BEATTY SECONDARY SCHOOL
END-OF-YEAR EXAMINATION 2022
SECONDARY TWO EXPRESS

CANDIDATE NAME			
CLASS		REGISTER NUMBER	

GEOGRAPHY

7 October 2022
1 hour 15 minutes

READ THESE INSTRUCTIONS FIRST

Write your name, class and register number on the cover page.
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.

Section A
You must answer Question 1.

Section B
You must answer Question 2.

Candidates should support their answers with the use of relevant examples.
Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

The number of marks is given in the brackets [ ] at the end of each question or part question.

For Examiner's Use	
Section A	/ 18
Section B	/ 18
Total	/ 36

This document consists of **11** printed pages and **1** blank page.

[Turn over

Section A: Transport (18 marks)

1 Study Fig. 1, which shows the topographical map of Antoneta Town.

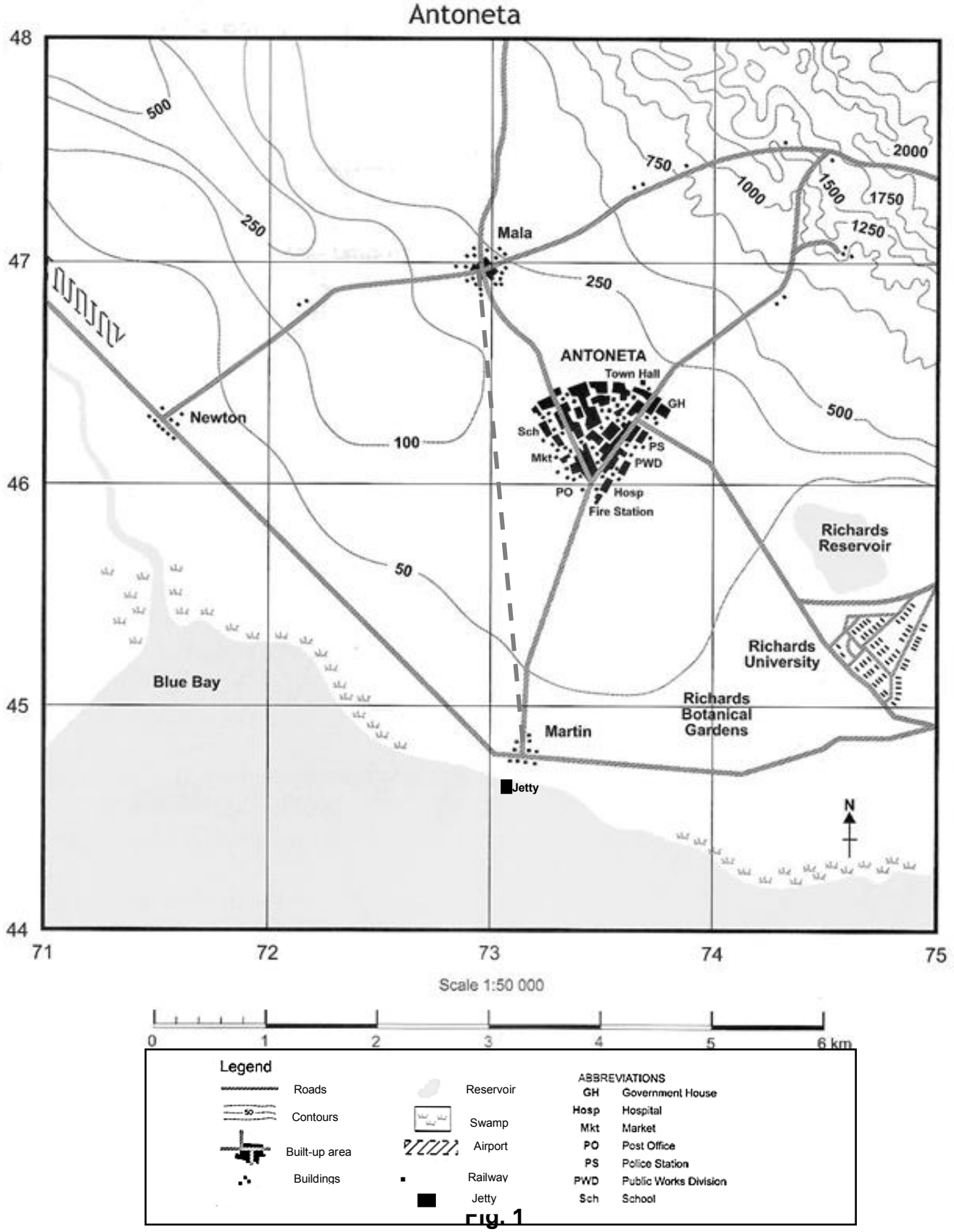

Fig. 1

(a) Describe the variety of transport modes in Antoneta Town.

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..... [2]

(b) Explain why the land in grid square 7146 is a suitable location for the airport.

