

ANDERSON SECONDARY SCHOOL
Preliminary Examinations 2026
Secondary Four Express



CANDIDATE NAME:

CLASS:

INDEX NUMBER:

GEOGRAPHY

2279/01

Paper 1

25 August 2026

MARK SCHEME

1 hour 45 minutes

0800 - 0945

Additional Materials: Insert

READ THESE INSTRUCTIONS FIRST

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

Write in dark blue or black pen.

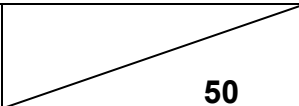
You may use an HB pencil for any diagrams or graphs.

Do not use staples, paper clips, glue 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.

Total Marks	 50
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Cluster 1: Geography in Everyday Life

A group of students were interested in investigating whether community gardens contribute to sustainable living in Singapore. Secondary data (Fig. 1.1) suggested that more residents were turning to community gardening since the COVID-19 pandemic.

To determine whether this increased interest reflected a growing importance of community gardens in residents' lifestyles, they investigated the hypothesis: "Community gardens are becoming increasingly important in promoting sustainable lifestyles among Singapore residents."

Changes in demand for community gardening in Singapore, 2018–2022

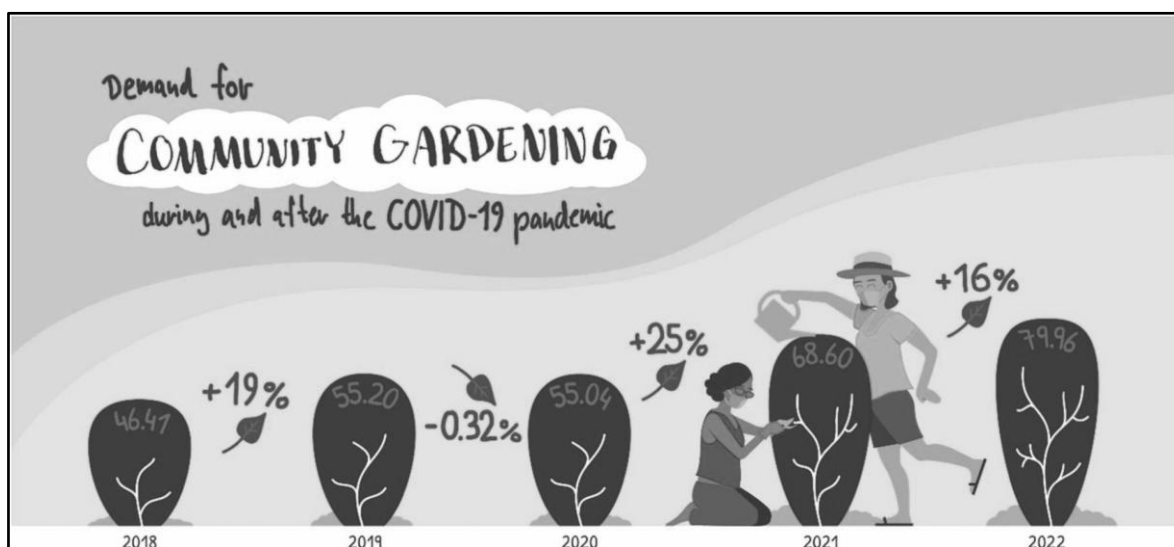


Fig. 1.1

(a)	The students designed a questionnaire survey and planned to survey the residents living in Tampines Greenview over two weekday afternoons using convenience sampling. Fig. 1.2 (Insert) shows the map of Tampines Greenview. With reference to Fig. 1.2 (Insert), describe how the students could conduct their investigation to collect the data needed to test their hypothesis. [4]
	Award 1 mark for each description on how the investigation could be conducted up to a maximum of 3 marks. Award a maximum of 1 additional mark, for any further development - Students could divide themselves into pairs/groups and <u>locate themselves at the different HDB blocks' void decks, at the park, at the bus stop (accept any other suitable location)</u> [1 mark] - where they most likely have <u>high foot traffic</u> so that they are able to get respondents for their survey [1 additional mark] - They will then <u>approach any passer-by who is willing to do their survey</u> [1 mark] till they hit their target number OR

