

MARKSCHEME

Class:



SENG KANG SECONDARY SCHOOL 2025 END-OF-YEAR EXAMINATION

GEOGRAPHY SECONDARY TWO G3

2nd October 2025

1 hour 20 minutes

Candidates answer on the Question Paper

READ THESE INSTRUCTIONS FIRST

Write your index number and name on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs, or rough working.
Do not use staples, paper clips, highlighters, glue, or correction fluid.
Use of calculator and geographical apparatus is allowed.
Answer all questions in this question paper.
The number of marks is given in brackets [] at the end of each question or part question.

For Examiner's use		
Section A		/17
Section B		/14
Section C		/14
Total		/45
%/Grade		/

Parent's / Guardian's Signature:

This document consists of **15** printed pages.

[Turn Over

Section A

1 Study Fig. 1.1, which shows the pattern of migration out from London in 2012,

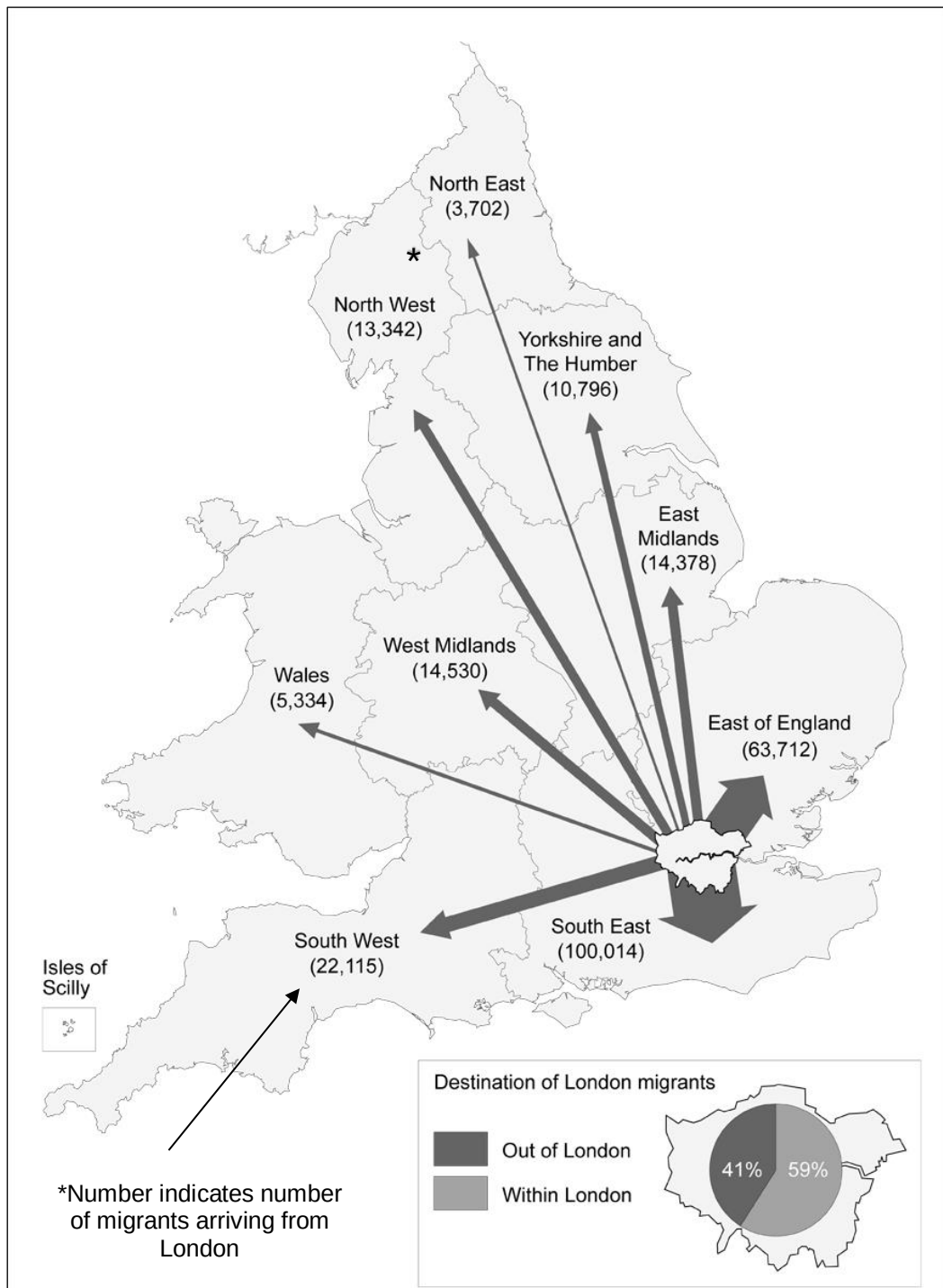
Pattern of migration out of London in 2012

Fig. 1.1

- (a) Using Fig. 1.1, describe the pattern of migration out of London in 2012.