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..... [2]

(c) Study Fig. 2, which shows the selected cities with PM10 levels that exceed the World Health Organisation (WHO) recommendations.

Mega-city air pollution
Selected cities with PM10 levels exceeding WHO recommendations

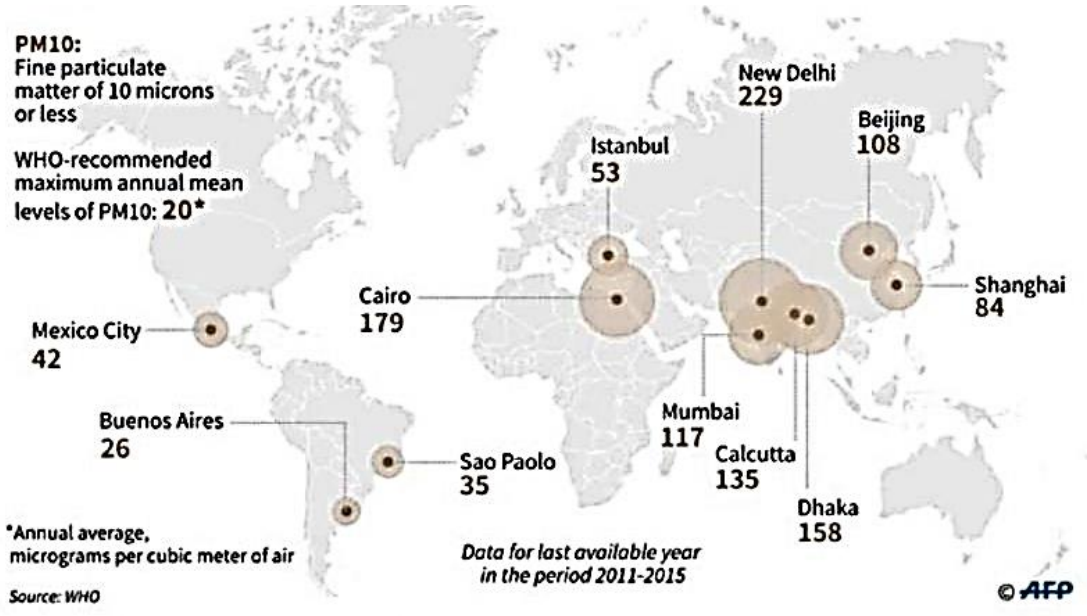

Fig. 2

With reference to Fig. 2, describe the distribution of the cities with PM10 levels that exceeds the WHO recommendations.

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..... [3]

(d) Describe **three** safety risks of transport systems on people.

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..... [3]

(e) Study Fig. 3, which shows an account of an elderly pedestrian's experience in using the silver zone.

An account by an elderly pedestrian

There's a hawker centre here, so a lot of old people cross the road to go there to eat. It is good that more is being done to keep us safe. Last time, I had to check both sides and cross quickly because the cars moved very fast. Now, I can walk slower because of the speed limit of 40km/h and the center divider. I feel more relaxed crossing busier roads in Bukit Merah View now.

