40. A scale bar at the bottom left indicates 0m, 50m, 100m. A north arrow is at the top left. The URL https://www.onemap.gov.sg/ is at the bottom.	
(i)	Using Fig. 1.1, identify a set of services that shows a spatial association.	[1]
	bus stop • Bus stops and school • Bus stops and flats • Bus stops and hawker centre • Carparks and flats (accept any other possible answers)	

			AO 1		
		(ii)	Using Fig. 1.1, explain how this neighbourhood achieved economic sustainability.		[3]
			- There are a number of block of flats in the neighbourhood surrounding the market. (1 mark) This means that the number of residential units and residents living in the area will be large enough around to support local businesses in the market thus achieving economic sustainability. (Additional 1 mark) - With large number of residential units surrounding the market, residents can just walk or cycle to the markets for their grocery and food. (1 mark) This helps to keep the transport costs low. In fact, there are as many as 27 blocks of flats that are less than 1km, about a 12-15 min walk from the market (1 additional mark). - There is also 1 primary school and 1 secondary school in the area. These schools are also within walking distance from many blocks of flats within the area (1 mark). These schools are within 1km of the flats in the neighbourhood. Students can choose to cycle or walk to school (about 15 min) which reduces the cost of travels for them this ensuring economic sustainability (1 additional mark).		
			AO 2		
		(b)	Describe how community resilience can be developed.		[4]
			Strengthening relationships and raising hazard awareness - Community resilience can be developed by <u>building strong relationships among residents</u> and raising awareness of potential hazards For example, in Singapore, the <i>People's Association (PA)</i> organises a wide range of activities, such as active ageing programmes, emergency preparedness workshops, and community sports that bring residents of different ages and backgrounds together (1 mark).. These activities help residents get to know one another and build trust, so they can depend on each other during emergencies. (1 additional mark). OR - By strengthening social ties and increasing hazard awareness, communities can respond more effectively to emergencies and recover more quickly after disasters (1 mark). Another example is during the COVID-19 pandemic, residents worked together to distribute masks and food to those in need. Such positive relationships create social support networks that make communities more adaptable and resourceful during crises. (1 additional mark) Developing self-organisation and resource readiness - Another way to build community resilience is to <u>empower residents to organise themselves and equip them with the resources and skills to resist, adapt, and recover from disasters</u> (1 mark). In Singapore, <i>Community First Responders (CFRs)</i> are trained volunteers who assist in search and rescue operations, relief work,		

