



NAN HUA HIGH SCHOOL
PRELIMINARY EXAMINATION 2026

HUMANITIES

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Paper 2 Geography

MARK SCHEME

This document consists of **14** printed pages

Section A

1	Geography in Everyday Life
a(i) AO2	Study Fig. 1.1 (Insert), which shows a photograph of a garden on the rooftop of a building in Singapore. Using Fig. 1.1, explain how provisioning ecosystem services can bring benefits to local residents. [2] Award 1 mark for each explanation on how provisioning ecosystem services can bring benefits to local residents. • Rooftop gardens allow local residents to participate in agricultural activities/ grow crops and meet with others in the neighbourhood [1] • The crops can be harvested which locals can eat and have their basic needs met [1]
a(ii) AO1	With reference to Fig. 1.1 (Insert), explain how human activities can positively impact nature. [2] Award 1 mark for each description on how human activities can positively impact nature Award a maximum of 1 additional mark for further development of each explanation. • People can participate in conservation or greening efforts, such as maintaining gardens and cleaning up parks and gardens [1] • This will ensure that greenspaces are kept clean, and biodiversity is allowed to thrive in a healthy environment [1] Beach clean up - not accepted. Urban green spaces, urban parks, rooftop gardens, home gardens - accepted.
b(i) AO2	Using Fig. 1.2 (Insert), explain how events such as the Community Resilience Day can build community resilience against disasters. [2] Award 1 mark for each description on how events like the Community Resilience Day can build community resilience against disasters Award a maximum of 1 additional mark for further development of each explanation. • Events such as the Community Resilience Day will equip local residents with the knowledge of how to respond in the event of a disaster [1] • For instance, they will be able to learn CPR-AED skills that can be used to support rescue and response efforts by providing first aid in the event of a disaster [1] • Events such as the Community Resilience Day gives residents an opportunity to gather and meet in community spaces with their neighbours, allowing them to know and be able to look out for each

	other in the event of an emergency [1]
b(ii) AO1	Explain how a community centre can build social sustainability in an urban neighbourhood. [1] Award 1 mark for each description on how a community centre can build social sustainability • Community centres provide shared spaces that promote regular social interactions, allowing local residents to <u>build positive and respectful relationships</u> OR <u>minimise conflict and misunderstandings</u> [1]
c AO1	Explain two features of a precinct that will foster economic sustainability in a neighbourhood. [2] Award 1 mark for each explanation of how a feature of precincts will foster economic sustainability. • A precinct has bus stops that are spread out at regular intervals, which will allow residents to have easy access to bus stops and keep their transport expenditure low [1] • A precinct has many shops that meet the everyday needs of the locals, which enables residents to meet their needs without having to spend money to travel to get them [1] • A precinct has many shops where locals can take up employment and earn an income. [1]
d(i) AO1	Study Fig. 1.3 (Insert), a photograph of Lau Pa Sat, one of Singapore's more iconic hawker centre. With reference to Fig 1.3, explain how one can develop a sense of place towards an iconic building such as Lau Pa Sat. [3] Award 1 mark for each explanation on how one can develop a sense of place towards an iconic landmark Award a maximum of 1 additional mark for further development of each explanation. • Lau Pa Sat is a place that has symbolic and historical meaning for Singapore [1] • Lau Pa Sat is highly visible and easy for people to identify and remember [1] • Thus, a sense of place can be developed as individuals might have significant memories at a landmark like Lau Pa Sat [1] ○ For example, the Truss Bridge in Bukit Timah was built in 1932 as part of a railway line, which people might associate with Singapore's railway history [1] • Lau Pa Sat is a place where people might go to for meals regularly, so they might develop a positive sense of place [1]

d(ii) AO2	A group of students from Xue Xiao School wanted to conduct an investigation to study Singaporeans' sense of place towards Lau Pa Sat. They intend to go to Lau Pa Sat to interview Singaporeans who are dining there. Using Fig. 1.3 (Insert), describe the factors that students must consider when scheduling their visit to Lau Pa Sat for data collection. [2] Award 1 mark for each description of how the students should decide when to visit Lau Pa Sat to collect data. • A large area in Lau Pa Sat is not sheltered, so the students need to consider the weather elements and ensure that they do not visit on a rainy day [1] • Students need to consider the crowd at Lau Pa Sat and avoid night times and peak hours as it could be dangerous/ people might not be willing to participate in the research [1] • Students need to consider when they are most likely to meet Singaporeans at Lau Pa Sat, so they might not choose to go on weekends [1]
	[Total: 14m]