Fig. 3

With the use of Fig. 3, explain how silver zones improve the mobility of elderly.

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..... [3]

(f) Evaluate road pricing as a strategy to manage road congestion. Support your answers with examples.

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Section B: Housing (18 marks)

2 Study Figs. 4 and 5, which show the lack of basic services in informal housing in two countries.

Informal housing in South Africa

Fig. 4

Informal housing in Iraq

Fig. 5

(a) (i) With reference to Figs. 4 and 5, explain how the lack of access to basic services can pose risks to the inhabitants of informal housing.

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(ii) Describe how the government can improve the conditions of informal housing**.**

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(b) Study Fig. 6, which shows the total amount of recycled waste and solid waste generated in Singapore between 2016 to 2021.

Total recycled and solid waste generated in Singapore, 2016 to 2021

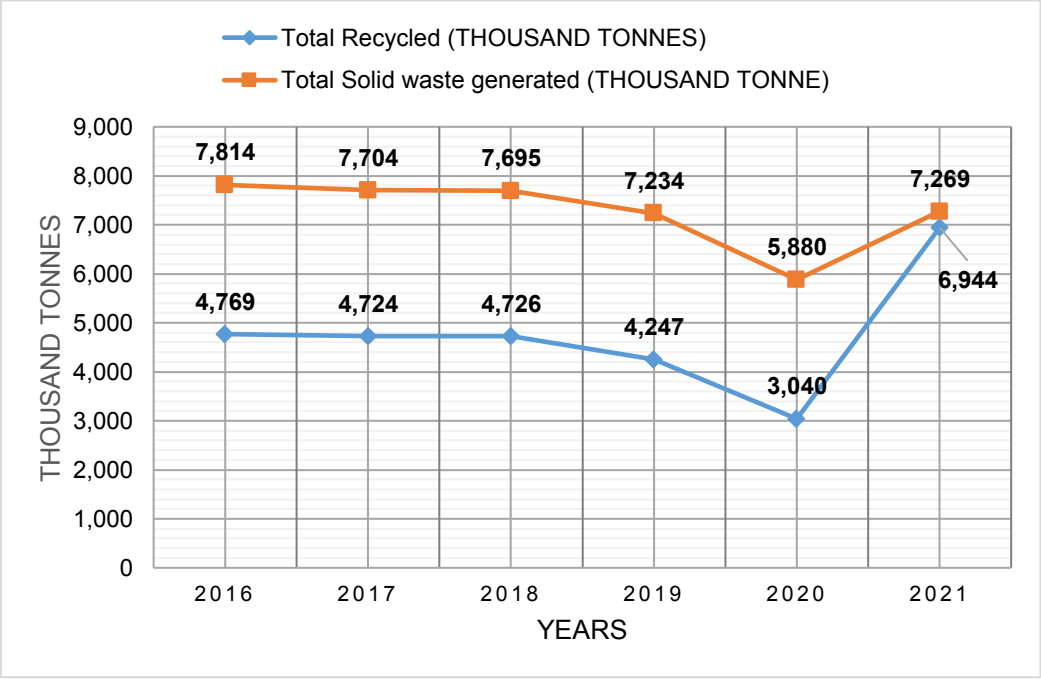

Fig. 6

With reference to Fig. 6, compare the changes in the total amount of recycled waste and solid waste generated in Singapore between 2016 to 2021.

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(c) Study Fig. 7, which shows the changes in land use in Iran between 1991 to 2019.