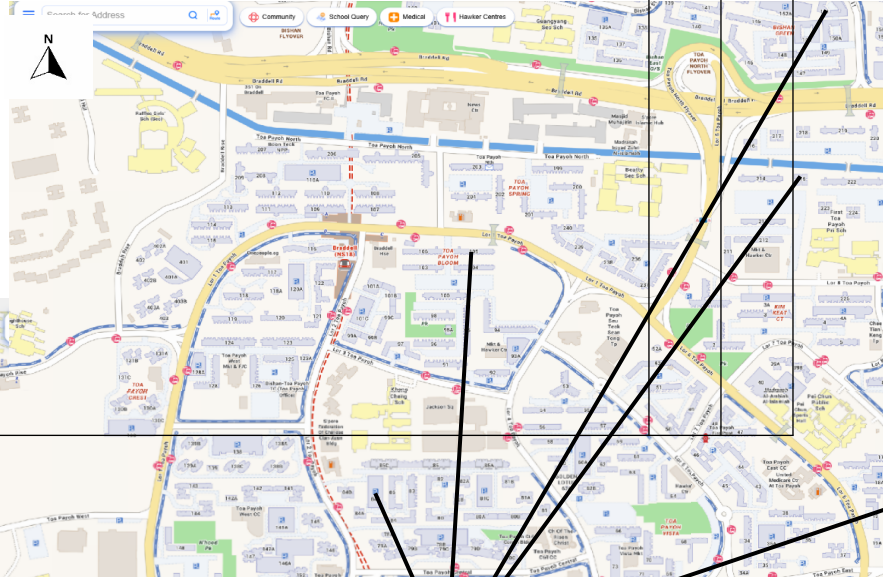
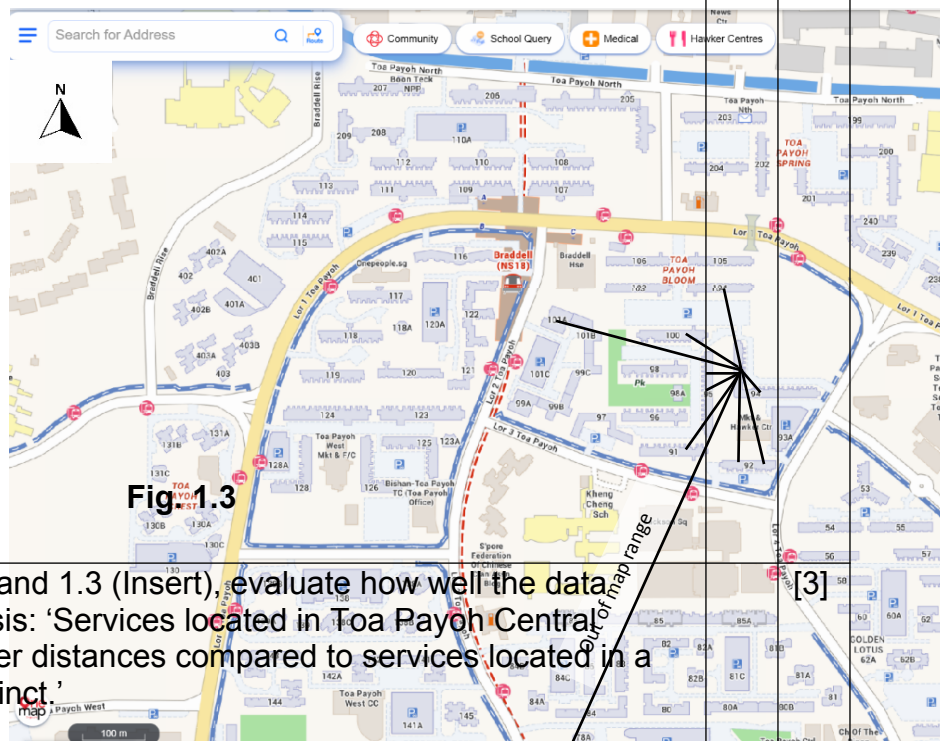
		public education on first aid, and basic firefighting. CFR (Fire) volunteers respond to small incidents such as rubbish chute and bin fires, helping the Singapore Civil Defence Force (SCDF) prioritise more serious emergencies (1 additional mark). • <u>Involving residents in inclusive planning processes</u> with community leaders, civil society groups, and the government ensures that they understand local risks and adaptation measures (1 mark). This also enables them to share valuable ground-level insights with planners. Additionally, Singapore's <i>Total Defence</i> framework reinforces that everyone, individually and collectively has a role in safeguarding the nation against threats, building both security and cohesion. (1 additional mark). Equipping residents with the skills, resources, and responsibility to act during emergencies strengthens the community's ability to manage crises effectively and recover faster (1 additional mark).		
(c)		A group of students wanted to test the hypothesis: 'Services located in Toa Payoh Central attract users from further distances compared to services located in a typical Toa Payoh precinct.' They split into two groups with one group visiting and interviewing customers in a bakery in Toa Payoh Bloom (a typical precinct) and one group visiting a bakery in Toa Payoh Central. Both groups interviewed a total of 10 customers each from 3pm to 4pm asking for the postal codes of the customers. Using this information, the students plotted each customer's residence on a map. The results were presented in flow line map, as shown in Figs. 1.2 (Insert) and 1.3 (Insert).  Customers' residence from a bakery in Toa Payoh Central 		

Fig. 1.2

100m

Customers' residence from a bakery in Toa Payoh Bloom precinct

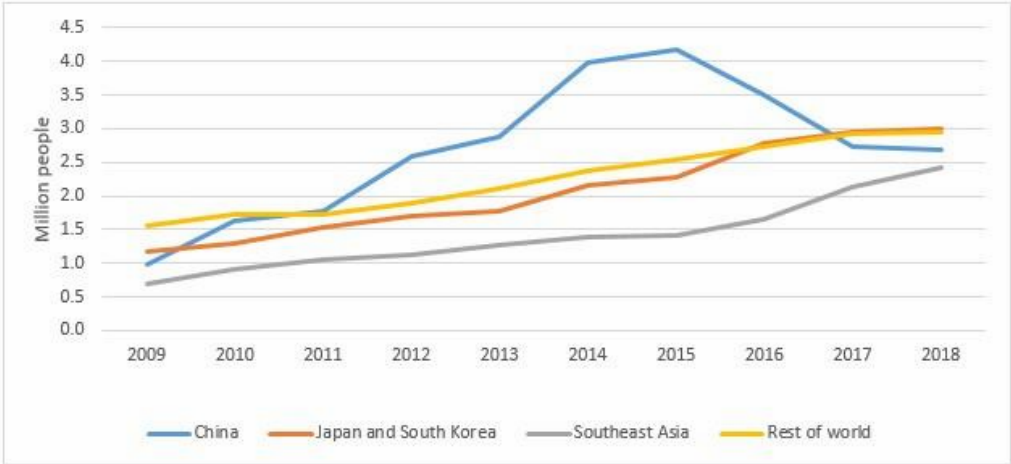


- (i) Using Figs 1.2 (Insert) and 1.3 (Insert), evaluate how well the data supports their hypothesis: 'Services located in Toa Payoh Central attract users from further distances compared to services located in a typical Toa Payoh precinct.'

