SINGAPORE CHINESE GIRLS' SCHOOL
PRELIMINARY EXAMINATION 2025
SECONDARY FOUR
O-LEVEL PROGRAMME
PAPER 2 (ANSWER KEY)

Answer **all** questions.

1 Cluster 1: Geography in Everyday Life

(a) A survey was conducted in different countries regarding people's views on the importance of environmental protection as compared to economic growth and job creation. Study Fig. 1.1 (Insert) which shows the results of the survey.

Using Fig. 1.1, describe the trend of the survey results. [3]
Award 1 mark for each description, to a maximum of 3 marks.

- For all countries, majority of citizens / more than 50% agree that environmental protection is more important than economic growth and job creation.
- Sweden has the highest percentage of citizens agreeing with environmental protection with 87.9%.
- While Japan has the lowest percentage of citizens agreeing with 50.7%.

(b) Study Fig. 1.2 (Insert), which shows a mural in Penang, Malaysia.

With reference to Fig. 1.2, explain how the mural can enhance the sense of place for locals in Penang. [4]
Award 1 mark for each explanation of how the mural can enhance the sense of place for locals in Penang, to a maximum of 4 marks.

- The mural is a landmark which is highly visible and easy for people to remember.
- It may be culturally significant to the people of Penang as it shows a man eating, which may represent the strong food culture in Penang.
- Many people may take photos there and create memories .
- The people may walk past the mural daily and the repeated encounters helps them recall the features and character of the place.

(c) Explain how social sustainability can be promoted in urban neighbourhoods. [4]
Award 1 mark for each explanation of how social sustainability can be promoted in urban neighbourhoods, to a maximum of 4 marks.

- Neighbourhoods can be sustained socially by ensuring residents feel included and have a sense of shared identity.
- This can be fostered by having shared community spaces to promote regular social interactions.
- If the population in the urban neighbourhood is kept small, it can facilitate regular interactions amongst the residents
    - Residents may come together to discuss issues affecting the neighbourhood and find solutions to various challenges.
    - This builds resilience and positive relationships between residents as this helps to maintain a culture of open communication, mutual respect and understanding, thus reducing misunderstandings and conflicts.
- A majority of the problems faced by local residents are day-to-day, mundane issues which can mostly be resolved locally with an adequate neighbourhood structure.

(d) Study Fig. 1.3 (Insert), which shows students learning how to recycle in school.

With reference to Fig. 1.3, explain how environmental stewardship can build sustainable urban neighbourhoods. [4]

Award 1 mark for each explanation of how environmental stewardship can build sustainable urban neighbourhoods, to a maximum of 4 marks.
Award a maximum of 2 marks if there is no reference to Fig. 1.3.

- There can be a partnership between different stakeholders to come together to ensure an efficient and sustainable waste recycling process.
- Different stakeholders may have different perspectives, resources and expertise to enhance the environmental stewardship efforts.
- As seen in the figure, public agencies can enhance awareness and education by educating students in schools on the right ways to recycle.
- While private stakeholders can provide recycling facilities such as recycling bins/logistics to collect recyclables for processing.
- Volunteerism can also be promoted among neighbourhood residents to share knowledge with others about the importance of healthy ecosystems.
- This helps residents become more aware of what they can and should do to responsibly use and protect the natural environment.

2 Cluster 4: Tectonics

(a) Study Fig. 2.1, which shows the formation of a tsunami.

Annotate Fig. 2.1 to explain how a tsunami is formed [3]