Changes in land use in Iran between 1991 to 2019

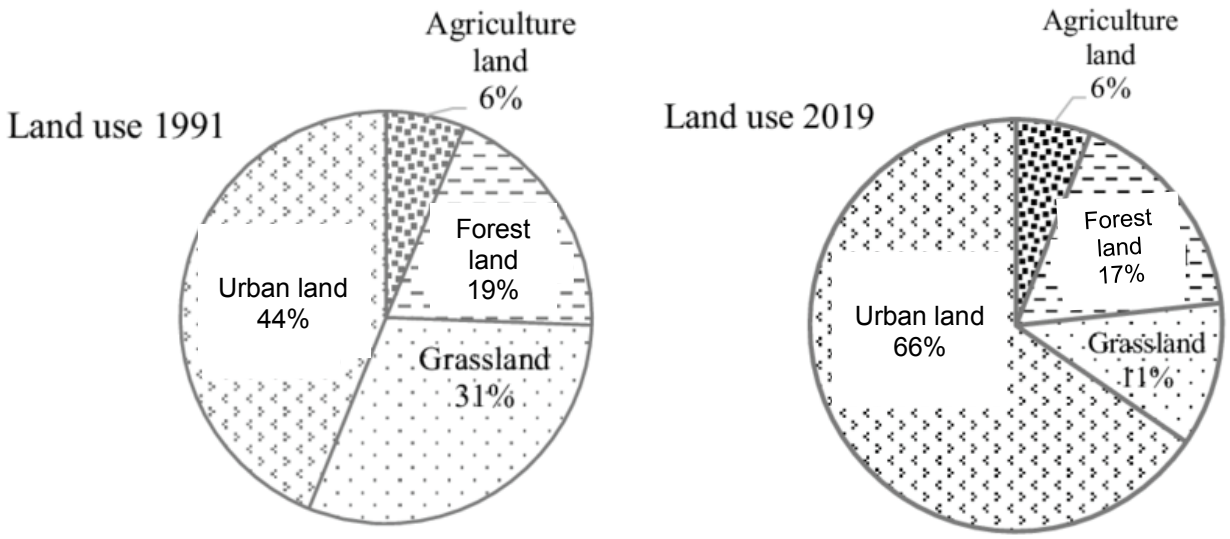

Fig. 7

(i) Describe the changes in land use in Iran between 1991 to 2019.

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(ii) Explain the impact of housing demands on the environment.

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(d) Evaluate the effectiveness of having environmental features in buildings as a strategy to sustainably manage housing. Use examples to support your answers.

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…… [5]

END OF PAPER

Copyright Acknowledgements:

Question 1	Fig. 2	https://www.deccanchronicle.com/nation/in-other-news/120516/four-out-of-top-five-world-s-most-polluted-cities-in-india-delhi-ranked-9th.html
Question 1	Fig. 3	https://lkycic.sutd.edu.sg/wp-content/uploads/2019/09/Note-7-Safer-Streets-for-Seniors-in-Singapore.pdf
Question 1	Fig. 4	https://www.iol.co.za/news/south-africa/gauteng/alex-man-electrocuted-while-connecting-power-illegally-to-a-shack-75a0694f-ddaa-49d8-8351-c72454464387
Question 2	Fig. 5	https://ejatlas.org/conflict/polluted-drinking-water-in-basra
Question 2	Fig. 6	https://tablebuilder.singstat.gov.sg/table/TS/M891371
Question 2	Fig. 7	https://www.researchgate.net/publication/342315892_The_effect_of_land_use_change_on_surface_water_quality_under_the_wet_and_dry_years_in_a_semiarid_catchment_case_study_the_Godarkhosh_catchment

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BEATTY SECONDARY SCHOOL
END-OF-YEAR EXAMINATION 2022
SECONDARY TWO EXPRESS
ANSWERS

CANDIDATE NAME			
CLASS		REGISTER NUMBER	

GEOGRAPHY

7 October 2022
1 hour 15 minutes

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Section A: Transport (18 marks)