- The data generally supports the hypothesis.
- Customers visiting the bakery at TPY central generally lived further away from home with most of them (6 out of 10) living more than 1km from the bakery while those who visited the bakery at a precinct, most (9 out of 10) lived lived nearer to the bakery less than 300m
- However, there are anomalies. There were 4 out of 10 customers who lived near - within 500m of the bakery at TPY central and for the bakery at a usual precinct, there was 1 visitor that lived far away – out of the map range at Boon Keng.

			AO 3		
		(ii)	Evaluate the reliability of the students' investigation.		[3]
			Award 1m for each evaluation of the reliability of the students' findings, to a maximum of 3 marks. Award a maximum of 1 additional mark for further development of each evaluation, where applicable. Reserve at least 1m for answers on 'reliable' and 'not reliable'. <u>Not reliable</u> • Sample size is small – Only 10 customers per location were interviewed. A larger sample would give more representative and reliable results. • Limited time frame – Data was collected only from 3pm to 4pm on one day. Customer patterns may differ at other times (e.g., morning, evening) or on weekends thus it may not be representative of all the customers visiting both location. • Single location per category – Only one bakery in Toa Payoh Spring and one bakery in Toa Payoh Central were surveyed. Results may be influenced by factors unique to those specific bakeries (e.g., reputation, pricing, promotions) rather than location type. • Self-reported data – Customers provided postal codes verbally, which relies on their accuracy and honesty. Mistakes or unwillingness to give true information could reduce reliability. <u>Reliable</u> • Same type of service compared – Both groups studied the same type of service (a bakery) in each location, helping to control for differences in service type. • Consistent data collection method – Both groups used the same method (interviewing customers and recording postal codes), which ensures comparability. • Equal sample size for both sites – Each group interviewed 10 customers, making the results easier to compare. • Same time frame for both sites – Data was collected between 3pm and 4pm for both locations, reducing the effect of time-of-day differences on customer profiles. AO3		

2 Cluster 2: Tourism

(a)	Study Fig. 2.1 (Insert), which shows the number of visitor arrivals in Taiwan from 2009 to 2018.	
	Number of visitor arrivals in Taiwan 2009-2018  Fig. 2.1 https://taiwaninsight.org/2019/09/16/why-chinas-solo-tourist-ban-is-not-a-big-deal-for-taiwan/	
	Using Fig. 2.1, compare visitor arrivals from China and Southeast Asia from 2009 to 2018.	[3]
	• There is both generally an increase in visitor arrivals from both China and Southeast Asia of from 2009 to 2018 (1 mark). • However, the rate of increase for the China visitors is faster than that of the visitors from Southeast Asia (1 mark). The visitors from China increased by 1.7 million (1 million people to about 2.7 million people) from 2009 to 2018 while the number visitors from SE Asia increased by about 1.9 million (from about 0.6m to about 2.5m) (1 additional mark) • Visitors from SE Asia continuous rose from about 0.6m to about 2.5m from 2009 to 2018 but there was a decrease in the number of visitors from China from 2015 to 2018 (1 mark) from 4.2m to 2.7m (1 additional mark for supporting data).	

		AO2		
		Max 2m if no supporting data Max 2m if incorrect data/unit		
(b)		Fig. 2.2 (Insert) shows the popular Shilin night market in Taipei, a city in Taiwan.		
		 Fig. 2.2 https://www.pelago.com/en-SG/activity/pg0nyvh67-private-tour-shilin-night-market-walking-tour-with-a-private-tour-guide-2-hr-taipei/		
		With reference to Fig. 2.2, explain the possible impacts of tourism in Taipei.	[3]	
		Award 1 mark for each description to a maximum of 3 marks. Award a maximum of 1 additional mark for further development of each suggestion, where applicable. Social impacts Tourism may cause overcrowding and cultural loss. Fig shows very dense crowds, making it difficult for people to move		