Award 1 mark for each description of the pattern of migration to and from London in 2009, with supporting data, to a maximum of 4 marks.

Award a maximum of 2 marks for description without supporting data.

Possible responses include:

- Overall trend: **Neighbouring regions attracted the largest numbers/Further regions attract less numbers** [1]: [4]
- The **South East (100,014)** and the **East of England (63,712)** received by far the highest number of migrants from London. [1 mark]
- **Moderate migration to other regions:** The **South West (22,115)**, **West Midlands (14,530)**, **East Midlands (14,378)**, and **North West (13,342)** also attracted sizeable but much smaller numbers. [1 mark]
- Fewer people moved to **Yorkshire and The Humber (10,796)**, **Wales (5,334)**, and especially the **North East (3,702)**, indicating that long-distance moves were less common. [1 mark]
- **Exceptions/anomalies:** Wales despite being near has a smaller exchange of migration of 5334 migrants. [1 mark]

Question was poorly done (most students scored 2/4)

- Most students were able to identify highest and lowest migration with supporting data
- Most students missed out the anomaly and the overall trend being, the closer the region to London, the greater the migration numbers.

(b) Study Fig. 1.2 which shows the reasons for migration to and from London.

Reasons for migration to and from London



Fig. 1.2

(i) Using Fig. 1.2, calculate the population density of London.

Award a maximum of 1 mark for calculating the population density of London, rounding off to the nearest whole number.

[1]

Possible responses include:

- **5,661 people/km²**

*showing workings not necessary but encouraged.

Correct units are necessary, must round off to nearest whole number.

Surprisingly poorly done as most students failed to include units.

(ii) With reference to Fig. 1.2, **explain a push factor** that caused people to migrate out of London.

Award 1 mark for explanation of a push factor for the migration from London.

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

Possible responses include:

[2]

- The cost of living in London is expensive. [1 mark]
- This makes people want to migrate as they cannot afford their daily needs [1 additional mark]
- Commuting around London is difficult/costly [1 mark]
- This makes it inconvenient for people to travel to work to earn a living/meet their needs [1 additional mark]
- There is a lot of congestion in London [1 mark]
- This makes it stressful/difficult for people to travel to work to earn a living/meet their needs/ emits high level of pollution which can deteriorate health [1 additional mark]

Overall, fairly done well. Most students were able to identify the cost but failed to provide supporting reason why cost is a push factor. Quoting the numbers is not sufficient for explanation.

(c) Explain how urban areas like London city depend on rural areas.

Award 1 mark for each explanation on why London city is still heavily reliant on its rural areas.

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

Possible responses include:

- London is an urban area that does not have that space to grow crops [2]
- for food/rural areas have plenty of space for farms [1 mark]
- Therefore, London must rely on rural areas to import food from farmlands [1 additional mark]

Question was done well. Almost all students could identify that the dependence on rural for food due to plentiful space as the reason.

2 Study Fig. 2.1, which shows the changes in the annual income generated from the various types of technological innovation from 2019 to 2025.

[Turn Over

Changes in the annual income generated from the various types of technological innovation from 2019 to 2025

