



NAN HUA HIGH SCHOOL
Preliminary Examination

CANDIDATE
NAME

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CLASS

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INDEX
NUMBER

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GEOGRAPHY

Paper 2

2279/02

29 August 2025

1 hour 45 minutes

Candidates answer on the Question Paper.

Additional materials: Insert

READ THESE INSTRUCTIONS FIRST

Write your class, index number and name on all the work you hand in.

Write your answers on the lines provided for each question.

Write in dark blue or black pen. You may use a pencil for any diagrams or graphs.

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

Answer **all** questions.

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 mark for this paper is **50**.

1 Cluster 1: Geography in Everyday Life

- (a) Study Fig. 1.1 (Insert), which shows a map of Bidadari Park with a 5.2 kilometres network of trails running through greenery. It also features a 1.8-hectare lake, which serves both recreational and flood-management purposes.

Using Fig.1.1, explain how Bidadari Park provides regulating and cultural ecosystem services. [5]

Award 1 mark for each explanation of how Bidadari Park provides ecosystem services, up to a maximum of 5 marks.

- The creek leading to Alkaff Lake can take the excess rainwater to the lake. This can regulate water flow and prevent flood.
- The footpath at Alkaff Lake can also help to prevent flood as it is able to be flooded up to 4m during times of intense rainfall and water levels rising.
- Vegetation in the park or around the lake or pathways can reduce surface runoff by retaining water in the soil and regulate water flows.
- The trees and plants in the park help with regulating air quality by removing pollutants from the atmosphere through photosynthesis.
- The Adventure Playwoods may also be a place for children to play and engage in recreational activities.
- Park users who frequent the place may find it relaxing / stress-relieving with activities such as jogging or walking. These activities may improve their physical and mental health.
The activities may also foster social belonging and group identity, strengthening their sense of place. [1 additional mark]

- (b) Study Figs. 1.2 and 1.3 (Insert), which shows how parts of Commonwealth Drive will be changed as part of the redevelopment for Tanglin Halt.

Tanglin Halt, located in Queenstown, was among Singapore's earliest Housing and Development Board (HDB) estates, established in the 1960s. In 2014, it was announced that the estate would undergo redevelopment under the Selective En-bloc Redevelopment Scheme (SERS), aiming to rejuvenate ageing housing stock and optimise land use.

Residents will be relocated to another housing estate as demolition takes place. Part of Commonwealth Drive will also be realigned, and the existing road will be turned into a pedestrian-friendly zone with cycling lanes and footpaths.

Using Figs. 1.2 and 1.3 (Insert), evaluate how the redevelopment for Tanglin Halt affects residents' quality of life. [6]

Award 1 mark for each evaluation of how redevelopment affects residents, to a maximum of 6 marks.

Award a maximum of 1 mark for further development of each evaluation, where applicable.

Positive Aspects:

- Residents are offered new flats with modern amenities, enhancing their quality of life. [1 mark]
- There will be enhanced infrastructure. The redevelopment includes better connectivity, new community spaces, and improved facilities, fostering a more vibrant neighbourhood. [1 mark]
- The links between the MRT and the trail corridor offer better access for residents. [1 mark]
- With new cycling paths and pedestrian footpaths, residents can build bonds with each other through recreational activities. [1 mark] These areas can also provide spaces for residents to exercise. [1 additional mark]

Negative Aspects:

- Long-time residents may experience a loss of memories or heritage to Tanglin Halt as they may have a deep attachment to the estate. The demolition signifies a loss of personal and collective memories. [1 mark]
- The close-knit community bonds formed over decades are disrupted, leading to feelings of displacement and nostalgia among residents. [1 mark]
- Roads may be less accessible to cars as Commonwealth Drive is made more pedestrian-friendly. [1 mark]

(c) Explain how environmental stewardship can be practised. [4]

Award 1 mark for each explanation of how environmental stewardship can be practised.

Award a maximum of 1 mark for further development of each explanation.