2.	Tourism
a(i) AO2	Study Fig. 2.1 (Insert), which shows the tourist arrivals and receipts in Hong Kong from 2010 to 2021. Using data from Fig. 2.1 (Insert), describe the relationship between tourist arrivals and tourist receipts in Hong Kong. [2] Award 1 mark for each description of the relationship between tourist arrivals and tourist receipts in Hong Kong • There is a positive relationship between tourist arrivals and tourist receipts in Hong Kong from 2010 to 2021 [1] • As tourist arrivals increased from 20.09 million in 2010 to 27.77 million in 2014, tourism receipts also increased from 27.21 billion dollars to 46.35 billion dollars [1] • Similarly, when tourist arrivals declined sharply from 23.75 million in 2019 to 23.75 million in 2020, tourist receipts also declined sharply from 32.7 billion dollars to 2.86 billion dollars [1]

a(ii) AO2	With reference to Figs. 2.1 and 2.2 (Insert), describe the factors that motivate tourists to travel to Hong Kong for tourism. [2] Award 1 mark for each description of the factors that motivate tourists to travel to Hong Kong for tourism. Award a maximum of 1 additional mark for further development of each explanation. • Tourists might be motivated to travel to Hong Kong to escape the environment due to a need for relaxation [1] • Tourists might be motivated to travel to Hong Kong due to a need to achieve personal growth and self-fulfilment and challenge themselves to climb a mountain [1] • Tourists might travel to Hong Kong for its scenic beauty at natural landscapes such as Dragon's Back [1]
a(iii) AO1	Explain how the lack of transit routes can affect tourism. [1] Award 1 mark for an explanation of how the lack of transit routes can affect tourism • The lack of transit routes make it more inconvenient or expensive for travellers, which can reduce tourist numbers and negatively affect tourism.
b AO3	Study Fig. 2.3 (Insert), which shows a poster of an ecotourism tour package in Laos. With reference to Fig. 2.3, evaluate the effectiveness of ecotourism in bringing about sustainable development. [4] Award 1 mark for each explanation of the benefits of Ecotourism in bringing about sustainable development, up to a maximum of 2 marks Award 1 mark for each explanation of the limitations of Ecotourism in bringing about sustainable development, up to a maximum of 2 marks Award a maximum of 1 additional mark for further development of each explanation. • Ecotourism focuses on allowing tourists to interact with nature which increases their appreciation of nature, and encourages them to behave in a way that conserves and minimises damage to the environment [1] • Revenue from ecotourism can be used to implement measures such as hiring park rangers/ train ecotour guides to ensure compliance to laws so that the environment is protected and the negative impact minimised [1] • However, ecotourism might not work if the tours are overwhelmingly popular with tourists, which can cause the environment to exceed its carrying capacity and lead to environmental destruction [1]

	• Not all locals might be trained or are interested in being a part of ecotourism, which might lead to businesses hiring non-locals instead, leading to the economic leakage of revenue that could be used for development [1]												
c. AO3	“Countries should always pursue tourism growth.” How far do you agree with this statement? Explain your answer. [9] <table border="1"><thead><tr><th>Level</th><th>Mark</th><th>Descriptor</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. • Example(s) used demonstrate comprehensive understanding of issue/phenomenon. • Evaluation derived from 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, using 1 or 2 points with some elaboration. <u>OR</u> Develops arguments that support both sides of the discussion, with little or some elaboration • Example(s) used demonstrate a satisfactory understanding of the issue/phenomenon. • Some evaluation, supported by arguments </td></tr><tr><td>1</td><td>1-3</td><td> • Arguments unclear. • Limited description, or just listing/stating. • No examples provided, or examples are generic, showing basic understanding of the issue/phenomenon. • Evaluation missing, simple, or unclear </td></tr></tbody></table> Factors (For): • Economic benefits ○ Employment opportunities (eg. global tourism accounting for 330 million formal jobs worldwide) ○ Income generation (eg. Maldives in 1980s vs present day) • Social benefits ○ Cultural preservation (Shadow puppetry in China) ○ Enhancing cultural ecosystem services (eg. Sanjiangyuan, China) • Environmental benefits	Level	Mark	Descriptor	3	7-9	• Develops arguments that support both sides of the discussion clearly, using a range of points with good elaboration. • Example(s) used demonstrate comprehensive understanding of issue/phenomenon. • Evaluation derived from well-reasoned consideration of the arguments.	2	4-6	• Develops arguments that support one side of the discussion, using 1 or 2 points with some elaboration. <u>OR</u> Develops arguments that support both sides of the discussion, with little or some elaboration • Example(s) used demonstrate a satisfactory understanding of the issue/phenomenon. • Some evaluation, supported by arguments	1	1-3	• Arguments unclear. • Limited description, or just listing/stating. • No examples provided, or examples are generic, showing basic understanding of the issue/phenomenon. • Evaluation missing, simple, or unclear
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- Conservation of natural environments and preservation of biodiversity (eg. Galapagos National Park, Ecuador)
- Restoration of degraded aquatic and terrestrial ecosystems (eg. coral reefs in Mauritius and Seychelles)

Note: Answer must link to how the country benefits as a result of these positive impacts of tourism.