		comfortably. (1 mark) Overcrowding can inconvenience locals, while stalls may modify traditional products to appeal to tourists, reducing authenticity. Without proper management, tourism can erode the cultural character of the area. (1 additional mark) • Tourism promotes cultural exchange and heritage preservation. Tourists visiting Shilin Night Market can interact with locals and experience Taiwanese street food culture (1 mark). This encourages mutual understanding and gives locals a reason to preserve traditional snacks, crafts, and recipes. Tourism can strengthen cultural pride and identity. (1 additional mark) Economic impacts • Tourism boosts Taipei's economy by generating income and jobs. In the Fig, the Shilin Night Market is crowded with tourists purchasing food, clothes, and souvenirs from local stalls (1 mark). This spending increases revenue for stall owners and creates employment in retail, food services, and transport. It also has a multiplier effect, benefiting suppliers and other related businesses. This helps improve the standard of living for locals and supports economic growth. (1 additional mark) • Over-reliance on tourism can cause economic vulnerability. Many businesses in tourist areas like Shilin Night Market depend heavily on tourist spending. (1 mark) During crises such as pandemics or economic downturns, tourist numbers can drop sharply, causing business losses and unemployment. This makes the local economy unstable if it is too dependent on tourism. (1 additional mark) Environmental impacts • Tourism can lead to urban improvements. Tourist areas like Shilin Night Market often have bright lighting and organised stalls. (1 mark) Authorities may improve infrastructure and cleanliness to attract and accommodate visitors. This benefits both tourists and local residents. (1 additional mark) • Tourism causes waste and pollution. Large numbers of visitors produce food packaging waste, while cooking stalls and vehicles contribute to noise and air pollution. (1 mark) This can degrade the environment and reduce the quality of life for residents. If unmanaged, tourism can harm Taipei's urban environment. (1 additional mark) AO1		

	(c)		Fig 2.3 (Insert) shows a 4-day Greenland itinerary.		
			A 4-day Greenland itinernary		

		Day 1 – Narsarsuaq • Arrive in Narsarsuaq • Free time to explore a remote Greenland settlement. • Overnight in Narsarsuaq. Day 2 – Itilleq & Igaliku • Boat to Itilleq, hike 4 km “King’s Road” to Igaliku. • Experience rugged landscapes with fjord and mountain views. • Overnight in Igaliku   Day 4 – Qassiarsuk & Qooroq Isfjord • Boat to Qassiarsuk (Erik the Red’s 982 AD settlement). • Visit Brattahlid ruins and museum. • Afternoon boat to Narsarsuaq, then glacier and iceberg boat trip to Qooroq Isfjord. • Enjoy a drink with ice over 1,000 years old in remote Arctic waters. • Depart from Narsarsuaq.  Day 3 – Igaliku Hikes • Explore Norse ruins (Gardar). • Optional challenging hikes: ◦ 17 km to Lake 90 for glacier and iceberg views. ◦ 15 km Waterfall Tour. ◦ Climb Nuuluk peak (823 m). • Opportunities to find rock crystals and moonstone. • Overnight in Igaliku. 	
		Fig 2.3 https://blueiceexplorer.gl/	
		Using Fig. 2.3, explain the type of tourists this itinerary would attract.	[3]
		• This itinerary will attract venturer type tourists (1 mark) • It offers challenging activities in remote and less commercialised areas like the hike of 4 km on “King’s Road” to Igaliku, optional 15–17 km trails to Lake 90 and the Waterfall Tour, and climbing Nuuluk peak (823 m)./ It also features boat trips among icebergs to the Qooroq Isfjord glacier and visits to Norse ruins in Igaliku and Qassiarsuk. (1 mark). • These activities require physical endurance, take place in rugged Arctic environments far from urban centres, and combine natural exploration with unique cultural heritage. The remoteness, physical demands, and novelty appeal to tourists seeking adventure and	