		- They could <u>sample at least 30 people</u> as this ensures that the <u>sample size is large enough</u> [1] - and it is <u>representative of the population in the neighbourhood</u> [1 additional mark] - The students should ensure that they <u>visit the neighbourhood at the same time on both days</u> and locate themselves at the same location to ensure that all other variables remain constant [1 mark]
	(b)	Fig. 1.3 (Insert) shows the questionnaire survey the students designed. Comment on the design of their questionnaire survey. [3]
		Award 1 mark for each comment of the questionnaire survey up to a maximum of 2 marks Award a maximum of 1 additional mark, for any further development - Students made use of <u>pre-defined responses for some of the questions (Q3 to Q5)</u> which helps to guide the participants, making it easier for them to answer [1 mark] - There was the use of Likert scale for Question 3 and 5, which allows respondents to <u>express degrees of opinion</u> (e.g., from Strongly Disagree to Strongly Agree), /allowing them to <u>not be forced to make a binary choice</u> [1 mark] - There was a <u>mix of open and closed-ended questions</u> (e.g Question 6 as the open ended question while Q1-5 were closed ended) which allows respondents to also <u>share their views openly</u> [1 mark] - Students could then gain insights to the views shared by the respondents and <u>probe further questions</u> if necessary [1 additional mark] - Sequencing of the questions is well-thought out as <u>simple questions (Gender, Age) are asked first to ease the respondent into the survey</u> before moving into specific opinions on community gardening. [1 mark] - Question 6 serves as a direct, logical <u>follow-up to Question 5</u>, allowing respondents to immediately justify or elaborate on the option they just selected [1 mark] OR - Question 6 “Explain your answer” was unclear as respondents may not know if the question was referring to them having to explain their answer to Qn 3, 4 or 5. [1 mark] - For <u>Question 2, there is no range of options given on age</u> (e.g 0 to 20, 21 to 40, 41 to 60, 60 and above) [1 mark] - Age could be sensitive information and respondents may be hesitant to reveal their actual age. [1 additional mark] OR - Students would find it difficult to <u>analyse and interpret the data easily as they are not put into fixed categories</u> [1 additional mark]
	(c)	The students tabulated the results for Question 5 in the questionnaire as shown in Fig. 1.4 (Insert). Describe a suitable presentation method to present the findings in Fig. 1.4 (Insert). [4]
		Award 1 mark for each description of up to a maximum of 3 marks. Award a maximum of 1 additional mark, for any further development

		- Students could draw a <u>comparison bar graph</u> [1 mark reserved] - They could draw the <u>X-axis (Horizontal)</u> titled ' likert scale scores' and Y-axis (Vertical) to represent the Number of Residents [1 mark] - Thereafter create <u>5 distinct categories</u> along the x-axis to represent the Scores 1 to 5. [1 additional mark] - Y-axis: with a scale of 0 to 20 [1 additional mark] - As there are <u>two different dates</u>, they will need to assign a unique color or <u>pattern</u> to each day to tell them apart [1 mark] For Pie Chart: [1 mark reserved] - Students have to calculate the total number of the residents [1 mark] - They would have to divide the sectors of the pie chart according to the likert scale scores (1 to 5). [1 mark] - Likert scale scores which have the larger number of residents would have a larger proportion, vice versa [1 mark] - This is done by calculating the angle of each sector to decide the proportion to draw. [1 additional mark] - Label and colour each sector. [1 mark]
	(d)	Study Fig. 1.5 (Insert), which shows some responses given by the residents on their views on community gardens in Question 6 of the questionnaire. The students decided to generate a word cloud with all the responses given by the residents. Explain how generating a word cloud helps the students analyze the responses collected from the residents [3]
		Award 1 mark for each explanation up to a maximum of 2 marks. Award a maximum of 1 additional mark, for any further development - With the large number of responses gathered, it may be <u>difficult to recognize the important points</u> in the text-based data [1 mark] - Word clouds allows students <u>to instantly identify the most dominant terms or sentiments shared by the residents</u> [1 mark] without having to manually read and count every single response - It can also help identify <u>words or ideas that the students might not have pre-emptively included</u> as checkbox options in their original survey design, opening up new viewpoints for their analysis. [1 additional mark] - The <u>bigger and bolder the word</u> appears, the <u>more often</u> it is mentioned in the responses. [1 mark]
	(e)	Taking into consideration the whole investigation conducted by the students, evaluate the validity of the students' findings on the growing importance of community gardens in Singapore residents' lifestyles. [6]
		Award 1 mark for each evaluation, up to a maximum of 6 marks. Valid: The data collected is largely valid as it supports the hypothesis.