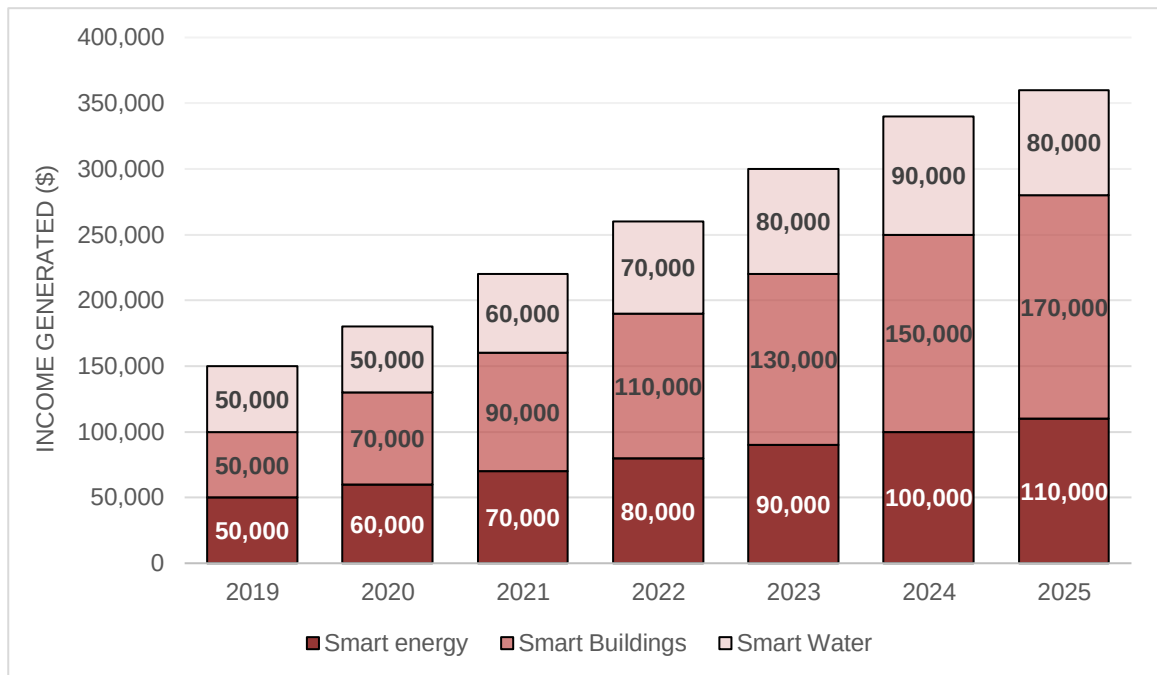


Fig. 2.1

- (a) Using Fig. 2.1, **describe** the **changes** in the annual income generated from the various types of technological innovation from 2019 to 2025.

Award 1 mark for each description, with supporting data, of the changes in the annual income generated from various technological innovation types from 2019 to 2025 to a maximum of 3 marks.

Award a maximum of 2 marks for description without supporting data.

Possible responses include:

- **Overall trend:** Income from all three technological innovation types (Smart energy, Smart buildings, Smart water) **increased steadily** from 2019 to 2025. Smart energy grew from \$50,000 to \$80,000. [3]
- **Largest growth: Smart buildings** showed the **largest growth**, rising sharply from \$50,000 in 2019 to \$170,000 in 2025, becoming the biggest contributor to total income.
- **Smallest growth: Smart water** increased **more slowly** compared to the other two, rising from \$50,000 in 2019 to \$80,000 in 2025, with growth levelling off after 2023.
- **Exception/anomaly: Smart water** experienced a decrease from \$90,000 in 2024 to \$80,000 in 2025 or remained constant at \$50,000 from 2019 to 2020.

This question was poorly done. Most student misinterpreted the graph, taking 360,000 as the total increase in income when students should instead be analysing the increase for each tech innovation type.

Students should also be pointing out significant changes (such as highest, lowest increase) rather than point out the increase/decrease for each innovation type.

- (b) Suggest how increasing educational opportunities in cities can result in greater technological innovation.

Award max 1 mark for suggesting how increasing educational opportunities in cities can result in greater technological innovation.

Possible responses include:

- Increasing educational opportunities increases the number of skilled/knowledgeable workers which increases the likelihood of/create opportunities for more innovation. [1]

Question was well done. Most students could link education opportunities to gaining knowledge and skills which helps increase tech innovation.

- (c) Study Fig. 2.2 which shows a strategy to manage the pond environment in Pang Sua, a neighbourhood in Singapore sustainably.

**Strategy to manage the environment in Pang Sua,
Singapore sustainably**



Fig. 2.2

With reference to Fig. 2.2, evaluate the effectiveness of the strategy in managing the environment in Pang Sua sustainably.

[Turn Over

Award 1 mark for each explanation for or against the effectiveness of the strategy in managing the environment in Pang Sua sustainably

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

Possible responses include:

For:

- The water treatment ponds helps to channel and collect rainwater and excess nutrients [1 mark]
- This prevent rainwater from mixing with nutrients and flow into the reservoir. [1 additional mark] [4]
- The plants help to purify the water. [1 mark]
This ensures nutrients do not pollute the water in the reservoirs. [1 additional mark]
- The water plants do not require much maintenance as they are watered by the pond [1 mark]
- The water plants absorb nutrients from waste of animals in the pond [1 mark]

Against:

- The cost of setting up such farms may be expensive [1 mark]
- Setting up such farms requires the cooperation of various stakeholders [1 mark]
- This can make the buy in of such projects challenging if different stakeholders have differing needs [1 additional mark]

Question was poorly done. Only a handful of students correctly identify the pond management strategy and elaborated on its strengths and limitations.