Eg. Countries should pursue tourism growth as it brings about economic growth. Tourism generates income for locals and the government. When tourists spend money on consumer goods and services offered by locals, locals will receive more money that they can spend to lead a better life. Additionally, the government will receive higher tax revenue that can be used to invest in infrastructure and improve the country's standard of living, and even alleviate poverty. In the 1980s, Maldives was one of the world's poorest countries. However, as its tourism industry developed, it has grown economically and now has very low poverty rates. This shows that countries should pursue tourism growth as it has great potential to help a country's development

Factors (against):

- **Negative economic impacts**
 - Economic leakages (eg. UN Environment Programme estimates on \$5 remains in the local economy of LDC)
 - Overdependence on tourism (eg. from natural disasters, unfavourable political situations, economic downturn, outbreak of diseases)
- **Negative social impacts**
 - Commodification of cultural rituals and artforms (eg. Maasai culture, Kenya; totem poles in Vancouver, Canada)
 - Cultural clashes
 - Rise in crimes (eg. Barcelona, Spain)
- **Negative environmental impacts**
 - Pollution (eg. Boracay Island, Philippines)
 - Depletion of natural resources and threat to wildlife habitats (eg. Bali, Maldives)

Note: Answer must link to how the country is negatively impacted as a result of these negative impacts of tourism.

Eg. A country should not always be pursuing tourism growth as there are negative impacts of tourism that can be harmful for the country, such as the rise in crime rate. Crimes like pickpocketing are common in tourist areas as tourists usually carry their valuables with them and are relaxed. Moreover, locals might not appreciate having too many tourists as they contribute to overcrowding and waste generation. This may lead to acts of violence, such as the 2017 attack on a tourist bus in Barcelona, Spain by anti-tourist protestors. These negative sentiments and acts of violence can make the locals feel less safe in their own home. Thus, countries should not always be pursuing tourism growth as it might lead to other social

	problems that negatively impact the local citizens. <u>Evaluation (Agree):</u> • Pursuing tourism growth can help countries reap economic benefits can increase standard of living and help locals meet their basic human needs • Pursuing tourism growth can help countries reap tourism revenue, which can then be used as funding or resources to bring out other social and environmental benefits • Pursuing tourism growth can give countries the impetus to protect their cultures and traditions/ environment, which can in turn lead to the country being able to cater to the demands of tourism and develop sustainably. <u>Evaluation (Disagree):</u> • The benefits of pursuing tourism growth will be negated if the money received is spent on repairing the environment or addressing social issues created by tourism • Pursuing tourism growth is very lucrative, and locals can very easily become too fixated on its economic gain, causing local businesses and cultures to eventually be inclined towards catering to tourists, causing social/ environmental issues • Depends on the country's priorities or stage of tourism development. At Exploration/ Involvement Stages there's a lot of potential to develop tourism further; countries Stagnation/ Decline might want to consider focusing more on addressing social and environmental issues. Sample evaluation In conclusion, I disagree largely that countries should always pursue tourism growth because some of the negative impacts of tourism are invaluable, and cannot be measured by money. Even if there is an increase in tourism revenue and locals have more money to spend, the erosion and dilution of their traditional practices and cultures might be irreversible and cannot be bought back with money. Hence, considering the intangible cost of tourism, countries should not always be pursuing tourism growth.
	[Total: 18m]

