Exemplar 5
Secondary 2 – G3 / Exp Humanities Geography
End of Year Examination
Question Paper

Section A: Housing

Answer all questions in this section.

1 (a) Study Figs. 1.1 and 1.2, which show images of two different types of areas.

Fig. 1.1

Fig. 1.2

		(i)	**Using Figs. 1.1 and 1.2, describe two differences in the features of rural and urban areas.**	[2]
		(ii)	**Using examples, explain two strategies in the building of cities that can be used to manage the impact of natural hazards.**	[4]

(b) Study Fig. 1.3, which shows a pie chart showing the distribution of the total global urban slum population across regions in the world.

Distribution of the total global urban slum population across regions in the world

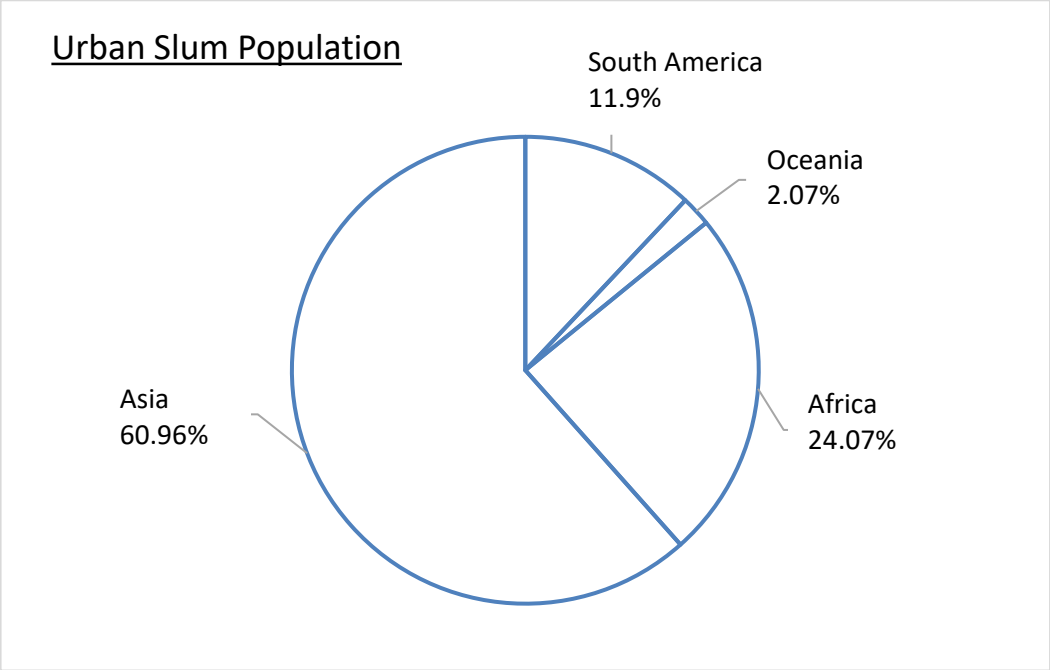

Fig. 1.3

(i)	**Using Fig. 1.3, describe the distribution of the total global urban slum population across regions in the world.**	[2]
(ii)	**Explain how government funding can be used to improve the conditions of slums.**	[4]

(c) Study Figs. 1.4 and 1.5, which show photographs of features that can be found in sustainable housing in a neighbourhood.

Features of sustainable housing in a neighbourhood

Fig. 1.4

Fig. 1.5

		(i)	**Identify the features of sustainable housing shown in Figs. 1.4 and 1.5.**	[2]
		(ii)	**With reference to Figs. 1.4 and 1.5, explain how the sustainable housing features identified in Part 1(c)(i) can improve the quality of life of residents in the neighbourhood.**	[4]

Section C: Transport

Answer all questions in this section.

2 (a) Study Figure 2.1, which shows a map showing how people taking the Japan Railway (JR) in Kyoto (Japan) can transfer to another type of transport to reach Ginkakuji Temple.