		discovery rather than comfort or mass tourism experiences. Therefore, this itinerary clearly matches the characteristics of venture-type tourism, attracting travellers who want to challenge themselves physically while exploring culturally and geographically unique environments. AO2																				
	(d)	q		[9]																		
		Generic Level Descriptors for O-Level Geography and Humanities (Geography) Syllabuses <table border="1"> <thead> <tr> <th colspan="3">Generic Level Descriptors for 9-mark evaluative sub-part assessing AO3</th> </tr> <tr> <th>Level</th> <th>Marks</th> <th>Descriptors</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>7-9</td> <td>Develops arguments that support 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.</td> </tr> <tr> <td>2</td> <td>4-6</td> <td>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.</td> </tr> <tr> <td>1</td> <td>1-3</td> <td>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.</td> </tr> <tr> <td>0</td> <td>0</td> <td>No creditworthy response.</td> </tr> </tbody> </table> <u>Relevant content</u> Government as stakeholder (given factor – must have) Effectiveness of government - Establishing policies and creating plans - These can help ensure minimal damage to the environment while maximising benefits to locals - Eg: In Sentosa, Singapore, the authorities bring together different stakeholders to develop a series of plans to enable the island to become more sustainable. - Conserving Sentosa’s rich heritage - Protecting island’s biodiversity - Achieving carbon-neutral status by 2030 - Enforcing regulations - Governments play an important role in enforcing regulations which include regulations on the types of tourism activity and the number of tourists who can enter -> ensures policies and plans can be adhered - Eg: In Bhutan, tourists can only enter the country by organising their trip with licensed tour operators. They are	Generic Level Descriptors for 9-mark evaluative sub-part assessing AO3			Level	Marks	Descriptors	3	7-9	Develops arguments that support 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.	2	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.	1	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.	0	0	No creditworthy response.		
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		tasked with ensuring tourists adhere to laws and regulations to minimise the negative impacts, such as ensuring tourists only trek on designated trails. Limitations of government - Poor enforcement - Active enforcement is required for regulations to be effective -> but governments which lack resources or political influence, or face corruption, may not be able to ensure that regulations are adhered, hindering sustainable tourism development - The decision to prioritise economic development - Some governments put economic development first -> neglect environmental and social dimensions of sustainability, hindering sustainable tourism development - Eg: Every year, Mount Everest receives hundreds of tourists who wish to scale up the mountain, but poor enforcement of waste disposal leads to mountain becoming increasingly polluted. If tighter regulations were imposed by the Nepali authorities, the flow of tourists might be reduced, affecting revenue received. Other possible content (chosen factor) - International organisations as stakeholder - Businesses as stakeholder - Local Communities as stakeholder - Tourist as stakeholder Effectiveness of tourists - Developing a genuine interest in the tourist destination and seeking to enhance its environment, culture and economy - Tourists can choose tours or services which prioritise sustainable tourism or channel their revenue toward environmental conservation efforts - Tourists can also get involved in environmental conservation or community projects that benefit the destination. - Eg: At the sea turtle volunteering conservation programme in Costa Rica, tourists can help care for injured sea turtles and patrol the beaches for sea turtles and their nests to protect them from poaches. - Interacting responsibly - Tourists can read up with local practices and cultures, and to be mindful of their attire or behaviour when travelling as a way to show respect to local customs and cultures - Eg: In Bali, Indonesia, tourists should be aware that they have to dress modestly when visiting religious sites. They can also look after the environment such as not littering or vandalising the areas they visit. Limitations of tourists - Some sustainable tourism options may be out of their budget - Some sustainable options may be more expensive due to the		
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		costs required to ensure tourism experiences are sustainable, such as fees to conserve the environment which tourists may not be keen to pay for 2. Lack of clear information, confuse on sustainable options available a. There are varied understandings of 'sustainable tourism' and the ways of measuring it. Tourists may be confused about whether a tourist business they engage with, or their tourist practices are truly sustainable -> not sure which to choose to ensure sustainability <u>Possible approach</u> The government plays a central role in influencing sustainable tourism through establishing policies, creating plans, and enforcing regulations. Firstly, governments can put in place policies that ensure minimal environmental damage while maximising benefits to locals. For example, in Sentosa, Singapore, the authorities have developed plans to conserve the island's rich heritage, protect its biodiversity, and achieve carbon-neutral status by 2030. These initiatives involve bringing different stakeholders together, showing the government's effectiveness in steering sustainability. Secondly, governments can enforce regulations to control tourism activities. For instance, in Bhutan, tourists must book through licensed tour operators who ensure visitors comply with rules, such as trekking only on designated trails. This regulation helps minimise environmental damage and preserve cultural integrity. However, governments can be less effective when enforcement is weak. In Nepal, poor waste management enforcement on Mount Everest has led to significant pollution from climbers, despite the growing number of visitors. In addition, governments may sometimes prioritise economic gains over sustainability, leading to environmental degradation if regulations are relaxed to attract more tourists. Tourists also play an important role because their actions directly impact destinations. They can support sustainability through responsible behaviour and conscious choices. For example, tourists may choose services or tours that prioritise sustainability or contribute directly to conservation projects. In Costa Rica, tourists can participate in a sea turtle conservation programme, helping patrol beaches to protect nesting sites from poachers. This shows that when tourists are genuinely committed, they can enhance conservation efforts. Tourists can also demonstrate respect for local cultures and environments. In Bali, Indonesia, visitors are expected to dress modestly when entering temples, and by following these cultural norms, they help preserve local traditions. Similarly, tourists can reduce environmental impacts by not littering or vandalising natural sites. On the other hand, the influence of tourists has limits. Sustainable options may be more expensive due to conservation costs, and not all		
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		tourists are willing or able to pay these fees. In addition, many tourists lack clear information about what counts as truly “sustainable tourism,” which can create confusion and limit their ability to make responsible choices. <u>Possible weighing</u> Both governments and tourists influence sustainable tourism, but the government is ultimately the most important stakeholder. This is because the government has the authority, resources, and power to set regulations and enforce them at a large scale, ensuring that sustainability is systematically prioritised. While tourists can act responsibly, their impact is more individual and inconsistent, as it depends on personal awareness, resources, and motivation. Criteria for judgement: Since sustainable tourism requires long-term planning, regulation, and large-scale implementation, the government’s role is more crucial than that of tourists, making it the most important stakeholder. OR Both the government and tourists are important stakeholders in influencing sustainable tourism. The government has the authority to set policies, enforce regulations, and coordinate large-scale plans that ensure sustainability is prioritised across the industry. At the same time, tourists play a critical role through their choices and behaviours, as their demand for responsible travel can directly support conservation and cultural preservation. Sustainable tourism can only be achieved when governments provide strong frameworks and enforcement, and tourists actively practise responsible travel, making both groups equally essential partners in shaping a sustainable future for tourism. AO 3		
			3	3