		• Evidence (Fig 1.4): The total number of <u>residents who voted score strongly agree/agree (1 or 2)</u> was 60, <u>higher than those who voted score strongly disagree/disagree (4 or 5)</u> - which was 36 [1 additional mark]. • Fig. 1.5 showed how <u>many residents also commented positively</u> on community gardening helping them be more aware of their environmental footprint and making eco-conscious choices in their daily life. Hence suggesting the growing importance of community gardens in their lifestyles [1 mark] • The students also asked a total of 110 residents which is <u>large enough/representative enough of the neighbourhood's population</u> to generalize the findings [1 mark] Not valid • However the investigation may not be valid as: • the students only took the data over a span of 2 weekday afternoons which may limit the reliability of the data set as <u>other timings of the day, especially morning and evening OR weekends, is not covered</u> [1 mark] ○ This may result in students <u>not able to receive insights from other resident profiles</u> from the neighbourhood, which could have different points of view from those surveyed in the afternoon [1 additional mark] • Convenience sampling – as they will <u>only approach those that they seem friendly</u> and will only be able to interview those who are agreeable [1 mark] ○ the sample may have <u>some biasness</u> [1 additional mark] • The students <u>only surveyed one neighbourhood</u> hence the findings may not be <u>representative of the whole of Singapore</u>, whether community gardens does increasingly become important in Singapore residents' lifestyles.[1 mark]
		[Total: 20 marks]

1 Cluster 2: Tourism

(a)	Describe two characteristics of a tourist destination experiencing the consolidation stage.
	Award 1 mark for each description - Total annual tourist arrivals at destination outnumber the local population - Growth in annual tourist arrivals starts to slow - Tourism industry dominates the local economy - Tourism continues to employ a significant number of works and contributes significantly to the local economy - There is a slowing down in the number of attractions and facilities built - Majority of tourist facilities and hotels are often owned by large MNCs supporting large number of tourists
(b)	Study Fig. 2.1 (Insert), which shows an infographic on tourism dependence among European countries. Using Fig. 2.1 (Insert), describe the pattern of tourism dependence among European countries. [4]
	Award 1 mark for each description, up to a maximum of 3 marks Award a maximum of 1 additional mark for further development, where applicable - Southern European countries are generally more dependent on tourism than Northern and Western European countries. [1 mark], - o For example, Greece (21%), Croatia (25%), Spain (14%) and Italy (13%) have higher percentages of GDP contributed by tourism. [1 additional mark] - OR - Majority of the European countries, especially those in Northern and Western Europe have lower tourism dependence [1 mark], - o such as Ireland (4%), Poland (5%), the Netherlands (6%) and Sweden (8%). [1 additional mark] - Croatia has the highest tourism dependence among the countries shown [1 mark], - o with tourism contributing 25% of its GDP, while Ireland has the lowest, at only 4% [1 additional mark] - Several major European countries show moderate / similar dependence on tourism [1 mark] - o including the UK, France and Germany, where tourism contributes 9% of GDP [1 additional mark]
(c)	'Community-based tourism a more sustainable form of tourism development than Eco-tourism'. To what extent do you agree with this statement? Explain your answer.