Map showing how people should transfer from the Japan Railway (JR) to another type of transport to reach Ginkakuji Temple

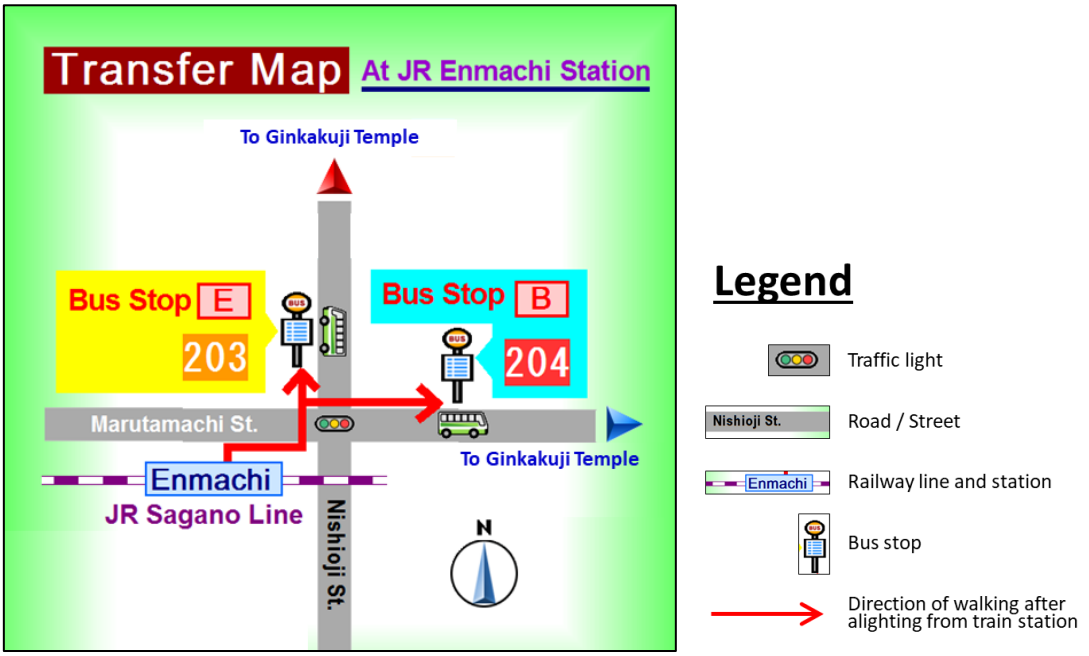

Fig. 2.1

		(i)	**Using Fig. 2.1, identify the type of transport people should transfer to in order to reach Ginkakuji Temple, after alighting at JR Enmachi Station.**	[1]
		(ii)	**With reference to Fig. 2.1, explain why seamless intermodal connectivity is important in a transport system in a city.**	[2]
		(iii)	**Explain the roles that transport systems play.**	[4]

(b) Study Fig. 2.2, which shows the number of fatalities from traffic accidents in Singapore from 2012 to 2021.