Section B

Answer either Question 3 or Question 4

3 Cluster 3: Climate (Dummy Question)

	(a)		Study Figs. 3.1 (Insert) and 3.2 (Insert), which show the rift valley and its location in East Africa respectively.	1	2

4 Cluster 4: Tectonics

	(a)	Study Fig. 4.1 (Insert) which shows a part of the East African Rift Valley, Fig. 4.2 (Insert) which shows the rift valley's location and Fig. 4.3 (Insert) which shows Erta Ale, a volcano in the East African rift valley.	1	2
		Fig. 4.1 https://www.theguardian.com/travel/2013/apr/19/great-rift-valley-africa-adventure-holidays Fig. 4.2 https://www.geologyin.com/2014/07/east-africas-great-rift-valley-complex.html		

		(i)	Using Fig. 4.1, describe the features of a rift valley.		[3]
			Award 1 mark for each description to a maximum of 3 marks. Award a maximum of 1 additional mark for further development of each suggestion, where applicable. • Valleys are steep-sided • Long and narrow • Valley floor is flat • Low land/ depression between 2 highland • It has a river in the valley AO2		
		(ii)	Using Fig. 4.2, explain the formation of the rift valley formed in Africa.	[4]	
			Award 1 mark for each explanation point to a maximum of 3 marks. Award a maximum of 1 additional mark for further development of each suggestion, where applicable. • When 2 continental plate - the African Plate Nubian Plate in the west diverge from the African Somalian Plate (1 mark) in the east, fault lines (cracks) develop on either side of the rift (1 additional mark). • Rocks eventually fracture to form parallel faults • The central block of land between the faults collapses/ sinks down due to gravity forming a long, narrow, steep-sided valley known as a rift valley. Reserve 1m for contextualizing answers based on Fig 3.1 AO1		
		(iii)	Using Figs. 4.2 and 4.3, account for the characteristics of Erta Ale volcano.		[4]



Fig. 4.3

https://en.wikipedia.org/wiki/Erta_Ale#/media/File:Erta_Ale.jpg

Award 1 mark for each explanation point to a maximum of 3 marks.
Award a maximum of 1 additional mark for further development of each suggestion, where applicable
Reserve 1m for the identification of the type of volcano.

- Erta Ale is a **shield volcano**.
- This can be identified from Fig. 3.2 by observing that the volcano has a **broad and gently sloping sides**.
- The volcano appears to be formed by **runny, low-viscosity lava**, which spreads out over a large area before solidifying. (1 mark). This type of lava does not pile up to form steep slopes, which is why shield volcanoes like Erta Ale have **gentle slopes**. (1 additional mark)
- Additionally, there are **central craters** with visible **smoke and gas emissions**, indicating **frequent, non-explosive eruptions**. This is also typical of shield volcanoes, which are usually found at **divergent plate boundaries** — such as the **East African Rift Valley**, where Erta Ale is located.

AO 2

(b)

Fig. 4.4 (Insert) shows information on Nepal and the earthquake which happened in Kathmandu in 2015.