Section B

Answer **either** Question 3 **or** Question 4

3.	Climate
a(i) AO2	Study Fig. 3.1 (Insert), which shows the rainfall and wind directions in the Indian subcontinent from June to September. Describe the distribution of rainfall in the Indian subcontinent as shown in Fig. 3.1 (Insert) [3]. Award 1 mark for each description of the distribution of rainfall in the Indian subcontinent. • Rainfall is very light at the leeward side of the Himalayan mountain ranges and the northern part beyond India [1] • Rainfall is moderate in the middle/central part of India towards the northern inland areas and near the windward side of the Himalayan mountain chain [1] • The heaviest rainfall in the world is found at the eastern end of the mountain, in the southern part of Central Asia/China [1].
a(ii) AO2	With reference to Fig. 3.1 (Insert), explain the movement of the winds and variation in rainfall in different parts of this region. [5] Award 1 mark for each explanation of the movement of winds and variation of rainfall in the different parts of this region Award a maximum of 1 additional mark for further development of each explanation. • The winds are blowing from the southwest towards the north-eastern direction over the Indian subcontinent and Central Asia [1] • During June to September, when it is summer in the northern hemisphere. During the same period, the southern hemisphere is experiencing winter [1]. • This results in an area of low pressure in the northern hemisphere and an area of higher pressure in the south, and due to the difference in pressure, winds move from the Southeast towards the Indian sub-continent and Central Asia [1] • As the winds cross the equator, the Coriolis Effect deflects winds to the right. These winds become the southwest monsoon winds and warm up as they head for India/Central Asia. [1] • The warm air picks up moisture as it travels over the Indian Ocean and brings heavy rain to the Indian sub-continent. Hence, the rainfall is heavier on the western coast of India and near to the Bay of Bengal as it starts to fall as rain when it hits land. [1]

a(iii) AO1	Explain why Singapore frequently experiences heavy rain in the afternoon. [3] Award 1 mark for each explanation of why Singapore experiences frequent afternoon thunderstorms. • In the day, heat from the sun is absorbed by the land, and the air above it gains heat [1] • The warm air rises and cools, and condenses on condensation nuclei at dew point temperature, forming clouds [1] • Water droplets in the clouds collide and coalesce, and when they become large and heavy enough, they eventually fall as rain in the afternoon [1]
b(i) AO2	Fig. 3.2 (Insert), which shows the impact on certain crop yields due to global warming. Using Fig. 3.2, describe the impacts of global warming on crop yields [2]. Award 1 mark for each description of the impact of global warming on crop yields • The increase in temperature and decrease in rainfall causes a decrease in crop yields. Evidence: An increase in 1°C and a 10% reduction in rainfall will cause a 17% reduction in barley crop yield [1] • A 2°C increase and 20% decrease in rainfall will have double the impact on crop yields for all crops [1]
b(ii) AO1	With reference to Fig 3.2 (Insert), explain how climate change has had a negative impact on provisioning ecosystem services [3]. Award 1 mark for each explanation on how climate change has had a negative impact on provisioning ecosystem services Award a maximum of 1 additional mark for further development of each explanation. • Global warming has led to increased temperatures and unpredictable rainfall, causing the level in water bodies to decline significantly, reducing the availability of fishes for human consumption [1] • Climate change causes more severe and frequent extreme weather events, making it difficult for crop yields to survive, thus reducing food production for humans [1] • Lack of rain and shorter monsoon seasons will lead to dried up reservoirs and barren land, causing farmers to be unable to grow crops for human consumption [1]
c(i) AO2	Study Fig. 3.3 (Insert), which shows the hydroelectric capacity in Canada from 2010 to 2021.

	Using Fig. 3.3, describe the trend of hydroelectric capacity in Canada from 2010 to 2021. [1] Award 1 mark for describing the trend of hydroelectric capacity in Canada from 2010 to 2021 • The hydroelectric capacity increased from 74, 200 Mw in 2010 to 82, 232 Mw in 2021. [1]
c(ii) AO3	Evaluate the effectiveness of using low carbon technologies to mitigate the impacts of climate change [2] Award up to 1 mark for each explanation of the benefits of using low carbon technologies to mitigate the impacts of climate change Award up to 1 mark for each explanation of the limitations of using low carbon technologies to mitigate the impacts of climate change • Low carbon technologies emit low levels of greenhouse gas emissions by capturing, storing, and utilising carbon instead of releasing greenhouse gases to the atmosphere [1] • However, CCUS can be expensive and requires public funding and subsidies, which not all countries can afford [1]
	[Total: 18m]

4.	Tectonics
a(i) AO2	Study Fig. 4.1 (Insert), a graph that shows the relationship between the age of sediments on the seafloor and distance from the Mid-Atlantic Ridge. Using Fig. 4.1, describe the changes in the age of the seafloor in relation to the distance from the Mid-Atlantic Ridge [3]. Award to 1 mark for each description of the changes in the age of the seafloor in relation to the distance from the Mid-Atlantic Ridge • The further the distance from the ridge, the older the age of the seafloor/ there is a positive relationship between the distance from the Mid-Atlantic Ridge and the age of the seafloor [1] • Sediments nearer the Mid-Atlantic Ridge at 200km are about 11 million years old [1] • As the distance from the Mid-Atlantic Ridge increased to 1700km, the age of the rocks also increased to 76 million years old [1]
a(ii) AO1	Explain the formation of the landforms that are found when oceanic plates collide. [4] Award up to 1 mark for each explanation of the landforms that are formed at O-O convergent plate boundary Award a maximum of 1 additional mark for further development of each explanation.