Number of fatalities from traffic accidents in Singapore from 2012 – 2021

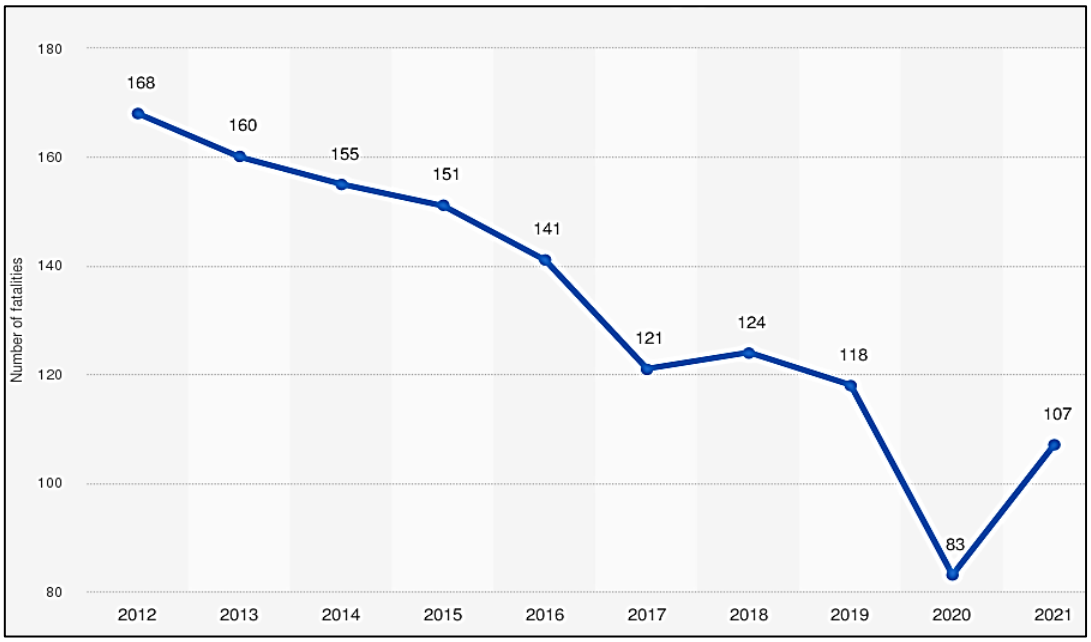

Fig. 2.2

(i) **Using evidence from Fig. 2.2, describe the trend in the number of fatalities from traffic accidents in Singapore from 2012 to 2021.** [3]

(ii) **Apart from traffic accidents, explain other ways in which transport systems can have negative impacts on people living in cities.** [4]

(c) Study Fig. 2.3, which shows an extract from a news report about the use of the NaviLens app at a bus interchange in Singapore.

Extract of article from The Straits Times

SMRT rolls out app to help visually impaired commuters at Woodlands transport hub

Published 31 May 2022

SINGAPORE - An app that helps visually impaired people navigate SMRT's bus interchange at Woodlands Integrated Transport Hub (WITH) has been rolled out to the public after a trial that began last year.

The app, called NaviLens, has been expanded to cover all 14 berths at the transport hub, after a trial involving commuters and covering three berths.

The NaviLens app - which was designed in Spain - directs commuters to the berth they wish to board at, by detecting marker tags embedded in the tactile paving at the interchange.

SMRT said it will roll out the app to the rest of its bus interchanges at Bukit Panjang and Choa Chu Kang by the end of this year.

Fig. 2.3

		The NaviLens app shows one way in which research and development (R&D) can be used to make transport systems more sustainable. Using Fig. 2.3, suggest how R&D in transport systems can improve the mobility for different groups of people in Singapore.	[4]

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Section A: Housing

Answer all questions in this section.

1 (a) Study Figs. 1.1 and 1.2, which show images of two different types of areas.