1	Study Fig. 1 which shows the topographical map of Antoneta Town.

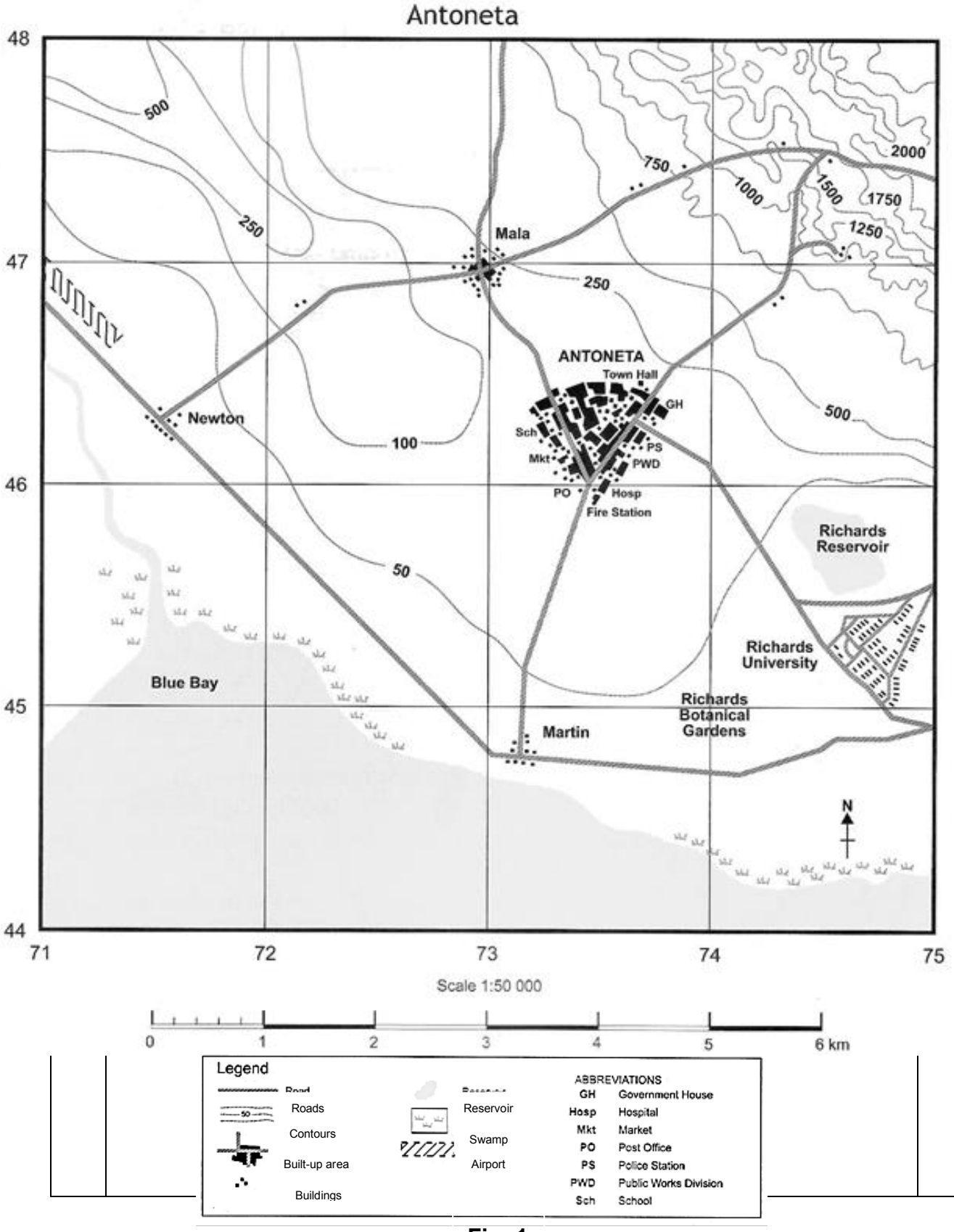
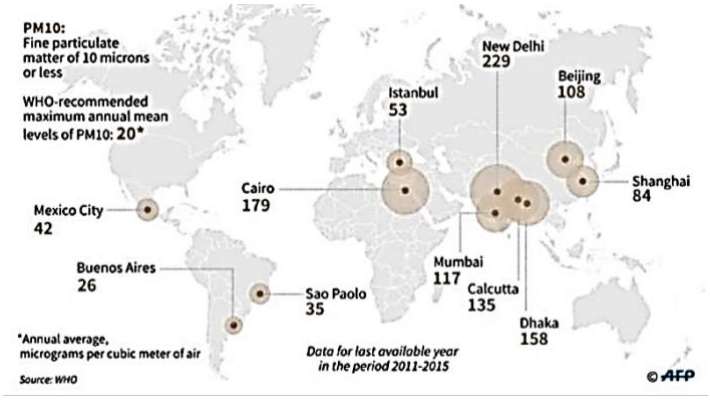