	• When two oceanic plates converge, the dense plate subducts beneath the other plate. • This forms a deep <u>depression</u> on the seafloor, known as the oceanic trench. • The subducting plate sinks into the mantle and high pressure forces water out of the oceanic crust, lowering the melting point of the overlying mantle, forming magma [1] • Magma rises through the cracks on the plates to form a chain of volcanoes/ volcanic islands[1]
b(i) AO2	Study Fig. 4.2 (Insert), which shows the Volcanic Explosivity Index (VEI) chart. Using Fig. 4.2 (Insert), describe the relationship between the VEI rating and the characteristics of a volcanic eruption. [3] Award 1 mark for each description of the relationship between the VEI rating and the characteristics of a volcanic eruption. • The higher the VEI, the higher the volume of erupted tephra. When VEI increased from 0 to 7, volume of erupted tephra increased from 0.0001km^3 to 1000km^3 [1] • The higher the VEI, the higher the volume of eruption column height. When the VEI increased from 0 to 5, the eruption column height increased from $<0.1\text{km}$ to $>25\text{km}$ [1] • The higher the VEI, the lower the frequency of the eruption. When the VEI is low at 0-1, the frequency of eruption is daily. However, when the VEI increased to 8, the frequency of eruption is 10, 000's of years [1] No data: 0m awarded
b(ii) AO1	With reference to Fig. 4.2 (Insert), describe the impact of tephra on natural systems [2]. Award 1 mark for each description of the impact of tephra on natural systems. Award a maximum of 1 additional mark for further development of each description • Tephra ash can be carried faraway, <u>polluting</u> huge areas of forests, rivers, and other wildlife habitats [1] • Tephra ash can cause blindness to birds by causing their eyelids to be gummed together [1] • The 1991 Mt Pinatubo eruption emitted huge amounts of ash that buried 180km^2 of forests in ash that is 25cm thick [1]
c(i) AO2	Study Fig. 4.3 (Insert), which shows the distribution of the shaking amplitude during the 2025 Myanmar earthquake. Using Fig. 4.3, describe the distribution of the amplitude of shaking during the 2025 Myanmar earthquake. [3]

	Award 1 mark for each description of the distribution of the amplitude of shaking. • The shaking is strongest near/in the epicentre at Mandalay [1] • With increasing distance from the epicentre, the shaking amplitude is reduced, reaching only moderate shaking in areas like Naypyidaw [1] • In areas further away from the epicentre such as the northern and western part of Myanmar, the shaking amplitude is weaker [1]
c(ii) AO1	Urban infrastructure development in the Bay of Bengal in the Southwest region of Myanmar has led to intense land reclamation in the area. With reference to Fig. 4.3 (Insert), suggest the greatest earthquake impact that will be experienced in the Southwest region of Myanmar. Award 1 mark for each description of soil liquefaction. • The Southwest region of Myanmar is prone to soil liquefaction as it is near the sea/ Bay of Bengal [1]
d	Evaluate the effectiveness of search and rescue efforts when responding to an earthquake event [2] Award up to 1 mark for each explanation of the benefits of using search and rescue when responding to earthquakes Award up to 1 mark for each explanation of the limitations of using search and rescue when responding to earthquakes • Search and rescue is beneficial in responding to an earthquake as survivors can be found and given medical treatment so their injuries do not worsen, as well as reduce the number of casualties [1] • However, countries might not have the necessary equipment to conduct effective search and rescue, which may slow down efforts or even result in more deaths [1]
	[Total: 18m]

Table of Specifications

Cluster	Qn	AO1	AO2	AO3		Qn	AO1	AO2	AO3
GEL	a(i)		2						
	a(ii)	2							
	b(i)		2						
	b(ii)	1							
	c	2							
	d(i)	3							
	d(ii)		2						
Tourism	a(i)		2						
	a(ii)		2						
	a(iii)	1							
	b			4					
	c			9					
Tectonics	a(i)		3		Climate	a(i)		2	
	a(ii)	4				a(ii)		5	
	b(i)		3			a(iii)	3		
	b(ii)	2				b(i)		2	

	c(i)		3			b(ii)	3		
	c(ii)		1			c(i)		1	
	d			2		c(ii)			2
Total		15	20	15	Total		15	20	15