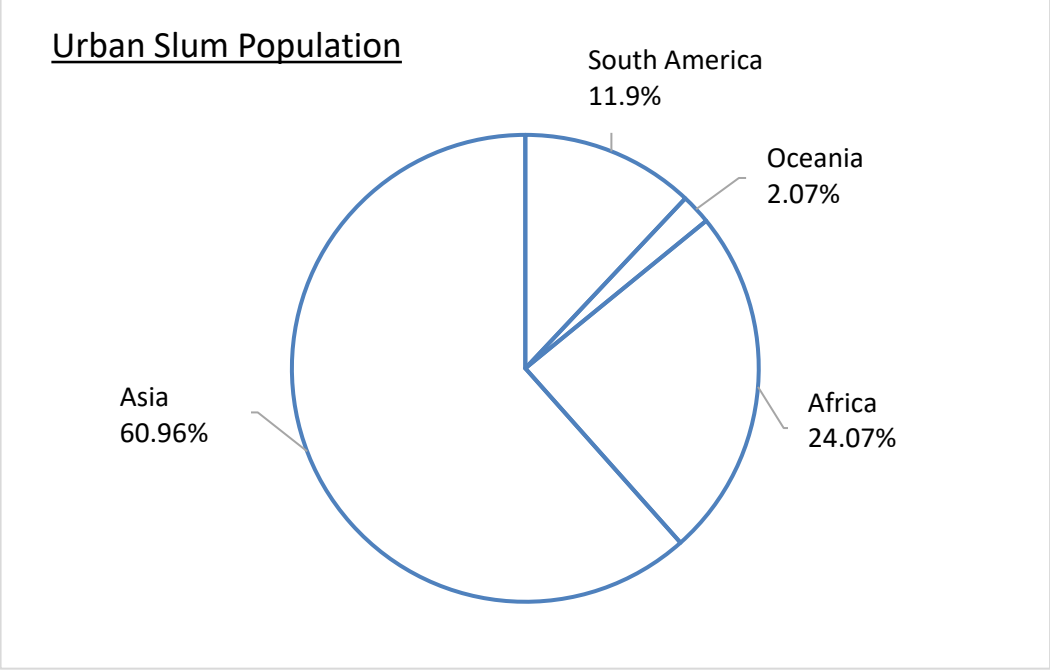
Fig. 1.1

Fig. 1.2

(i) **Using Figs. 1.1 and 1.2, describe two differences in the features of rural and urban areas.** **A03** [2]

Award 1 mark for each description of a difference in the features of rural and urban areas.

Possible responses:

			• Urban areas tend to be more densely populated than rural areas [1 mark]. • There are more high-rise buildings in urban areas, while rural areas tend to feature more low-rise buildings[1 mark]. • Buildings tend to be built further apart in rural areas than urban areas [1 mark]. • There are more open spaces / areas of vegetation in rural areas than urban areas [1 mark].	
		(ii)	**Using examples, explain two strategies in the building of cities that can be used to manage the impact of natural hazards. A02** Award 1 mark for each explanation of a strategy in the building of cities that can be used to manage the impact of natural hazards, to a maximum of 2 marks. Award a maximum of 1 additional mark for further development of each explanation of a strategy, where applicable. Possible responses: • The use of better quality building materials can be used construct earthquake-resistant buildings in cities [1 mark]. For example, oil dampers and break dampers are used in earthquake-prone cities to help buildings resist swaying due to tremors [1 additional mark]. • Cities can also make use of land-use planning to prevent the building of housing or transport infrastructure in unsafe locations that are prone to hazards [1 mark]. For example, authorities in New York City have restricted development in coastal areas of the city that are prone to coastal erosion hazards [1 additional mark].	[4]
	(b)	Study Fig. 1.3, which shows a pie chart showing the distribution of the total global urban slum population across regions in the world. **Distribution of the total global urban slum population across regions in the world**  **Fig. 1.3**		

		(i)	**Using Fig. 1.3, describe the distribution of the total global urban slum population across regions in the world. A03** Award 1 mark for each description of the distribution of the total global urban slum population across regions in the world. Possible responses: • The total global urban slum population is unevenly distributed around the world [1 mark]. • The highest proportion of the total global urban slum population is found in Asia at 60.96% [1 mark]. • The lowest proportion of the total global urban slum population is found in Oceania at 2.07% [1 mark].	[2]
		(ii)	**Explain how government funding can be used to improve the conditions of slums. A02** Award 1 mark for each explanation of how government funding can be used to improve the conditions of slums, to a maximum of 4 marks. Award a maximum of 1 additional mark for further development of each explanation, where applicable. Possible responses: • Government funding can be used to improve access to basic infrastructure and services in slums [1 mark]. For example, slum upgrading programmes in Brazil's Favela Bairro helped to provide basic infrastructure and services such as lighting, sewerage, and social services [1 additional mark]. • Government funding can also be used to improve access to clean water and sanitation services in slums [1 mark]. Such improvements can raise health levels and reduce the threat of disease to the people living in slums [1 additional mark].	[4]
	(c)	Study Figs. 1.4 and 1.5, which show photographs of features that can be found in sustainable housing in a neighbourhood. **Features of sustainable housing in a neighbourhood**  **Fig. 1.4**		