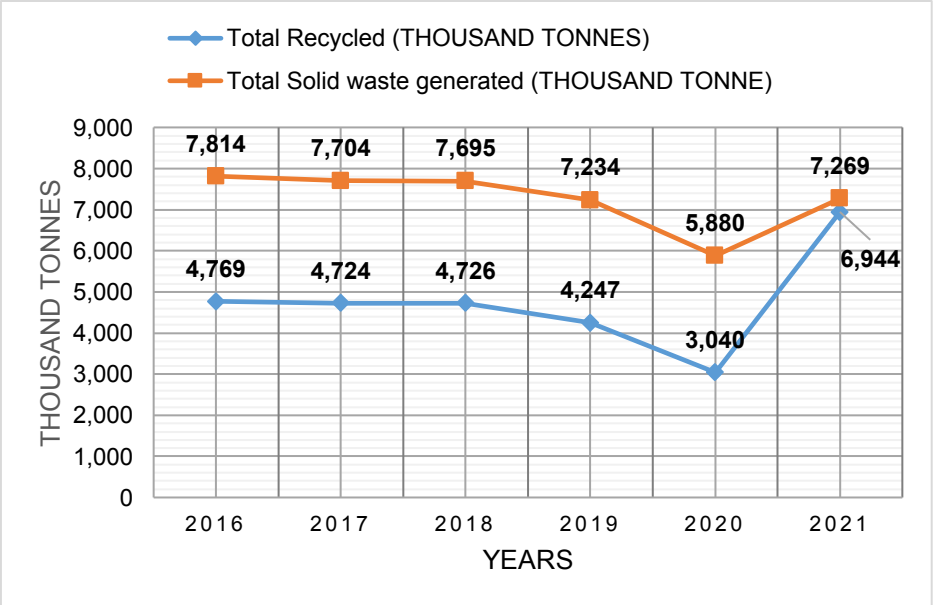
Fig. 1

(a)	Describe the variety of transport modes in Antoneta Town.	[2]
	● There is a large variety of transport modes in Antoneta Town ● For example, there railway connecting Mala and Martin, road networks connecting the various towns, jetty in grid square 7345 and airport in grid square 7146.	
(b)	Explain why the land in grid square 7146 is a suitable location for the airport.	[2]
	● The relief of the land is gentle as the height of the land is less than 50m and the contours line are far apart as compared to the steep land relief in grid square 7447. ● The flat land will be suitable to build the airport.	
(c)	Study Fig. 2 which shows the selected cities with PM10 levels that exceed the World Health Organisation (WHO) recommendations.	
	Mega-city air pollution **Selected cities with PM10 levels exceeding WHO recommendations**  **Fig. 2**	
	With reference to Fig. 2, describe the distribution of the cities with PM10 levels that exceeds the WHO recommendations.	[3]
	● There is an uneven distribution of cities with PM10 levels that exceeds the WHO recommendations ● The cities are mostly concentrated in South Asia with 4 out of 12 cities located in India OR Asia with 6 out of 12 cities located in India and China ● The cities are also found in Central Asia like Istanbul and Cairo and South America like Beunos Aires and Sao Paolo. ● The least can be found in South America with only Mexico city. Max 2m without data from Fig. 2.	