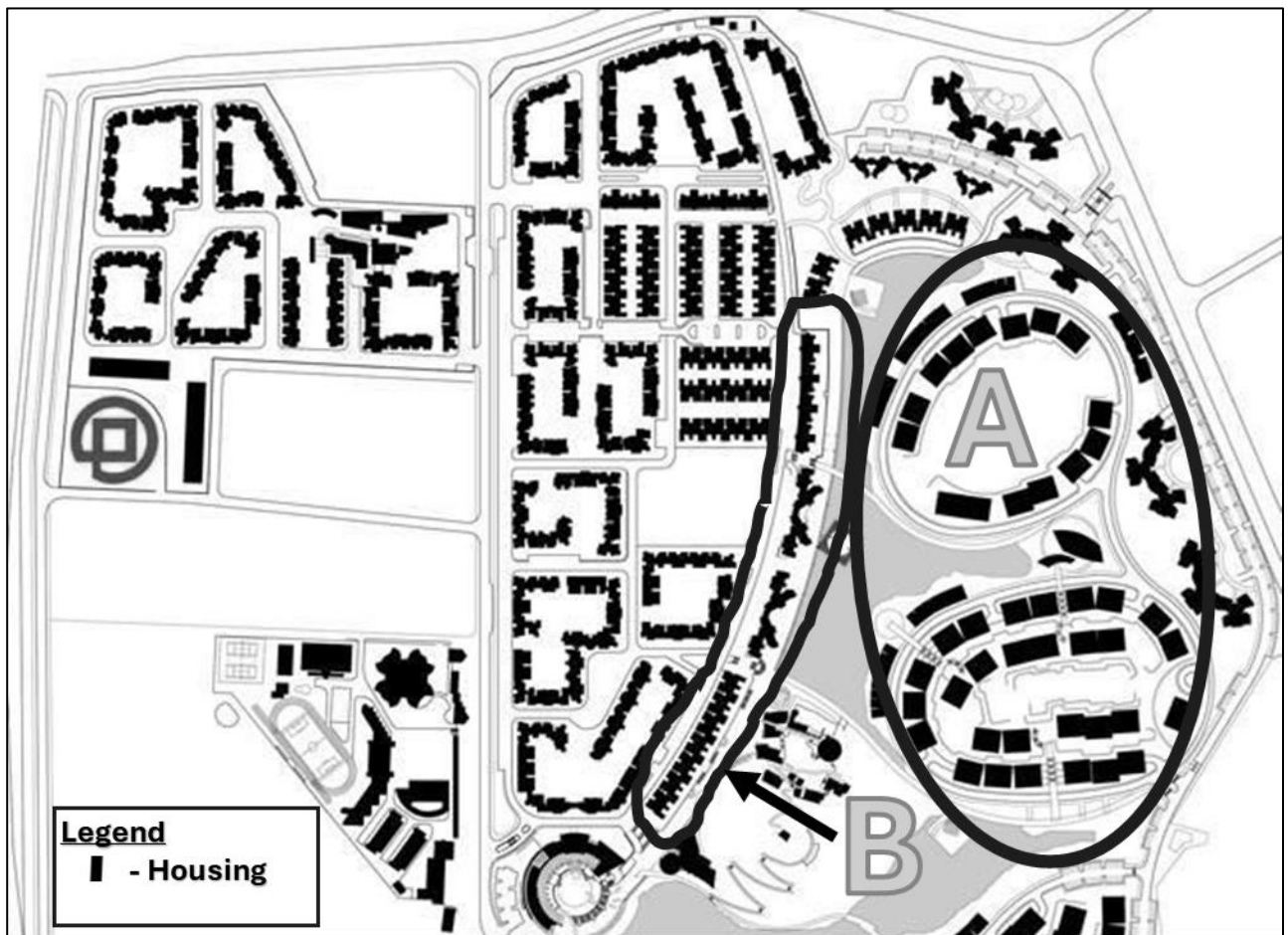
Most students linked it to S1 Ecosystem which is not the focus of the question. Some marks were awarded for stating the ability of the water plants to sustain itself which is a strength of the strategy.

Students should be familiar with the syllabus and correctly identify the content tested.

Section B

- 3 Study Fig. 3.1, which shows a map of a neighbourhood in Guangzhou, China

Map of a neighbourhood in Guangzhou, China



[Turn Over

Fig. 3.1

- (a) (i) With reference to Fig. 3.1, state the spatial pattern of the housing in area A.

Award a maximum of 1 mark for stating the spatial pattern of the housing in area A.

[1]

Possible responses include:

- Circular/Oval [1 mark]
- Cluster [1 mark]
- Peripheral [1 mark]

Do not accept: spherical (Not 3D)

Question was done well.

- (ii) With reference to Fig. 3.1, state the spatial pattern of the housing in area B.

Award a maximum of 1 mark for stating the spatial pattern of the housing in area B.

[1]

Possible responses include:

- Linear [1 mark]
- Straight [1 mark]

Question was done well.

- (b) Study Fig. 3.2 which shows an article about a particular housing development in a neighbourhood of Guangzhou, China.