Level	Marks	Generic Level Descriptors for 9-Mark AO3 Questions
3	7 - 9	Develops arguments that supports both sides of the discussion clearly using a range of points with <u>good elaboration</u> . <i>Examples</i> 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

Community-based tourism (CT) is a type of innovative small-scale tourism experience that is managed by local communities.

This includes homestays and agricultural tourism.

It aims to maximise local communities' involvement in tourism and the benefits to them, ensuring economic and social sustainability.

how does it ensure the different dimensions of sustainability

- Encourage the local community to participate in decision-making on tourism development in their community.
- Local communities have greater knowledge of their economic, social, and environmental needs.
- Hence, their decisions can help to ensure these needs are met in a sustainable way.
- For example, local communities can suggest cultural and nature-based experiences that can be developed without disrespecting their heritage and damaging the local environment.
- This ensures that locals continue to support and be involved in the tourism industry, and the environment continues to thrive and attract tourists, ensuring sustainable tourism development.
- Put in place measures to increase economic and social benefits to local communities.

benefits it can bring to the community/how tourists can also play a part

- Economic benefits:
 - Locals are encouraged to innovate, set up businesses (e.g. restaurants) and offer tourism experiences (e.g. homestays) to cater to the needs of tourists.
 - These businesses and tourism experiences provide employment to locals, minimise leakages and benefit locals economically.
 - o In agricultural tourism, tourists visit local farms to purchase local produce, and to participate in activities for education and enjoyment purposes such as farming using local techniques, harvesting crops and cooking them.
 - As such, local farmers benefit economically from higher incomes generated.
 - As locals continue to support and be involved in the tourism industry, sustainable tourism development is ensured.
- Social benefits:
 - Revenue generated from tourism can be directed to community projects such as funding schools and clinics.

- This improves the social well-being of the local community as they receive better education and healthcare.
- Educate and increase tourists' appreciation of local cultures and protection of the environment.
- Promote interactions between locals and tourists to develop respect for local cultures and the environment.

case study, limitations

Example:

- Through traditional homestays in the Binsar Wildlife Sanctuary, tourists can live with a local host family, and participate in daily activities related to local cultures and traditions.
- This helps them appreciate the local cultures and environment more, which motivates locals to preserve their heritage and environment.
- This ensures cultural and environmental sustainability.

Limitations:

1. Loss of culture

Without sufficient measures, when local communities offer tourism experiences out of their cultures, it may result in commodification, resulting in the loss of authenticity of their cultures.

2. Competition with large-scale tourism developments.

Often, local communities lack some of the necessary skills and finances to further develop the local tourism industry.

Many face difficulties in communicating with tourists and are ill equipped to undertake marketing campaigns in order to compete with other tourism developments, especially the large-scale ones.

They may lack the finances to start new tourism experiences or tourism-related businesses.

Large-scale tourism developments such as hotel resorts on the other hand, often have greater finances to undertake marketing campaigns (e.g. advertisements) and therefore attract more tourists.

Ecotourism is a form of sustainable tourism that often takes place in natural areas which are scenic and allows for tourists to experience nature.

It aims to conserve the natural environment while benefiting the local community, thus ensuring environmental, economic and social sustainability.

Ecotourism often involves many stakeholders depending on the projects undertaken.

The following are some of the strategies used to achieve the aims of ecotourism:

- Educate and increase tourists' appreciation of nature.
- Tours take place within natural areas for tourists to experience and interact with nature.
- This increases tourists' knowledge and appreciation of nature, which encourages tourists to take action to conserve and minimise damage to the environment.
- This ensures environmental sustainability.
- Put in place measures to minimise the negative impacts on the environment.
- Tourism revenue is channelled into the conservation of the natural environment such as by hiring local park rangers.
- Park rangers ensure laws set up to protect the environment are adhered to.

- Damage to the environment is minimised, ensuring environmental sustainability.

Example:

The Galapagos Islands in Ecuador attract many tourists for their unique flora and fauna.