Fig. 1.5

		(i)	**Identify the features of sustainable housing shown in Figs. 1.4 and 1.5. A03** Award 1 mark for each identification of a feature of sustainable housing that can be observed from the photographs. Possible responses: • Wheelchair-friendly playground [1 mark] • Inclusive playground [1 mark] • Recycling bin/service/point [1 mark]	[2]
		(ii)	**With reference to Figs. 1.4 and 1.5, explain how the sustainable housing features identified in Part 1(c)(i) can improve the quality of life of residents in the neighbourhood. A03** Award 1 mark for each explanation of how the sustainable housing features identified in **Part 1(c)(i)** can improve the quality of life of residents in the neighbourhood, to a maximum of 2 marks. Award a maximum of 1 additional mark for further development of each explanation, where applicable. Possible responses: • A playground that is accessible to all residents regardless of age and physical ability can foster greater interaction and understanding of one another [1 mark]. This enables all residents to feel at ease in their neighbourhood [1 additional mark]. • An inclusive playground provides a common space for all children to play together, regardless of their age or physical ability [1 mark]. This can help to develop a sense of belonging or inclusion in the neighbourhood [1 additional mark]. • Having recycling bins in neighbourhood can encourage good waste management practices [1 mark]. When people recycle, less waste is generated which can improve the cleanliness and long-term environmental sustainability of the neighbourhood [1 additional mark].	[4]

Section C: Transport

Answer all questions in this section.

2 (a) Study Figure 2.1, which shows a map showing how people taking the Japan Railway (JR) in Kyoto (Japan) can transfer to another type of transport to reach Ginkakuji Temple.

Map showing how people should transfer from the Japan Railway (JR) to another type of transport to reach Ginkakuji Temple

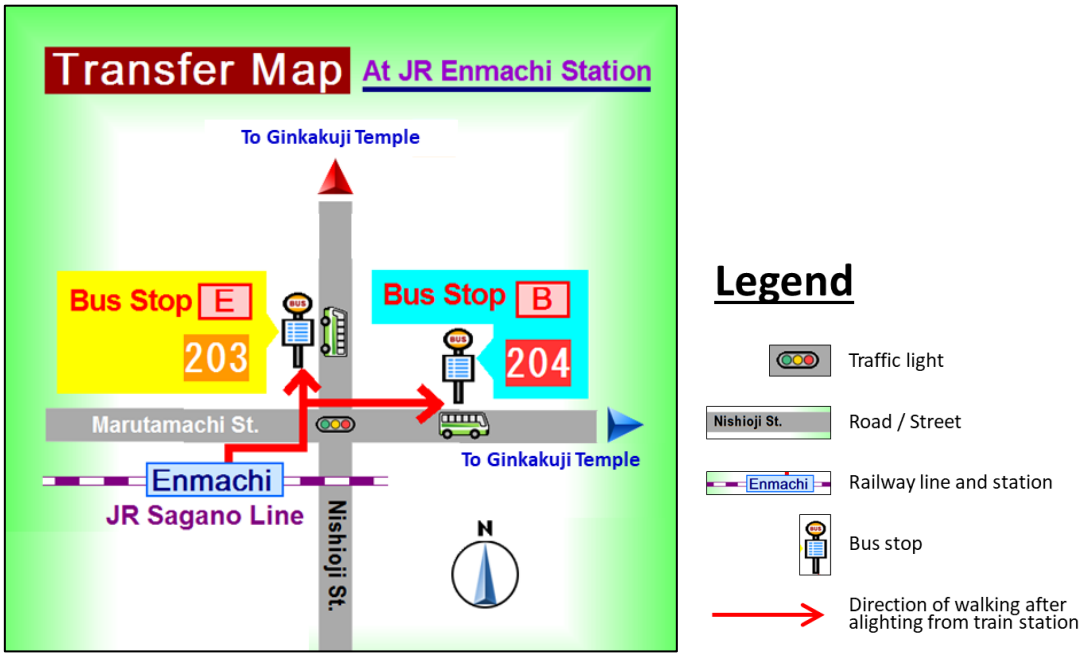


Fig. 2.1

(i) **Using Fig. 2.1, identify the type of transport people should transfer to in order to reach Ginkakuji Temple, after alighting at JR Enmachi Station.** A03 [1]