(d)		Describe **three** safety risks in transport systems.	[3]
		● Road accidents account for 90% of all traffic accidents on average. Transport accidents have implications on healthcare, insurance, damage to property and life ● Public transport can become overcrowded, especially during peak periods and large crowds increase the risk of crimes such as theft and outrage of modesty. ● Terminals may become targets of many terrorist attacks due to their visibility and significance and will lead to panic and loss of lives.	
(e)		Study Fig. 3 which shows an account of an elderly pedestrian's experience in using the silver zone. **An account by an elderly pedestrian** There's a hawker centre here, so a lot of old people cross the road to go there to eat. It is good that more is being done to keep us safe. Last time, I had to check both sides and cross quickly because the cars moved very fast. Now, I can walk slower because of the speed limit of 40km/h and the center divider. I feel more relaxed crossing busier roads in Bukit Merah View now. **Fig. 3**	
		With the use of Fig. 3, explain how silver zones improve the mobility of elderly.	[3]
		● Reduced speed limit of 40km/h so cars do not move as fast ● Two stage crossing **allows elderly to rest** at the center divider. ● As a result of silver zones, elderly will be more confident in moving around independently to access goods and services.	
(f)		Evaluate road pricing as a strategy to manage road congestion. Support your answers with examples.	[5]
		● Road pricing is a strategy that shapes travel behaviour by charging drivers a premium when they use certain roads during specific time periods. ● For example, the road pricing in Stockholm, reduced traffic in and out of the city by approximately 20% and traffic delays have decreased by 30-50%. ● This makes driving costlier compared to using public transport and helps to reduce congestion at certain stretches of roads ● However, traffic is diverted elsewhere instead. ● Regulations on vehicle usage have to be tightly enforced to ensure the effectiveness of road pricing.	

Section B: Housing (18 marks)

2	Study Fig. 4 and 5 which shows the lack of basic services in informal housing in two countries. **Informal housing in South Africa**  **Fig. 4** **Informal housing in Iraq**  **Fig. 5**		
(a)	**(i)**	With reference to Fig 4. and 5, explain how the lack of access to basic services can pose risks to the inhabitants of informal housing.	[4]
		● Residents may resort to illegally tapping on electrical grids ● Which are dangerous and results in accidents such as electrocution ● Residents may also siphon water from nearby pipes and or dispose waste in an improper manner, ● Resulting in poor health due to drinking contaminated water and diseases.	

	(ii)	Describe how governments can improve the conditions of informal housing.	[3]
		● Governments can improve access to basic services and building quality of housing ● Occupants may be more motivated to invest in their own homes and make improvements to community infrastructure. ● Better access to clean water and sanitation services raises health levels and reduces threat of diseases.	
(b)		Study Fig. 6 which shows the total amount of recycled waste and solid waste generated in Singapore from 2016-2021. **Total recycled and solid waste generated in Singapore, 2016 to 2021**  **Fig. 6**	
		With reference to Fig. 6, compare the changes in the total amount of recycled waste and solid waste generated in Singapore between 2016 to 2021.	[2]
		● Generally, the changes in total amount of recycled waste increased from 2016 to 2021 from 4769 thousand tonnes to 6944 thousand tonnes but total amount of solid waste generated fluctuated and stayed at 7269 thousand tonnes. ● Both total amount of recycled waste and solid waste generated remined about the same from 2016 to 2018 at about 7700 thousand tonnes and 4700 thousand tonnes ● Both total amount of recycled waste and solid waste generated decreased slightly from 2019 to 2020 from 4247 thousand tonnes to 3040 thousand tonnes and 7234 thousand tonnes to 5880 thousand tonnes. ● The total amount of recycled waste increased drastically from 3040000 tonnes to 6944000 tonnes whereas the total amount of	

		recycled waste increased gradually from 5880000 to 7269503 tonnes. ● Max 1m if no supporting data ● Max 1m if no comparison	
(c)		Study Fig. 7 which shows the changes in land use in Iran between 1991 to 2019. **Changes in land use in Iran between 1991 to 2019**	