**Article about a particular housing development in a
neighbourhood of Guangzhou, China**

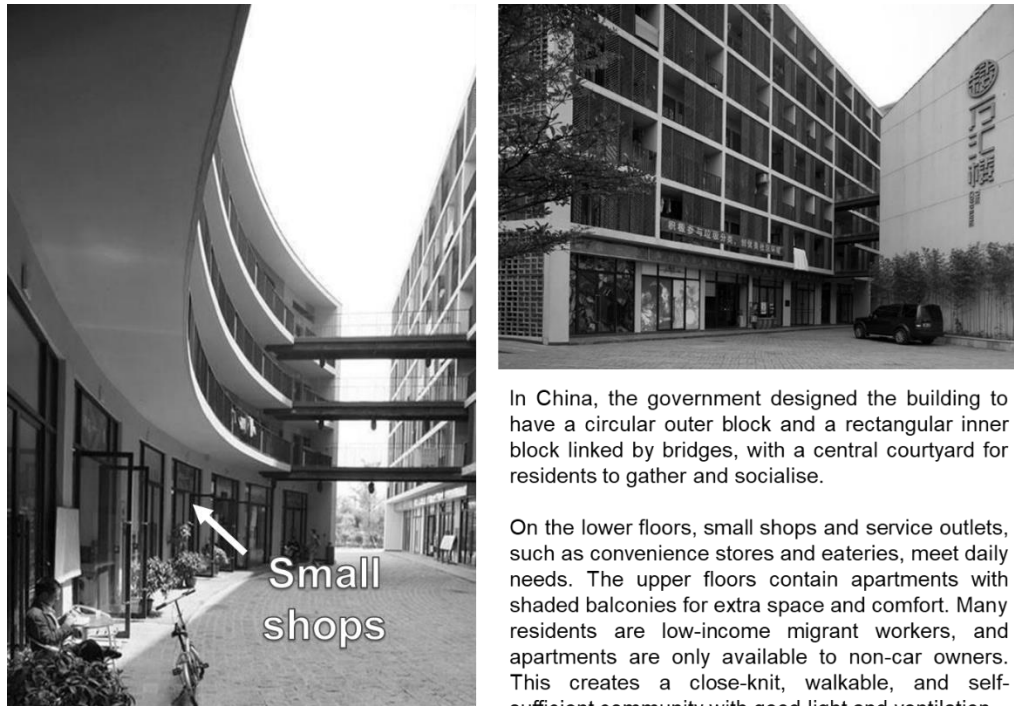


Fig. 3.2

Using Fig. 3.2, explain how public developers can meet the needs of the people when developing housing.

Award 1 mark for each explanation, with supporting data, on how public developers can meet the needs of the people when developing housing to a maximum of 4 marks

Award a maximum of 2 marks for explanation without supporting data.

Possible responses include:

- Presence of amenities nearby makes life easier/convenient for the people [1 mark] [4]
- This can be seen through the small shops and service outlets like convenience stores and eateries that meet daily needs [1 additional mark] → *evidence*
- Presence of social spaces/communities help to meet social needs [1 mark]
- The central courtyard for people to gather and socialise help foster community spirit and sense of belonging [1 additional mark]
- Shaded balconies provide comfort [1 mark]
- It is made affordable [1 mark] so that low income workers and no car owners can afford to pay for a place to live [1 additional mark]

Question was done fairly well. Most students were able to identify the amenities that met basic and social needs. However, they also needed to elaborate with examples to score the full mark for each point.

- (c) Explain how providing financial support can increase the supply of formal housing.

Award 1 mark for each explanation on providing financial support can increase the supply of formal housing.

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

[2]

Possible responses include:

- Providing financial support lowers the cost of building houses [1 mark]
- This encourages developers to build more houses [1 additional mark] or
- This encourages developers to sell houses at affordable prices [1 additional mark]

Most students could only identify that providing financial support can make housing affordable. However, they fail to elaborate how financial support allows developers to lower the cost of building houses so that they can build more houses.

- 4 Study Fig. 4, which shows the development of Dover for new HDB estates from March to July in 2023.