To conserve this unique biodiversity, 97% of the islands' total area was declared a national park, with only 3% for humans to live on.

Authorities implemented some rules and regulations to protect the environment, such as:

Only a limited number of visitors is allowed in the park on any given day to minimise disturbances to the wildlife.

Tourists are required to pay an entrance fee of USD\$100 when visiting the park, and the revenue earned is used to fund conservation projects.

Tourists are not allowed to explore the islands on their own. A guide, who educates tourists, is required at each site.

Locals are also involved in the ecotourism industry by offering day tours and homestays to small groups of tourists.

Limitations:

- 1) Uncertainty over the continuity of efforts in conserving nature.

Ecotourism does not work when ecotours are overwhelmingly popular with tourists.

The presence of many tourists interacting with nature may destroy the very environment they seek to protect.

There may be a strong desire to earn profits from ecotourism which may lead to some aims of ecotourism being compromised, and nature may not be conserved.

2. Uncertainty over involving local communities.

Demand for manpower to meet the needs of tourists may cause some tourism-related businesses to hire non-locals.

This is especially so when locals are not sufficiently equipped with the skills and knowledge required, and authorities or businesses do not put in place measures to train locals.

Hence, the benefits to local communities are not maximised.

Possible evaluation:

- Students could look at how the success of each approach is dependent on the country's context; commitment of the stakeholders involved / the number of dimensions of sustainability the approach can address.

[Total: 15 marks]

2 Cluster 3: Weather and Climate

(a)	Explain how the Earth's angle of tilt causes climate variability. [3]
	Award 1 mark for each explanation, up to a maximum of 2 marks Award a maximum of 1 additional mark for further development of each explanation, where applicable

		- Earth's axis varies back and forth between 21.5deg and 24.5deg [1 mark] - o This happens every 41 000 years [1 additional mark] - When the tilt decreases, the hemispheres will lean further away from the sun [1 mark] - This leads to warmer winters and cooler summers [1 mark] - o This enables the build up of large ice sheets in higher latitudes, cooling the earth [1 additional mark]
	(b)	Explain how vulnerable conditions can increase the climate risk faced by people in a location. [3]
		Award 1 mark for each explanation, up to a maximum of 2 marks Award a maximum of 1 additional mark for further development of each explanation, where applicable Poverty - Extreme weather such as droughts and floods can result in <u>crop failures, reducing supply of food available</u> [1 mark] - o This may result in prices of food to increase [1 additional mark] - Those in poverty are often <u>unable to cope with the price increases</u> and are therefore <u>vulnerable to food shortages</u> [1 mark] - Those suffering from poverty may also <u>not be able to afford health resources</u> when they are infected with <u>diseases caused by climate change</u> [1 mark] Lack of access to piped water - Extreme weather such as cyclones and floods may result in the <u>contamination of water sources</u> such as wells [1 mark] - Communities especially in rural areas which are <u>not connected to piped water systems</u> rely on water sources such as rivers and wells [1 mark] - Hence when struck by extreme weather, they may not have access to clean water [1 mark] - They may be forced to drink from - in these contaminated sources of water, leading to the spread of diseases such as cholera [1 mark]
	(c)	Study Fig. 3.1, which shows a type of monsoon wind that affects Central Asia between June and September. Monsoon wind that affects Central Asia between June and September