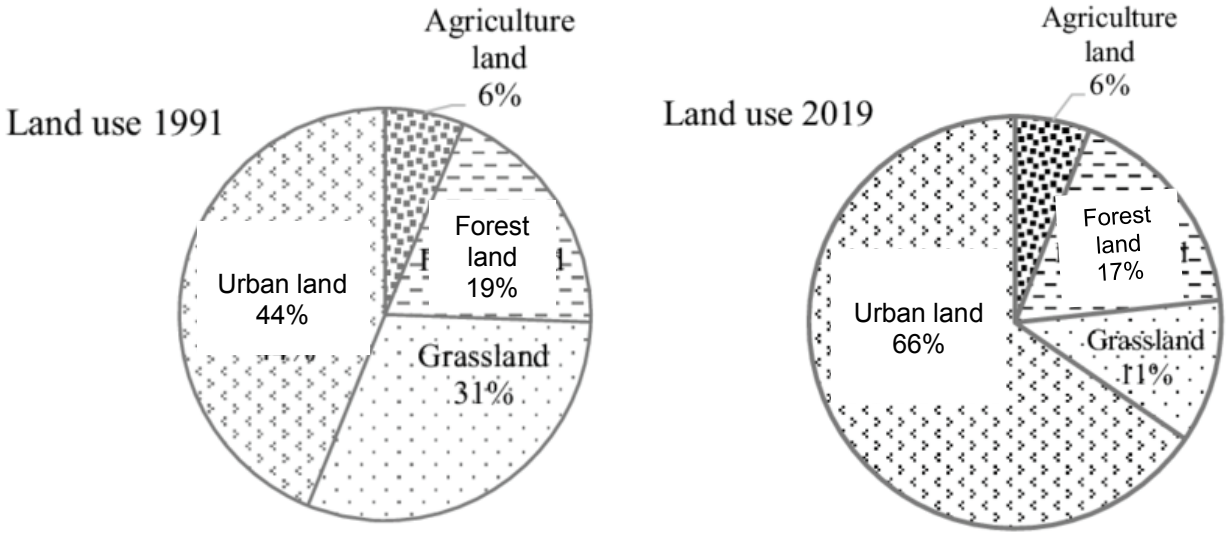


Fig. 7

	i)	Describe the changes in land use in Iran between 1991 to 2019.	[2]
		● Between 1991 to 2019, urban land increased significantly by 22% ● Grassland decreased significantly from 31% to 11% and forest land decreased slightly by 2% ● Agriculture land remained the same at 6%.	
	ii)	Explain the impact of housing demands on the environment.	[2]
		● Humans produce vast quantities of waste, especially in factories, offices, schools and homes. ● As a result, many cities build landfills to dispose waste products which often have unpleasant odours. ● Urban areas also pollute water when surface runoff from streets carries oil, rubber, heavy metals and other contaminants from vehicles. OR ● Unreated or poorly treated sewage can be low in dissolved oxygen and high in pollutants like faecal coliform, nitrates, phosphorous, other bacteria and chemicals.	

		● As a result, groundwater and surface water can be contaminated from many sources such as garbage dumps and toxic waste.	
	(c)	Evaluate the effectiveness of having environmental features in buildings as a strategy to sustainably manage housing. Use examples to support your answers.	[5]
		● Environmental features include the use of solar panels and having recycling bins to promote sustainability ● The use of solar panels offset electrical consumption of common lighting ● The use of green roofs and walls reduce surrounding temperatures ● As a result, there may be cost savings in the long run. ● However, they may be expensive to install. ● OR, many of these features may be perceived as being inconvenient for members of the public who might not understand their benefit like finding it troublesome to sort their trash before disposing it into the recycling bins. ● OR education of the population is needed in the form of educational campaigns or outreach programmes, which adds to the cost of building houses.	

END OF PAPER

Table of Specification

Question	AO1 + AO2	AO1 + AO3
Section A		
1a		2
1b		2
1c		3
1d	3	
1e		3
1f	5	
Total	**8**	**10**
Section B		
2ai		4
2aii	3	
2b		2
2ci		2
2cii	2	
3c	5	
Total	**10**	**8**
TOTAL	**18**	**18**