The formation of a tsunami

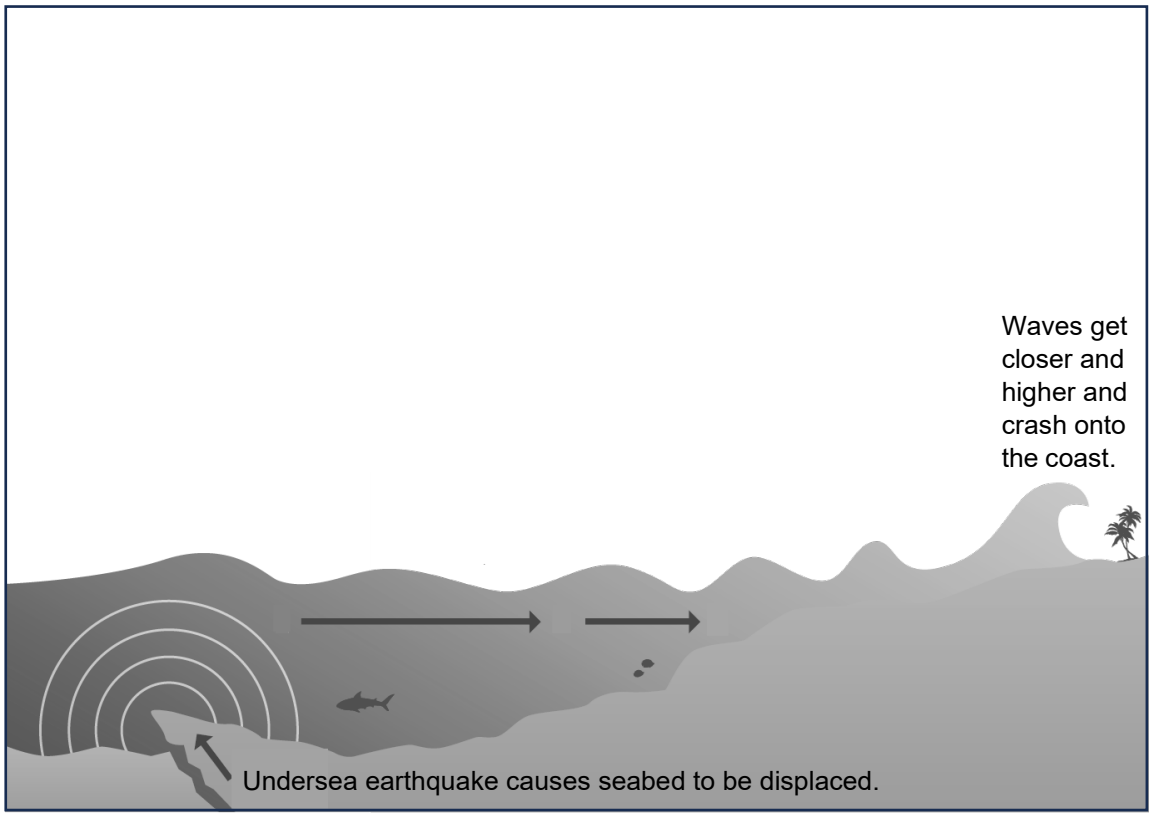

Fig. 2.1

Source: https://www.calstate.edu/csu-system/news/Pages/it-comes-in-waves.aspx

Award 1m for the description of each stage.

- A large volume of water is lifted, forming waves of great wavelength and low wave height of less than 1m.
- The waves travel towards land at high speed of around 800 km/h.
- On approaching the coast, greater friction with the shallower seabed slows the waves down.

(b) Study Fig. 2.2 which shows volcanic areas along the Pacific Ring of Fire.