- Environmental stewardship can be practised through promoting volunteerism among neighbourhood residents to share knowledge with others about the importance of healthy ecosystems. [1 mark]
- This helps residents become more aware of what they can and should do to responsibly use and protect the natural environment. [1 additional mark]
- Environmental stewardship efforts can also be practised through partnership of public and private sectors.

- Different stakeholders may have different perspectives, resources and expertise to enhance environmental stewardship efforts. [1 additional mark]

2. Cluster 4: Tectonics

- (a) Using an example, explain what happens at transform plate boundaries. [4]

Award 1 mark for each explanation of what happens at transform plate boundaries with a named example.

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

When there is no named example, a maximum of 2 marks is given.

- When the Pacific Plate slides past the North American Plate (1 mark)
- Friction causes the two plates to be locked, and stress builds up. (1 mark)
- Stress caused by the plate movement produces a fault, which is a zone of fractures. The fault is called the San Andreas Fault in this example. (1 mark)
- Earthquakes occur here as one plate suddenly slips past another. (1 mark) This is due to the release of seismic energy / waves. (1 additional mark)

- (b) (i) Study Fig. 2.1 (Insert), which shows a map of shake intensity from the earthquake and aftershocks that happened in Turkey, 2023.

Using Fig. 2.1, describe the distribution of shaking in Turkey. [3]

Award 1 mark for each description of distribution of shaking of the earthquake.

- The highest / most severe and very strong shake intensity areas are in the areas where the first quake and a major aftershock / aftershocks occurred / Gaziantep.
- The strong shake intensity spreads outwards from Gaziantep and the areas of aftershocks in the Northeast and Southwest direction / towards Adana / Aleppo
- The moderate shake intensity can be in areas such as Adana and Aleppo.

- The light shake intensity spreads outwards all the way to Damascus in Syria, parts of Iraq, and other parts of Turkey.

- (b) (ii)** Study Fig. 2.2 (Insert), which shows comparison of the earthquake in Turkey in 2023 to an earthquake in Peru in 2021.

With reference to Fig. 2.2, compare the factors that affected the impact of the earthquakes in the two countries. [5]

Award 1 mark for each comparison of the factor that affected the impact of the earthquakes.

Award a maximum of 1 additional mark for further development of each comparison, where applicable.

- The earthquake in Turkey had a shallow focus of 17.9km which meant that the vibrations were felt stronger whereas the earthquake in Peru had a deeper focus of 112km which allowed the vibrations to be absorbed by the rocks before reaching the surface. [1 mark]
- Turkey's earthquake occurred in an area of high population density hence there were many deaths while Peru's earthquake occurred in an area of sparse population density which means fewer people were living in the region hence lower number of casualties. [1 mark]
- The geology in Turkey is made of soft sediments which means that the rocks could not absorb the vibrations of the earthquake well, giving rise to more vigorous shaking while the geology in Peru was dense bedrock which could absorb the vibrations better, leading to less violent shaking. [1 mark]
- More infrastructure was damaged in Turkey compared to Peru due to the different levels of urbanisation. [1 mark]
- There were also many unreinforced buildings in Turkey which resulted in many buildings collapsing, causing high casualty rate while in Peru, the area was forested which means there is likely to be few buildings. [1 mark]
- The magnitude of Turkey's earthquake is higher at 7.8 on the Richter Scale while Peru's earthquake is slightly lower at 7.5 on the Richter Scale. Turkey also experienced a second earthquake of a high magnitude at 7.5 on the Richter scale. [1 mark]

- (c)** Explain how disaster management strategies could help people of the affected areas after a volcanic eruption. [3]

Award 1 mark for each explanation of how disaster management strategies could help people of affected areas.

Award a maximum of 1 additional mark for further development of each comparison, where applicable.