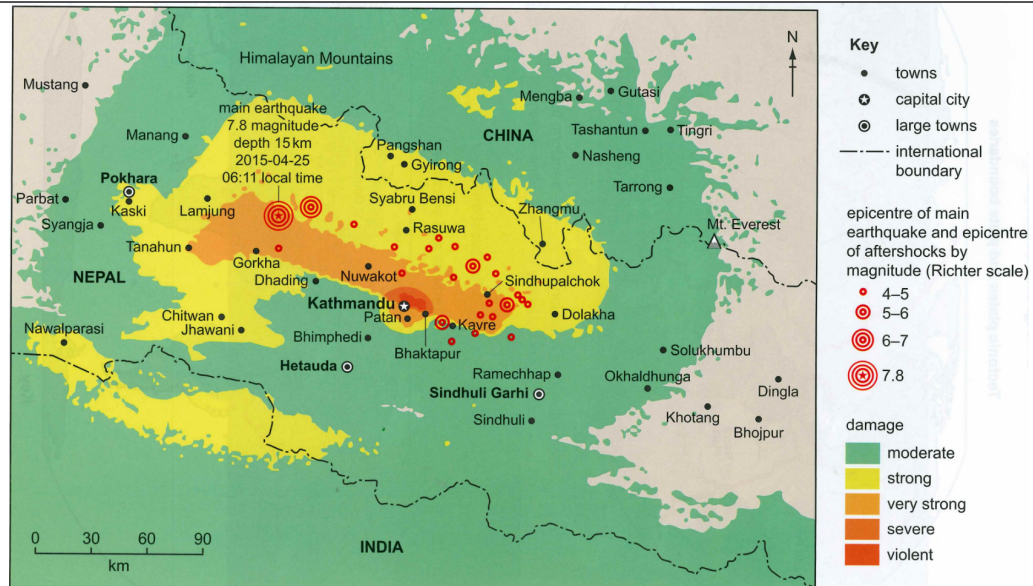


Fig. 4.4

file:///C:/Users/S7814639g/Downloads/04.27.15%20-%20USAID-DCHA%20Nepal%20Earthquake%20Map.pdf

Using Fig. 4.4, suggest how the earthquake resulted in serious damage and heavy loss of lives in Nepal and the Himalayan region.

[4]

Award 1 mark for each explanation point to a maximum of 3 marks. Award a maximum of 1 additional mark for further development of each suggestion, where applicable

High Magnitude and Shallow Depth

- The earthquake measured **7.8 on the Richter scale**, which is considered very powerful. The degree of shake would have been very strong thus collapsing the buildings/ infrastructure in the area.
- The **epicentre depth was only 15 km**, meaning seismic waves reached the surface quickly with minimal energy loss, causing stronger ground shaking resulting in the collapse of many buildings and infrastructure.

Proximity of Populated Areas to the Epicentre

- Several densely populated towns and the capital city, Kathmandu, lie close to the epicentre and in the “very strong” and “severe” damage zones shown in Fig. Cities such as Gorkha, Nuwakot, and Bhaktapur were directly in high-intensity shaking area (1 mark).
- Cities nearer the epicentre will experience the highest levels of ground motion. Since they are densely populated region, more people are directly exposed to the hazard. This increases casualties as more individuals are inside buildings that may fail, especially during the day when schools, workplaces, and markets are full. (1 additional mark)

		Multiple aftershocks - After the main earthquake, many buildings, roads, and bridges in Nepal and the Himalayan region had been cracked or partially damaged. The repeated shaking from aftershocks caused these weakened structures to collapse completely, trapping more people and increasing casualties (1 mark). - Some of the aftershocks has also a high magnitude of 6-7 and 5-6. There were at least 4 of that intensity. This would have further collapse more buildings causing more damages and casualties making recovery more costly. Challenging Physical Geography - The Himalayan terrain is mountainous and steep. In mountainous areas, the vibrations from aftershocks also triggered additional landslides and rockfalls, blocking rescue routes and isolating communities. (1 mark) making rescue and aid delivery difficult. This could delay emergency aid and meant injured survivors had to wait longer for help, further increasing the disaster's impact (1 additional mark). Landslides triggered by the earthquake blocked roads, isolating communities and delaying emergency responses which increase casualties. (1 additional mark) AO 2		
	(c)	Describe strategies that can be used to respond to earthquake disasters.	[3]	
		Search and rescue - Teams are deployed immediately after the earthquake to locate and rescue trapped survivors. This often involves firefighters, military personnel, civil defence forces, and trained volunteers using specialised equipment (e.g. thermal cameras, sniffer dogs, cutting tools). The aim is to save as many lives as possible within the "golden hours" (first 24–72 hours) before survival chances drop with minimal risk to rescuers (1 mark). Example: Eg: In the 2020 Aegean Sea, Turkey earthquake (Mw 7.0), more than 8,000 search, rescue and first aid teams were deployed and over 106 people were rescue (1 additional mark) Timely evacuation - Involves moving people away from areas at risk of hazards to safer locations to reduce loss of lives due to earthquakes, tsunamis, volcanic eruptions. Authorities use emergency announcements, sirens, and community leaders to guide residents to pre-designated evacuation centres (1 mark). - Earthquakes - To avoid getting trapped under collapsed buildings, people need to evacuate quickly. Buildings and structures already weakened from initial shaking may collapse due to aftershocks, trapping people who are still inside.		