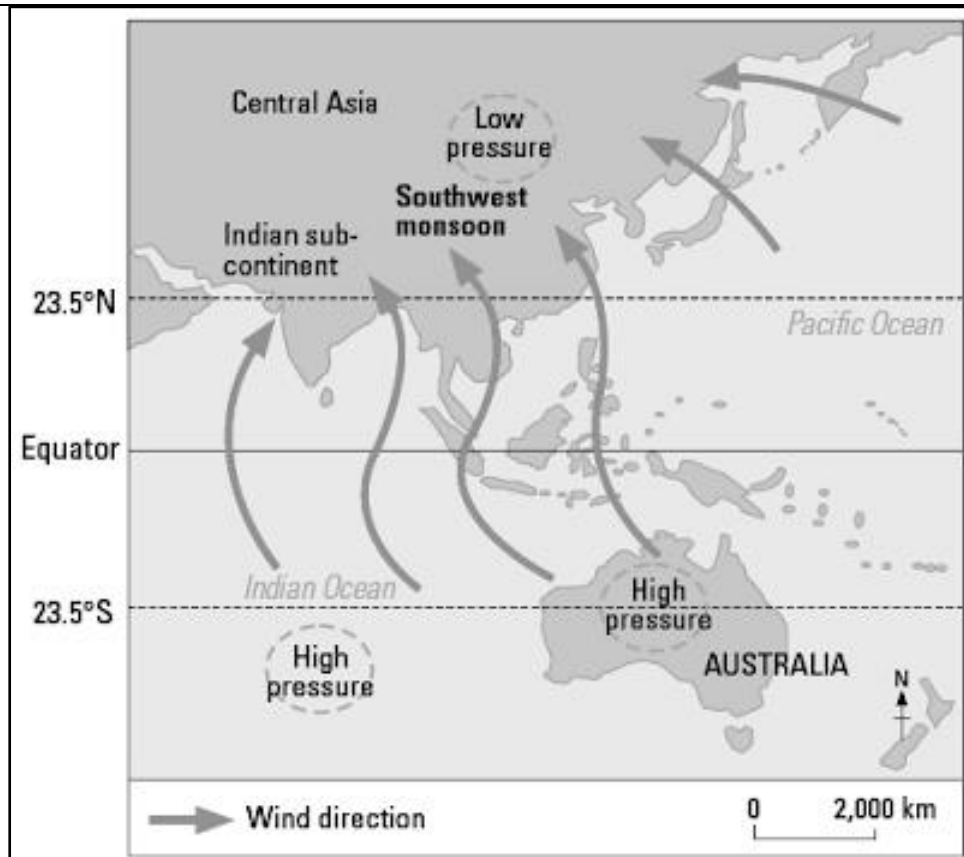


Fig. 3.1

With reference to Fig. 3.1, account for the high rainfall experienced in Central Asia between June and September. [4]

Award 1 mark for each explanation of Southwest monsoon formation, up to 3 marks
Award a max of 1 additional mark for a further development of each explanation, where applicable.

Between June and September,

- Temperature is high in Central Asia as it's experiencing summer and low in Australia as it's experiencing winter. [1 mark]
- Air over Central Asia is heated, becomes less dense and rises, forming area of lower pressure. Air over Australia cools, becomes denser and sinks, forming area of higher pressure. [1 mark]
- Since wind travels from region of higher to lower pressure [1 mark], air will move from Australia towards Central Asia
- As winds cross the Equator into the Northern Hemisphere, Coriolis force deflects the wind to the right [1 mark]
- and it becomes the Southwest monsoon
- Warm winds pick up moisture from Indian Ocean, bringing heavy rains to Central Asia.

(d) Study Fig. 3.2, which shows the location of the Patagonian Desert in Argentina. The Patagonian Desert receives about 500-700mm of rainfall a year.