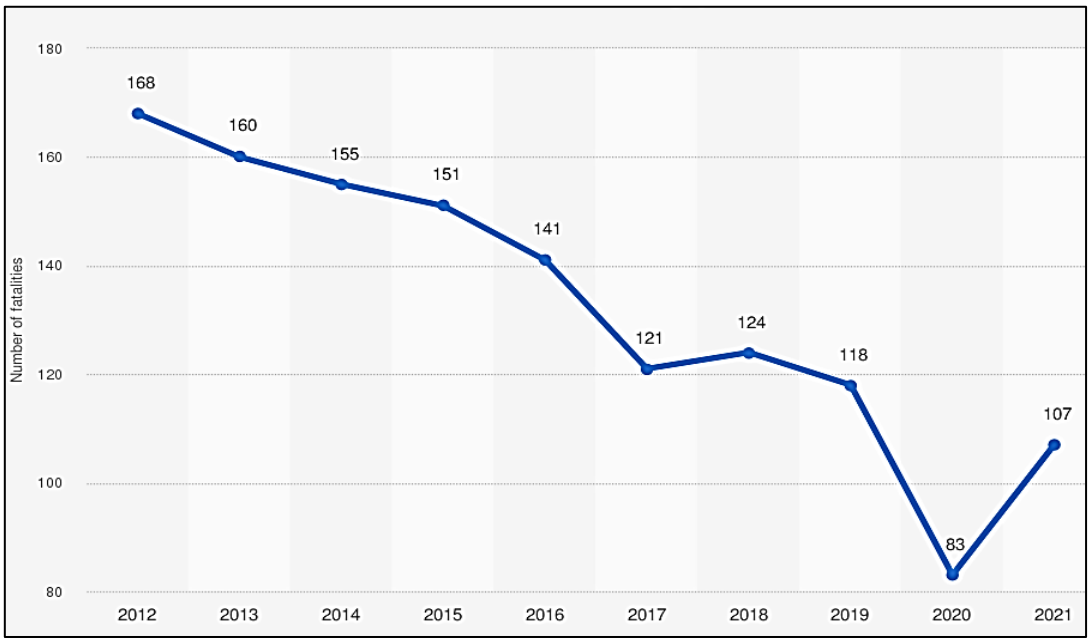
Award 1 mark for the identification of the type of transport.

Type of transport:
- Bus [1 mark]

(ii) **With reference to Fig. 2.1, explain why seamless intermodal connectivity is important in a transport system in a city.** A02 [2]

Award 1 mark for each explanation of the importance of intermodal connectivity in a transport system in a city, to a maximum of 2 marks. Award a maximum of 1 additional mark for further development of each explanation, where applicable.

Possible responses:
- Seamless intermodal connectivity can help passengers reach their destinations faster [1 mark], especially when there is no direct link to the destination from the main transport mode [1 additional mark].
- Seamless intermodal connectivity can help to ensure that passengers do not get lost [1 mark], especially when changing from one mode of

			transport to another at an intermodal interchange/terminal [1 additional mark]. • Good intermodal connectivity can also help to ensure that goods do not go missing [1 mark], especially when changing between modes at intermodal interchanges/terminals [1 additional mark].	
		(iii)	**Explain the roles that transport systems play. A02** Award 1 mark for each explanation of the roles that transport systems play, to a maximum of 4 marks. Award a maximum of 1 additional mark for further development of each explanation, where applicable. • Transport systems enable the movement of people [1 mark]. Transport systems facilitate the everyday mobility of people, enabling people to commute to work or access social amenities/facilities [1 additional mark]. • Transport systems enable the movement of goods and services [1 mark]. For example, the rise of e-commerce has increased the demand for door-to-door delivery of goods [1 additional mark].	[4]
	(b)	Study Fig. 2.2, which shows the number of fatalities from traffic accidents in Singapore from 2012 to 2021. **Number of fatalities from traffic accidents in Singapore from 2012 – 2021**  **Fig. 2.2**	
		(i)	**Using evidence from Fig. 2.2, describe the trend in the number of fatalities from traffic accidents in Singapore from 2012 to 2021. A03** Award 1 mark for each description of the trend in the number of fatalities from traffic accidents in Singapore from 2012 to 2021, to a maximum of 3 marks. Possible responses: • The number of fatalities from traffic accidents in Singapore has generally decreased from 168 in 2012, to 107 in 2021 [1 mark].	[3]