		○ Basic services may be disrupted. People need to be evacuated to temporary shelters where food, water, medical supplies are provided. ● Tsunami waves ○ People need to evacuate to higher ground and away from the coast. Eg: During the 2011 Tohoku, Japan earthquake (Mw 9.0), nearly all 3000 students in Kamaishi city survived. The students were evacuated to higher grounds immediately after the earthquake struck, saving them from the tsunami caused by the earthquake. ● Volcanic eruptions ○ Eg: In 2010, after a warning of Mount Merapi's imminent eruption was issued by scientists, Indonesia's authorities organised massive evacuation efforts that comprised more than 700 evacuation centres. The quick and massive evacuation efforts were credited for saving more than 10,000 lives. Provision of basic social and psychosocial services to affected communities. ● Providing essential needs such as shelter, clean water, food, medical care, and sanitation to affected communities. Alongside this, offering psychosocial support helps survivors cope with trauma and loss. This helps to maintain health, prevents disease outbreaks, and supports mental well-being during recovery. (1 mark) ● Water ○ Ground shaking during earthquakes can rupture water pipes, cutting off water supply. Volcanic ash can also pollute water sources ○ Providing clean water can prevent dehydration and serves as an alternative for contaminated water ○ Eg: During the 2010 Haiti earthquake, water supply was disrupted in the capital city Port-au-Prince. The International Committee of the Red Cross provided water supply for 12000 people by trucking water into the city daily ● Food ○ There may be food shortages due to shop closure or damages to crops. Providing food can prevent hunger and starvation. ○ Eg: After the 2017 Mount Agung eruption in Indonesia. stakeholders such as the government and international NGOs provided food for more than 75000 evacuees. ● Healthcare ○ Healthcare services may be disrupted due to damage to hospitals, and many require healthcare support after disasters. Providing access to medicines, doctors and hospitals can help save the lives of injured.		
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			○ Eg: After the 2018 Fuego eruption in Guatemala, World Vision, an international charity, provided 30,000 boxes of medical supplies and 1000 hygiene kits to affected communities. ● Psychosocial services ○ Experiencing a disaster can result in great emotional distress due to severe injuries, the loss of family members and friends or the loss of livelihood. Providing psychological support helps survivors cope with psychological trauma, which can last a long time after the disaster. ○ Eg: After the 2018 Palu, Indonesia earthquake (Mw 7.5), volunteer groups focusing on mental health worked with children to help them deal with the trauma of losing their families and homes.		
			AO 1		
				7	11

END OF PAPER

Copyright acknowledgments

Question 1	Fig. 1.1	© https://www.onemap.gov.sg/
	Fig. 1.2	© https://www.onemap.gov.sg/
	Fig. 1.3	© https://www.onemap.gov.sg/
Question 2	Fig. 2.1	© https://taiwaninsight.org/2019/09/16/why-chinas-solo-tourist-ban-is-not-a-big-deal-for-taiwan/
	Fig. 2.2	© https://www.pelago.com/en-SG/activity/pg0nyvh67-private-tour-shilin-night-market-walking-tour-with-a-private-tour-guide-2-hr-taipei/
	Fig. 2.3	© https://blueiceexplorer.gl
Question 3	Fig. 3.1	2024 Ang Mo Kio Secondary School Geography Preliminary Examination Paper 1
	Fig. 3.2	2024 Ang Mo Kio Secondary School Geography Preliminary Examination Paper 1
	Fig. 3.3	2024 CHIJ (Toa Payoh) Secondary School Humanities (Geography) Preliminary Examination
Question 4	Fig. 4.1	© https://www.theguardian.com/travel/2013/apr/19/great-rift-valley-africa-adventure-holidays
	Fig. 4.2	© https://www.geologyin.com/2014/07/east-africas-great-rift-valley-complex.html
	Fig. 4.3	© https://en.wikipedia.org/wiki/Erta_Ale#/media/File:Erta_Ale.jpg
	Fig. 4.4	© file:///C:/Users/S7814639g/Downloads/04.27.15%20-%20USAID-DCHA%20Nepal%20Earthquake%20Map.pdf

Table of Specifications

Question 1: Geog in Everyday Life	Question parts	C3R	AO1	AO2	AO3	Total
	(a)(i)	Low	1			14
	(a)(ii)	Moderate		3		
	(b)	Low	4			

<i>No more than 9 sub-parts</i>	(c)(i)	High			3	
	(c)(ii)	Moderate			3	
	Qn Total	M-H	5	3	6	
Question 2: Tourism <i>No more than 9 sub-parts</i>	(a)	Moderate		3		18
	(b)	Moderate	3			
	(c)	Moderate		3		
	(b)	Moderate			9	
	Qn Total	M	3	6	9	
Question 1: Geog in Everyday Life <i>No more than 9 sub-parts</i>	Question parts	C3R	AO1	AO2	AO3	Total
	(a)(i)	Moderate		3		18
	(a)(ii)	Low	4			
	(a)(iii)	High		4		
	(b)	High		4		
	(c)	Low	3			
	Qn Total	M	7	11		
	Grand Total					