Location of Patagonian Desert, Argentina

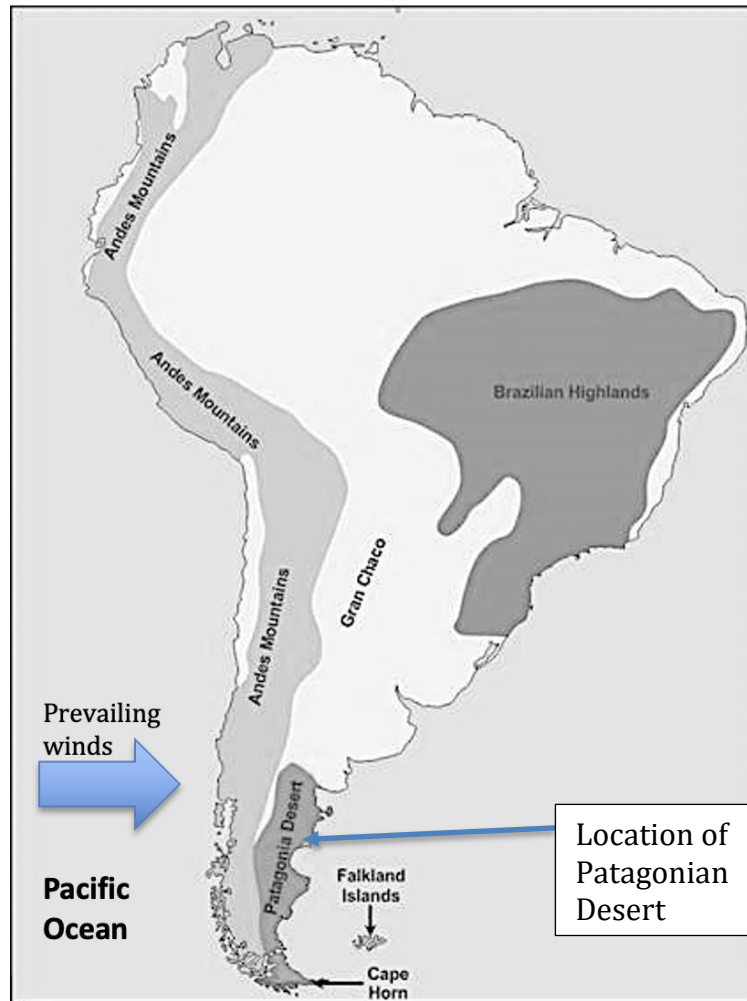


Fig. 3.2

(i) **Identify the type of rainfall** Patagonian Desert experiences. [1]

Relief rain

(ii) Using Fig. 3.2, account for the rainfall received in Patagonian Desert. [4]

Award 1 mark for each explanation, up to 4 marks.

- Prevailing winds pick up moisture over the Pacific ocean and push the moist air up the windward side of Andes Mountains [1 mark]
- The rising moist air cools and condenses on condensation nuclei at dew point temperature, forming clouds [1 mark]
- Water droplets in the clouds collide and coalesce [1 mark] and when they become large and heavy enough they fall to the ground as rain on the windward side
- As most of the moisture has fallen on the windward side, the leeward side (Patagonia desert) experiences dry descending air and is thus dry, only 500-700mm of rain a year [1 mark]

[Total: 15 marks]

End of Paper

Assessment Specification Grid

Question	Max Mark	Question Part	AO1	AO2	AO3
1	20	a		4	
		b		3	
		c		4	
		d	3		
		e			6
		TOTAL	3	11	6
2	15	a	2		
		b		4	
		c			9
		TOTAL	2	4	9
3	15	a	3		
		b	3		
		c	4		
		di		1	
		dii		4	
		TOTAL	10	5	0

AO1: $3 + 2 + 10 = 15$

AO2: $11 + 4 + 5 = 20$

AO3: $6 + 9 = 15$

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This image shows a full page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page, typical of notebook or legal stationery. There are no margins, text, or other markings on the page.

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Acknowledgements:

- Fig. 1.1 [https://www.streetdirectory.com/pdf/map-pdf/kampong\(eg\).pdf](https://www.streetdirectory.com/pdf/map-pdf/kampong(eg).pdf)
Fig. 1.2 <https://www.onemap.gov.sg/?lat=1.36528634266006&lng=103.935196033623>
Fig. 2.1 Adapted from <https://www.behance.net/gallery/9281073/ExploreIndonesia-with-Burufly-Travel-Infographic>
Fig. 2.2 <https://arival.travel/article/one-chart-to-rule-them-all-why-travelers-choose-one-experience-over-another/>
Fig. 2.3 https://www.researchgate.net/figure/Per-capita-disposable-income-of-Chinas-urban-residents-and-international-tourists_fig2_334103828
Fig. 3.1 <https://climatecharts.net/>
Fig. 3.2 <https://www.britannica.com/place/Patagonia-region-Argentina>