Development of Dover for new HDB estates from March to July in 2023

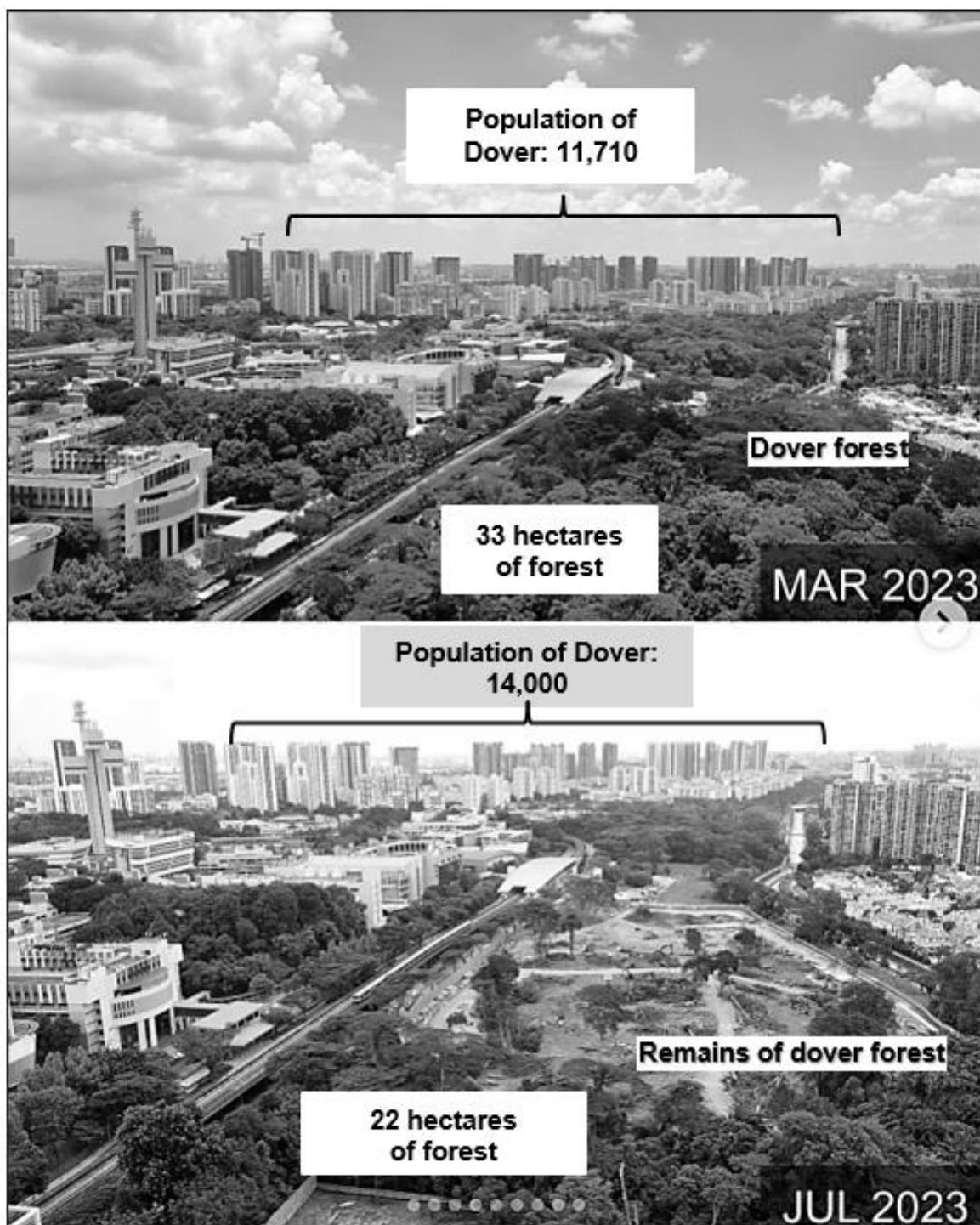


Fig. 4

- (a) With reference to Fig. 4, explain the impact of housing on the environment.

Award 1 mark for each explanation of the impact of housing on the environment

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

Possible responses include:

- In order to make space for housing, land needs to be cleared leading to deforestation [1 mark]
- This results in loss of habitat for wildlife/release of greenhouse gases which leads to global warming [1 additional mark]

Question was done well.

- (b) Evaluate the effectiveness of integrated land use planning as a sustainable management strategy for housing.

Award 1 mark for each explanation for or against the effectiveness of integrated land use planning as a sustainable management strategy for housing

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

Possible responses include:

For:

- Integrated land use planning is the process by which different groups of people come together to decide how the city should be developed. This helps to manage and coordinate different activities in a sustainable way [1 mark]
- **In doing so**, this helps to meet the economic, social, and environmental needs of people [1 additional mark]
- There would be less conflicts between the different groups of people. [1 additional mark]

Against:

- This is difficult to achieve because it requires a lot of coordination between different groups of people. [1 mark]
- This is difficult to achieve because different stakeholders have competing or different interest, needs and perspectives. [1 mark]

As any evaluation question, question was done poorly. Most students did not understand the concept of integrated land use planning and went off topic to discuss how the strategy saves space. Many did not explain the limitation of the strategy either.

Section C

- 5 Study Fig. 5, which shows the map of transport network system of freight ships and their connecting routes to ports across the world.

**Map of transport network system of freight ships
and their connecting routes to ports across the world**



Fig. 5

- (a) Using Fig. 5, describe the type of connection present in A.

Award 1 mark for each description of the type of connection present in A.
Award a maximum of 1 mark for description without supporting data.

Possible responses include:

- The type of connection present in A shows a point-to-point connection [1 mark]
- Shanghai and Tokyo are connected directly without interruption of services [1 additional mark]

[2]

Question was fairly done well. While many students could identify the direction connection between Tokyo and Shanghai, they did not identify that it is point to point. Some students misidentified as unimodal. Some students did not mention the port cities either.

- (b) Using Fig. 5, describe the type of connection present in B.

Award 1 mark for each description of the type of connection present in B.
Award a maximum of 1 mark for description without supporting data.