Volcanic areas along Pacific Ring of Fire

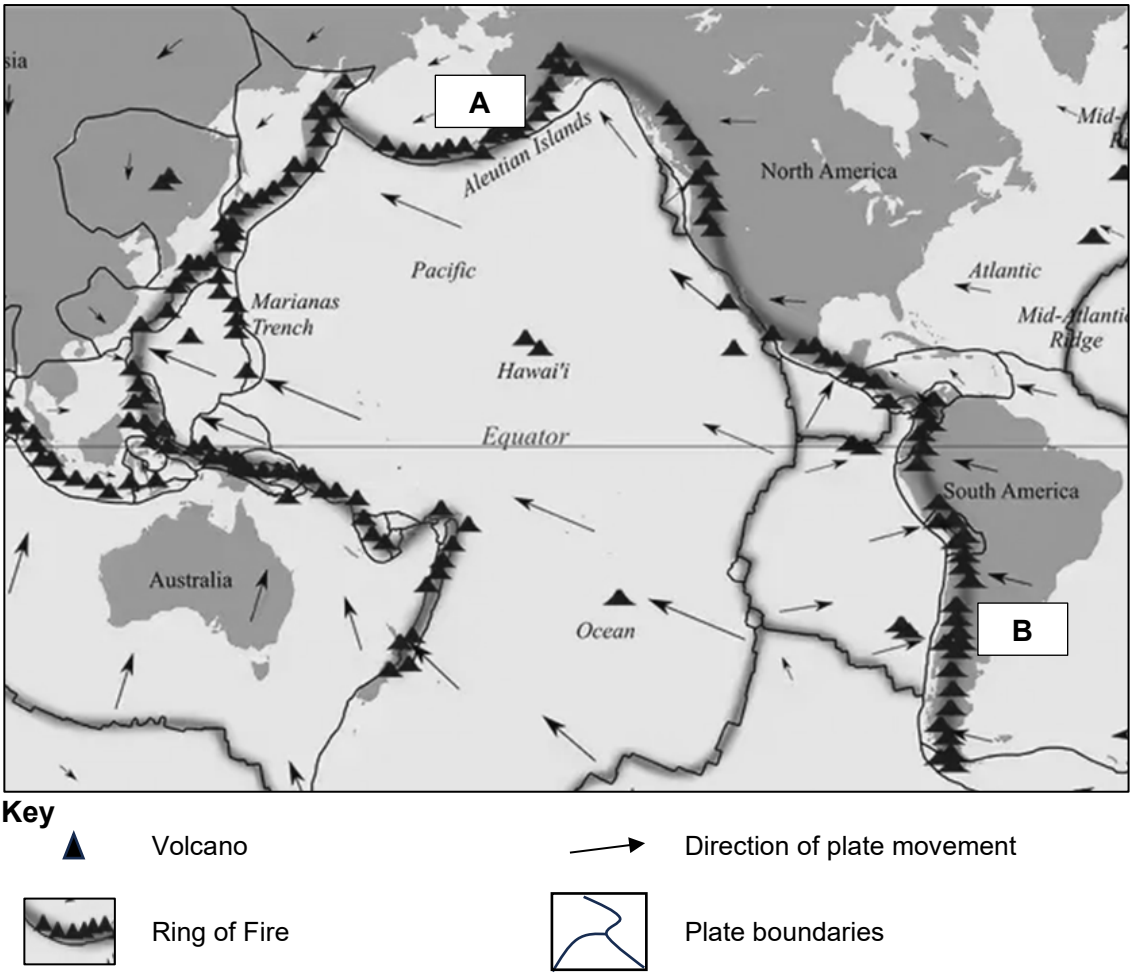

Fig. 2.2

Source: https://science.howstuffworks.com/environmental/earth/geology/ring-of-fire.htm

With reference to Fig. 2.2, compare the occurrence of the volcanoes at A and B. [3]

Award 1m for each clear comparison.

- Volcanoes at both A and B are formed by the convergence of tectonic plates.
- The volcanoes at A are formed when two oceanic plates converge while the volcanoes in South America are formed when one oceanic plate and one continental plate converge.
- Volcanoes at A occur in the sea while those at B occur on land.

(c) 'Timely evacuation is more effective than other disaster management strategies after a tectonic hazard occurs.'

How far do you agree with this statement? Explain your answer. [9]

Relevant Content:

- Response to disasters
  - Search and rescue
  - Timely evacuation
  - Provision of basic social and psychological services
- Recovery from disasters
  - Restoration and improvement of facilities and living conditions of affected communities

A possible approach:

- The answer could first highlight that the effectiveness of strategies for disaster risk management depends heavily on the context or place characteristics, thus the same strategies are likely to be more effective in some locations and not others.
- With reference to selected strategies, the answer could then outline the ideal conditions for / challenges in implementing these strategies before referring to relevant examples to illustrate the argument.
- Some challenges include the lack of domestic resources (technological and financial), and the inability of stakeholders to collaborate and integrate disaster management into their practices.
- The answer could also consider the alternative view of strategies being universally effective by explaining why this might be the case, before arriving at a conclusion of whether some strategies are more effective than others.

Level 0 • No credit worthy response.
Level 1 (1 – 3 marks) • Arguments are unclear with limited descriptions 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.
Level 2 (4 – 6 marks) • Content has some details on strategies for response and recovery in disaster risk management. • Develops arguments that support one side of the discussion well, using one or two points with some elaboration on effectiveness of strategies for disaster risk management. • At least one example used demonstrate a good understanding of the issue or phenomenon like 'In the Philippines, only 10 to 20% of buildings are insured against earthquakes due to high insurance cost.' • Evaluation is well supported by arguments with some attempt to justify the stand.
Level 3 (7 – 9 marks) • Content has good details on strategies for response and recovery in disaster risk management. • Develops arguments that support both sides of the discussion clearly, using a range of points with good elaboration such as details on effectiveness of strategies for disaster risk management. • At least two detailed examples used demonstrate a comprehensive understanding of the issue or phenomenon like 'during the 2011 earthquake in Tohoku, Japan, nearly all the 3000 students of Kamaishi City survived. Schools in the city have disaster prevention education programs, including evacuation drills. Hence, they were able to respond quickly and evacuate to higher ground, away from the tsunami. However, the 2010 earthquake in Haiti resulted in more than 220,000 deaths and one of the reason was no timely evacuation.' • Evaluation is derived from a well-reasoned consideration of the arguments with good attempt to justify the stand.

3 Cluster 5: Singapore

(a) Study Figs. 3.1A and 3.1B (Insert), which show distribution of coastal ecosystems in Singapore in 1950 and 2002 respectively.

Using Figs. 3.1A and 3.1B, describe the changes in the distribution of coastal ecosystems in Singapore between 1950 and 2002. [4]

Award 1m per description, max 4 marks.

Overall
- In general, various coastal ecosystems have seen a decrease in the areas they occupied .