			• Despite this overall trend, the number of fatalities slightly increased by 3 between 2017-2018 [1 mark]. • There was also a sharp increase in the number of fatalities between 2020-2021, by 24 fatalities [1 mark]. • The lowest number of fatalities was observed in 2020, with 83 fatalities [1 mark].	
		(ii)	**Apart from traffic accidents, explain other ways in which transport systems can have negative impacts on people living in cities. A02** Award 1 mark for each explanation of a way in which transport systems can have negative impacts on people living in cities, to a maximum of 4 marks. Award a maximum of 1 additional mark for further development of each explanation, where applicable. Possible responses: • Traffic congestion can affect the physical well-being of those caught in traffic [1 mark]. Traffic congestion can result in longer travelling times that may tire out both drivers and passengers [1 additional mark]. • Traffic congestion can affect the emotional well-being of those caught in traffic [1 mark]. Drivers may become frustrated and display aggressive behaviour or lose concentration, increasing the risk of traffic accidents [1 additional mark]. • Transport systems can contribute to worsened air quality that affect the health of people living in cities [1 mark]. As vehicles burn fuel, they emit harmful air pollutants into the atmosphere, which result in air pollution and increases health risks [1 additional mark].	[4]
	(c)	Study Fig. 2.3, which shows an extract from a news report about the use of the NaviLens app at a bus interchange in Singapore. **Extract of article from The Straits Times** **SMRT rolls out app to help visually impaired commuters at Woodlands transport hub** *Published 31 May 2022* SINGAPORE - An app that helps visually impaired people navigate SMRT's bus interchange at Woodlands Integrated Transport Hub (WITH) has been rolled out to the public after a trial that began last year. The app, called NaviLens, has been expanded to cover all 14 berths at the transport hub, after a trial involving commuters and covering three berths. The NaviLens app - which was designed in Spain - directs commuters to the berth they wish to board at, by detecting marker tags embedded in the tactile paving at the interchange. SMRT said it will roll out the app to the rest of its bus interchanges at Bukit Panjang and Choa Chu Kang by the end of this year. **Fig. 2.3**		

		The NaviLens app shows one way in which research and development (R&D) can be used to make transport systems more sustainable. Using Fig. 2.3, suggest how R&D in transport systems can improve the mobility for different groups of people in Singapore. A03 Award 1 mark for each explanation of how research and development (R&D) in transport systems can improve the mobility for different groups of people in Singapore, to a maximum of 4 marks. Award 1 additional mark for further development of each explanation, where applicable, to a maximum of 3 marks. Possible responses: • The development of mobile applications can help different groups of commuters plan their journeys and improve their transport experience [1 mark]. For example, mobile applications like NaviLens helps visually-impaired commuters to navigate the bus interchange on their own and locate the berth they wish to board at [1 additional mark]. In addition, mobile applications can provide real-time information on bus arrival times as well as the availability of wheelchair facilities on buses [1 additional mark]. This can help physically-impaired commuters better plan their journeys and make public transport more attractive for them [1 additional mark]. • Pedestrian audio signal systems have been developed and introduced to aid visually impaired commuters [1 mark]. Traffic lights equipped with the audio signal function emit beeping sounds to help the visually impaired cross the road [1 additional mark]. To better help the visually impaired hear the audio signals, the volume of the audio signals is adjusted based on the noise level of the surrounding environment [1 additional mark]. • To help elderly pedestrians cross the road, the Green Man+ scheme was implemented to give them more green man time to cross the road [1 mark]. Traffic light poles have been installed with card readers [1 additional mark]. To activate more green man time, elderly pedestrians tap their senior citizen concession card or Green Man+ card on these card readers [1 additional mark].	[4]