Possible responses include:

- The type of connection present in B shows a hub-and-spoke connection [1 [2] mark]
- Halifax and New Orleans are connected through an intermediary location called a hub which is New York [1 additional mark]

Question was fairly done well. While many students could identify hub and spoke connection, they did not mention which port city is the hub.

Some students misidentified as intermodal. Some students did not mention the port cities either.

- (c) Study Fig. 5.2 which shows an excerpt describing the characteristics of the port of New York

Excerpt describing the characteristics of the port of New York

The Port of New York has ships arriving and leaving almost every hour, which keeps goods moving in and out quickly with little waiting time. It is connected to more than 80 international ports and over 35 inland rail terminals, so goods from New York can reach many countries and travel smoothly into the rest of the United States. The port can handle more than 7 million containers each year, with deep-water berths that allow some of the world's largest ships to dock. Modern cranes, wide container yards, and direct highway links also help speed up the loading and transport of goods, making New York one of the busiest and most reliable freight ports.

Fig. 5.2

Award 1 mark for suggestion and 1 mark for explanation on the factor that would make New York's transport infrastructure good quality.

Award a maximum of 1 additional mark for explanation on the quality of transport infrastructure for New York to be a major port.

Possible responses include:

- New York port needs to have high frequency of freights in and out of the port. [1 mark]
- This ensures the port is able to service as many freights as possible [1 [2] additional mark]
- New York port needs to have high coverage [1 mark]
- This ensures the port reach as many ports as possible to transport goods and services [1 additional mark]
- New York port needs to have high capacity [1 mark]
- This ensures the port is able to receive as many freights as possible[1 additional mark]
- New York Port is very convenient [1 mark]

- It is connected to many ports so goods can be transported to as many places and smoothly as possible [1 additional mark]

Students need to read the question carefully and identify the factor. Many students scored $\frac{1}{2}$ marks only as they listed the details without identifying the overall quality of transport.

- 6 Study Fig. 6, which shows the waiting times at Tuas and Woodland checkpoints between Singapore and Johor Bahru on Dec 12, 2022.

Waiting times at Tuas and Woodland checkpoints between Singapore and Johor Bahru on Dec 12, 2022

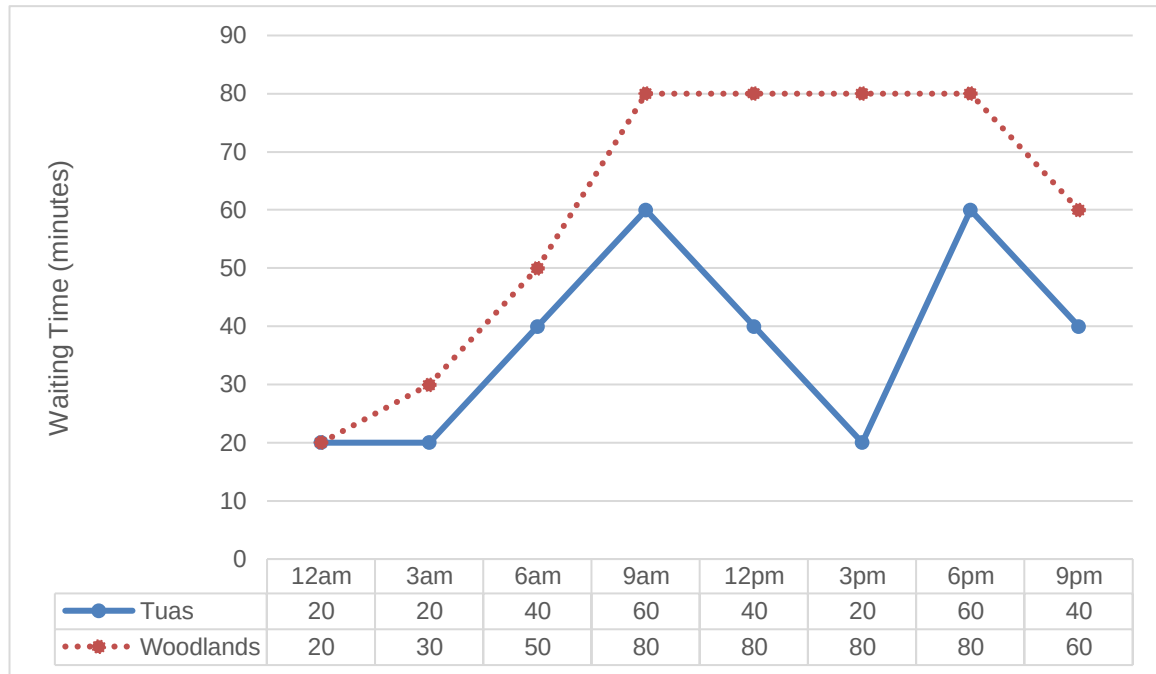


Fig. 6

- (a) (i) Using Fig. 6, compare the waiting times between Tuas and Woodland checkpoints on Dec 12, 2022.