- Search and rescue efforts involve finding and saving survivors trapped in disaster zones. Their aim is to rescue as many people as possible in the shortest time with minimal risk to rescuers. [1 mark] Without search and rescue, the survivors could die from injuries, crush syndrome, dehydration, burns or other conditions. [1 additional mark]
- Timely evacuation involves moving people away from areas at risk of hazards as quickly as possible to safer locations to reduce loss of lives.
- People need to be evacuated from danger zone around the volcano as lava flows or tephra can cause loss of lives. [1 mark]
- People need to be evacuated as basic services such as food, water, medical supplies could be disrupted. They will need to go to temporary shelters. [1 mark]
- Providing clean water can prevent dehydration or water-borne diseases, which may occur when affected communities drink from contaminated sources of water. [1 mark]
- Providing food can prevent hunger and starvation. [1 mark]
- Providing access to medication, doctors and hospitals can prevent the spread of diseases and save the lives of the injured. [1 mark]
- Experiencing a disaster can result in great emotional distress due to severe injuries, the loss of family members and friends, homelessness or the loss of livelihoods. [1 mark]
- Providing psychological services helps survivors cope with psychological trauma which can last for a long time after the disaster. [1 mark]

3. **Cluster 5: Singapore**

(a) Describe two challenges that Singapore might face due to climate change. [4]

Award 1 mark for each description of a challenge that Singapore might face due to climate change, up to a maximum of 4 marks.

Award a maximum of 1 additional mark for further development of each description.

- As a low-lying island with 30% of its land being less than five metres above sea level, Singapore can be impacted by rising sea levels. [1 mark] With sea level rise, more areas in Singapore could be flooded easily, especially during seasons of intense rainfall. [1 additional mark]
- Singapore could face the challenge of more intense rainfall due to climate change. This could result in flash floods as Singapore's drainage system may not be able to cope. [1 mark]
- The urban heat island effect which is caused by the replacement of Singapore's natural cover with buildings, roads and pavements could see an increase in surface temperatures. [1 mark] This is due to surfaces absorbing more heat due to climate change. Air-conditioning systems, cars and factories also emit heat and raise surface temperatures. [1 additional mark] High humidity levels worsen the situation as perspiration from people evaporates less easily, increasing people's vulnerability to heat exhaustion and heat stroke. [1 additional mark]
- Many vector-borne diseases such as dengue fever could be more widespread as warmer temperatures could shorten egg incubation, resulting in larger Aedes mosquito population. [1 mark]
- Biodiversity of Singapore could be threatened as with warmer and drier environments, habitats could be severely harmed. [1 mark]
- Singapore's food security could be under threat as Singapore imports more than 90% of our food. [1 mark]
- Water insecurity could arise due to climate change. As Singapore does not have natural water sources, extended periods of drought across the world could affected the reliability of Singapore's water supply. [1 mark]

- (b) Study Fig. 3.1 (Insert), which shows information on the proposed Long Island project at East Coast to help Singapore manage climate change.

Using Fig. 3.1, explain how the proposed Long Island project will help Singapore manage the threat of climate change. [3]

Award 1 mark for each explanation of how proposed Long Island project will help Singapore manage the threat of climate change.

Award a maximum of 1 additional mark for further development of each explanation.

- The creation of a water body could help to prevent floods inland brought about by sea level rise as sea water will be trapped in it. [1 mark]
- Low-lying coastal areas may also be flooded due to sea level rise especially at East Coast Park. The reclamation bund to be built at higher levels will protect our infrastructure. [1 mark] It can also prevent seawater from mixing with fresh water which can affect our water supply. [1 additional mark]
- The new reservoir that can meet our needs in water supply as it stores fresh water from intense rainfall due to climate change. [1 mark]

- (c) Describe the trend of Singapore's birth rate and proportion of population aged 65 and above. [4]

Award 1 mark for each description of the trend of birth rate or proportion of population aged 65 years and above, to a maximum of 4 marks.