Mangroves
- Mangroves experienced the greatest decrease in area occupied.
- In 1950, large areas mainly found in northern and western parts of the main island along the coastal areas but in 2002, only small areas remain.
- In 1950, stretches of mangroves were found further inland along rivers e.g. Sungei Seletar and Sungei Serangoon but are no longer present in 2002.

Coral Reefs
- In 1950s, mainly found around offshore islands in the Southern part of Singapore but in 2002 reduction in area around offshore islands e.g. Pulau Sudong / no longer found e.g. Sentosa.

Sand / Mudflats
- In 1950, stretched from eastern to southeastern coast of Singapore but in 2002, no longer found and replaced by reclaimed land.

(b) Evaluate the social impacts tourism activities have brought to Singapore. [3]

AO3

Award a max of 2 mark for either side of argument.
Award a maximum of 1 additional mark for further development of each description, where applicable.

Positive
- Through strict law enforcement, Singapore's reputation of being a country with low crime rates encourages order in society and deters violent crimes against tourists.
- Tourism justifies the preservation of historic places in Singapore to ensure that places of historical and cultural significance remain attractive to tourists as well as locals.
- For example, Singapore's last remaining kampung, Kampung Lorong Buangkok was identified as a site for urban redevelopment. However, as the site was deemed to be culturally significant to Singapore's history and heritage, it was ultimately preserved.

Negative
- Though heritage conservation plays an important role in showcasing a place's cultural identity to locals and tourists, it can be especially challenging in Singapore where land resources are scarce.
- It is also difficult to balance the interests of different stakeholders.
- For example, when Chinatown was redeveloped in the 1990s, people lamented the overemphasis on Mandarin Chinese elements which ultimately led to the neglect of the neighbourhood's multi-ethnic residents and diverse dialect groups.

(c) Study Fig. 3.2 (Insert), which shows innovations adopted by the local farming industry in Singapore.

A02 Using Fig 3.2, explain how the various innovations address the vulnerabilities Singapore faces. [3]

Award 1 mark per explanation, max 3 marks.
Award a maximum of 1 additional mark for further development of each explanation, where applicable.

- Crops are grown without the use of soil frees up scarce land resources in Singapore for other uses.
- Crops are grown in structures that are stacked vertically in an area.
- The amount of crops grown / harvested per unit area is higher compared to traditional farming methods thus maximises space / land utilised.
- There is less dependence on human labour / fewer people employed to complete work on the farms overcoming shrinking working population caused by ageing population / decreasing birth rates.
- The use of robots to perform tasks as seen in the left foreground of picture.
- The farming method helps to increase local food production in Singapore thus reducing dependence on imports which can lead to food insecurity.

(d) Evaluate the likelihood of Singapore suffering from economic losses from volcanic eruptions in the region. [3]

A03 *Award a max of 2 mark for either side of argument.*
Award a maximum of 1 additional mark for further development of each explanation, where applicable.

No losses from the following:

- Far from the nearest volcano thus hazards such as pyroclastic flows, lahars and landslides do not reach Singapore.

Losses occur when:

- Ash clouds reach Singapore causing low visibility that results in grounding of flights / widespread cancellation of flights affecting the aviation industry's income.
- Ash clouds can damage aircraft frame, engine and windows which would result in high repair costs borne by aviation companies
- Widespread cancellation of flights would also affect the daily operations and activities of other related industries, thus wider economic consequences.
- Widespread cancellation of flights would negatively impact Singapore's status as a global air hub which is an economic asset.

(e) Explain how integrated master planning helps Singapore achieve sustainable development. [5]

A01 *Award 1 mark for each explanation.*
Award a maximum of 1 additional mark for further development of each explanation, where applicable.

- This approach allows trade-offs to be objectively discussed, ensuring decisions would serve overall national interests.
- Singapore adopts a long-term approach to land-use planning which involves identifying different demands for land use and reviewing best option for development.
- Feedback from developers, industry organisations and public is also considered.
- For example, Marina Bay area started as a plan to meet the economic and infrastructural needs in the 1970s has now transformed the Marina Bay area into a space that balances work, play, culture, and commerce while seamlessly enabling one to experience both nature and urban development.
- This long-term approach identifies problems that may arise in the future and takes steps to pre-empt them.
- Integrated master planning also balances economic, social, and environmental development to create a sustainable nation.
- This offers abundant growth and job opportunities while safeguarding the city's clean and green landscape and quality living spaces.

(f) Explain why good governance plays an important role in the sustainable development of a country. [2]

Award 1 mark for each explanation, max of 2 marks.

- It ensures that there is a clear vision of sustainable development that would be communicated effectively to the people.
- It ensures that sufficient resources are dedicated to sustainable development even in face of other competing needs.