Award 1 mark for each comparison, with supporting data, of the waiting times between Tuas and Woodland checkpoints on Dec 12, 2022 to a maximum of 3 marks.

Award a maximum of 2 marks for comparison without supporting data.

Possible responses include:

- **Overall**, Woodlands consistently had **longer waiting times** throughout the day compared to Tuas, especially in the afternoon when Tuas dropped to 20 minutes while Woodlands remained at 80 minutes. [1 mark]
- **Similarity**: [1 mark each]
 - At 12am and 3am, both Tuas and Woodlands had the same waiting time of **20 minutes**. [3]
 - From 6am to 9am, waiting times at both checkpoints increased, Woodlands (20 to 60 minutes), Tuas (20 to 80 minutes).
 - By 9pm, waiting times fell at both checkpoints, with Woodlands at 60 minutes and Tuas at 40 minutes.
- **Differences**: [1 mark each]

- Between **12pm and 3pm**, Tuas waiting times dropped sharply to **20 minutes**, while Woodlands remained high and constant at **80 minutes**.
- At **6pm**, waiting time at Tuas rose again to **60 minutes**, while Woodlands stayed at **80 minutes**.

Most students scored 2/3 marks.

While students were able to identify Tuas is shorter than woodlands, they did not provide supporting data.

Some students got into the habit of listing data without any comparison between Tuas and Woodlands.

Many students however, could identify the similarity between Tuas and Woodlands being 20minutes from 12am to 3am.

- (ii) With reference to Fig. 6, describe the impacts of the waiting time on the motorists at Woodlands checkpoint on Dec 12, 2022 from 9am to 6pm. Award 1 mark for each description of the impacts of the waiting time on the motorists at Woodlands checkpoint on Dec 12, 2022 from 9am to 6pm to a maximum of 2 marks.

Possible responses include

- Long waiting time can tire motorists [1 mark]
- Motorists may also become frustrated and display aggressive behaviour/lose concentration [1 mark] [3]
- This can increase the risk of traffic accidents [1 additional mark]
- Motorist may end up wasting fuel [1 mark]
- Motorist may end up being late to their destination [1 mark]
- Motorist may breathe in pollutants from the emissions at the congestion [1 mark]
- Motorist on bikes may experience heat stroke/sun burn from waiting in the sun for very long [1 mark]

Many variation of answers were accepted as long as clear link between length of time waiting and impact on motorist is shown.

Inconvenience is not accepted as it is not a material impact.

Some students mistook motorist and bike riders.

- (iii) Experts claim that long waiting time can have an impact on the environment. Using your own knowledge, explain why. Award 1 mark for each explanation for how long waiting time can have an impact on the environment. Award a maximum of 1 additional mark for further development of each explanation, where applicable.

Possible responses include:

- When vehicles remain stationary or constantly start and stop due to congestion, more fuel is burnt and wasted [1 mark]
- This leads to more carbon dioxide emissions and worsened air quality/lead to climate change [1 additional mark]

Most students scored $\frac{1}{2}$ marks as they did not elaborate the cause of the emission which is the burning of fossil fuel.

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

Copyright Acknowledgments

Question 1	Fig. 1.1	https://fullfact.org/news/how-many-londoners-move-other-parts-uk/ https://www.agencycentral.co.uk/articles/why-are-people-leaving-london/
Question 2	Fig. 1.2	
	Fig. 2.1	https://www.verizon.com/business/resources/whitepapers/the-evolution-of-smart-cities-delivering-on-the-promise/
Question 3	Fig. 2.2	https://www.nas.gov.sg/archivesonline/data/pdfdoc/20170325002/Press%20Release-PangSua.pdf
	Fig. 3.1 Fig. 3.2	https://www.archnet.org/sites/6457?media_content_id=65573
Question 4	Fig. 4	https://www.instagram.com/p/CuVXulayj5f/
Question 5	Fig. 5	https://www.hapag-lloyd.com/en/online-business/digital-insights-dock/insights/2024/10
Question 6	Fig. 6	https://www.channelnewsasia.com/singapore/causeway-heavy-traffic-jam-woodlands-tuas-johor-bahru-malaysia-school-holidays-3138831

Table of specifications

Section	Structured Questions	AO1	AO2	AO3
A	1(a)		4	

	1(b) (i)		1	
	1(b) (ii)	2		
	1 (c)	2		
	2(a)		3	
	2(a)	1		
	2 (c)			4
	Total	5	8	4
B	3(a) (i)	1		
	3(a) (ii)	1		
	3(b)		4	
	3(c)	2		
	4(a)	2		
	4(b)			4
	Total	6	4	4
C	5(a)		2	
	5(b)		2	
	5(c)	2		
	6(a) (i)		3	
	6(a) (ii)	3		
	6(a) (iii)	2		
	Total	7	7	
Grand Total		18	19	8