- Birth rate has been decreasing from about 13.7 per 1000 in 2000 to 8 per 1000 in 2025.
- There was a rapid decrease from 2000 from 13.8 per 1000 to 9 per 1000 in 2009.
- The lowest birth rate was in 2024 where it was about 5 per 1000.
- The proportion of population aged 65 and above has been increasing from about 4% in 2000 to 18% of the population in 2025.
- There was a rapid increase from 2010 onwards from 9% to 18% in 15 years.

- (d) “Building Singapore’s economic resilience is more important than building its social resilience.”
How far do you agree with this statement? Explain your answer. [9]

Relevant Content

- Economic resilience efforts
- Social resilience efforts

A possible approach

I disagree with the statement as building both economic resilience and social resilience are equally important to achieving sustainable developing in Singapore.

Singapore is an attractive location for MNCs and start-ups. Building economic resilience ensures that Singapore continues to be attractive as a competitive economy that can cope with global economic uncertainties. Singapore’s main efforts are focused on deepening and diversifying international connections. Singapore’s linkages with overseas partners would create business opportunities in new markets. For example, the Economic Development Board (EDB), Enterprise Singapore (ES) and Global Innovation Alliance (GIA) connect Singapore companies with overseas partners. This ensures that Singapore has diverse international connections, which could strengthen the capabilities of businesses here. Singapore also puts emphasis on strengthening the capabilities of all businesses to innovate and cope with changes. Investments in R & D are aimed at creating new avenues of growth, raising Singapore’s economic competitiveness in the long term. For example, Centre for Quantum Technologies and ST Engineering had come together to develop new AI-enabled cybersecurity tools, which produce encryption codes that are unbreakable. As technology replaces routine tasks, Singaporeans would need to pick up new skills that enable them to be effective in their jobs. For example, universities and polytechnics have launched more than 500 skills-based courses to help Singaporeans learn new skills. This keeps Singapore’s workforce competitive and able to deal with economic changes in the future.

All sectors of society and different groups of people play an integral role in Singapore’s efforts to build social resilience. Singaporeans are encouraged to go beyond achieving basic academic qualifications and continually pick up new skills throughout their lives. For example, the SkillsFuture national movement provides Singaporeans with the opportunity to engage in lifelong learning. The SkillsFuture Work-Study Programme helps Singaporeans pick up skills and gain work experience, combining classroom training with

on-the-job training. The programme guides working adults in starting new careers and also enhances the employability of fresh graduates.

Singapore strengthens its social resilience by mobilising communities in preparedness measures for emergencies. For example, the Total Defence framework aims to engage all Singaporeans in building a strong, secure and cohesive nation. This involves fulfilling National Service duties and volunteering in Civil Defence activities, ensuring that the country remains united in overcoming difficulties.

In Singapore, shared spaces are created to help bring together people from all walks of life, fostering relationships that help to build its social resilience. For example, HDB's pilot initiative 'Build-A-Playground' at Canberra in 2014 was carried out in partnership with the residents. The opportunity to design and build the playground has enhanced the residents' sense of belonging and inclusion. The government regularly invites the community to offer input to its plans, creating a greater sense of ownership among people. This creates an inclusive society with strong social support from different groups of people. For example, the government started the SGFuture Engagement in 2015 to consult people of all ages and backgrounds on their hopes for the future of Singapore. Through this nation-wide public engagement, the community and the government collectively explore different views and ideas to address challenges that may confront Singapore.

Building economic resilience is as important as building social resilience. This is because Singapore needs to constantly improve our business environment and supporting services to attract investments for economic growth. Despite growing global competition, limited resources and physical space, it is important for Singapore to ensure its economy is competitive to bring in investments which will bring about employment opportunities for Singaporeans as industries are set up by overseas companies.

However, building social resilience in Singapore is equally important as society becomes more diverse. Due to the small population that Singapore has, there is an increase in foreign population and new citizens. Hence a strong community spirit is important to enable people to feel included and that they could contribute to Singapore. If a country does not prioritise building its social resilience, tensions and disharmony could divide the country. Only in building both economic and social resilience, could Singapore survive any crisis or challenges.

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 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

