

Name: _____()

Class: _____



ANGLICAN HIGH SCHOOL END OF YEAR EXAMINATIONS 2022

S2

GEOGRAPHY

Secondary 2

Candidates answer on the Question Paper
Section A and B

30 September 2022

1 hour 15 minutes

READ THESE INSTRUCTIONS FIRST

Follow the instructions on the front cover of the question paper.
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.
Do not use paper clips, glue or correction fluid.

Answer **all** questions.

Write all answers in the Question Paper.

Hand in Section A and Section B together.

Hand in Section C separately.

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

Section A	Question 1		6 marks
Section B	Question 2		15 marks
Section C	Question 3		15 marks
TOTAL:			36 marks

Parent's Name:	
Parent's Signature:	
Date:	

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Section A

Answer **all** questions in this section.

- 1 A group of Secondary 2 students from XYZ School wanted to investigate whether the amenities in Town A and Town B met the needs of its residents. The group of students went to Town A and Town B on Monday at 3pm and 4pm respectively and recorded their observation. Both towns have the same population size and age group profile. Information gathered are shown in Table 1.

Table 1

No. of amenities	Playgrounds	Parks	Fitness corner	Senior activity centres
Town A	4	5	7	5
Town B	1	6	6	0

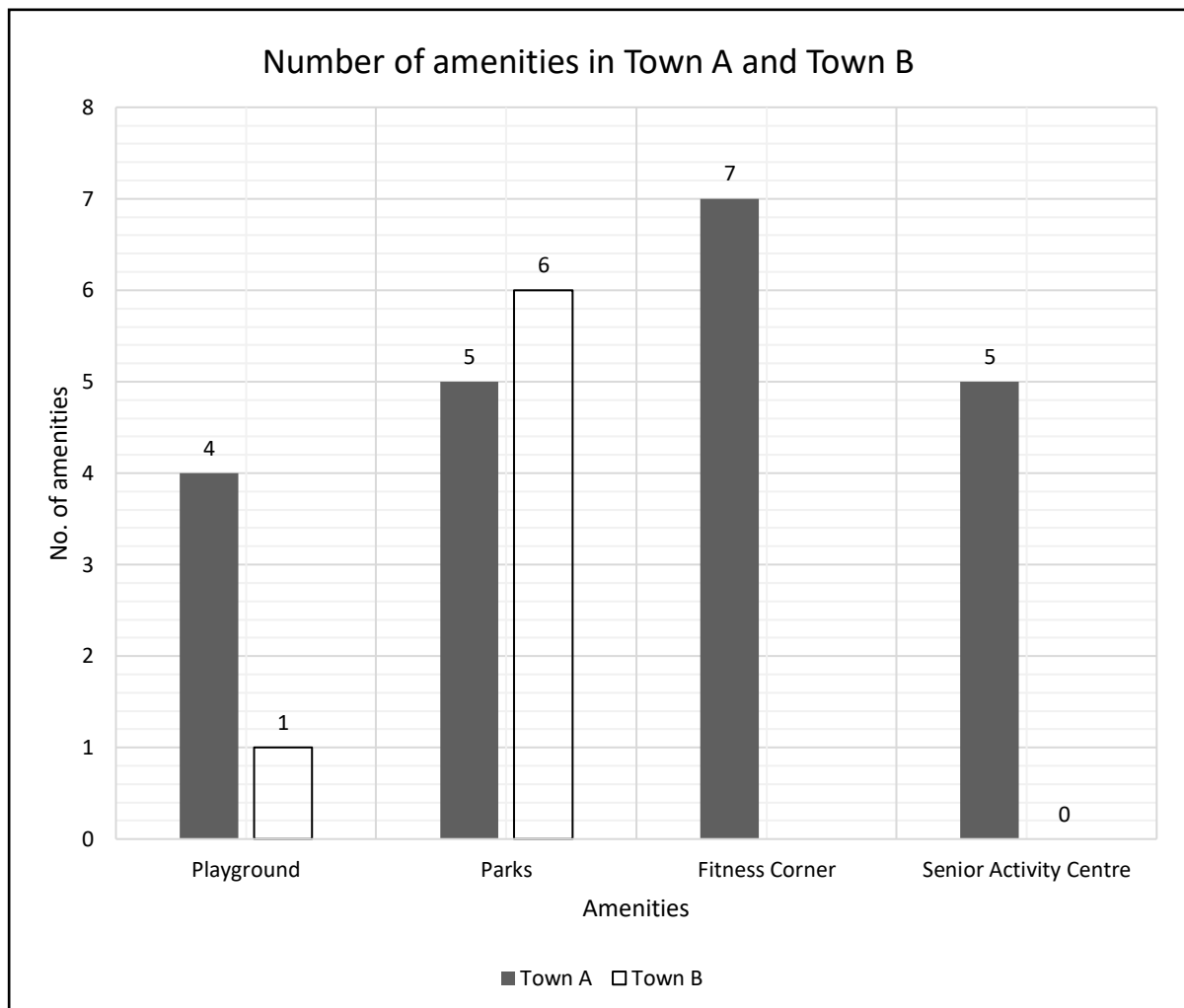


Fig. 1

(a) Using Table 1, complete the bar graph in Fig. 1. [1]

(b) State and describe **one** other way students can gather data for this investigation.

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..... [2]

(c) With reference to Table 1, what conclusion can the students make about their investigation?

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..... [3]

Section B

Answer **all** questions in this section.

- 2 Study Fig. 2, which shows the number of people living in slum settlements in the world from 1990 to 2010.

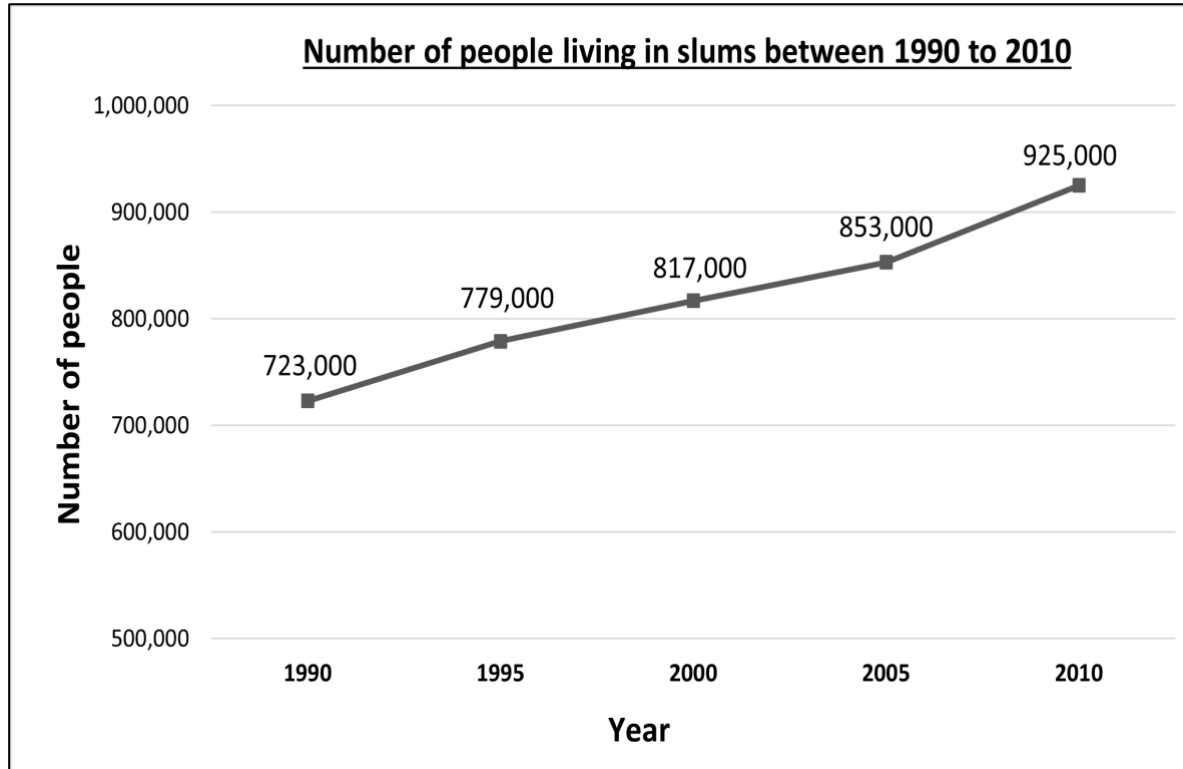


Fig. 2

- (a) With reference to Fig. 2, describe the trend in the number of people living in slum settlements in the world from 1990 to 2010.

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..... [3]

(b) Explain how land-use planning affects the location of formal and informal housing.

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..... [3]

- (c) Study Photograph A and Photograph B, which show the characteristics of formal and informal housing in two different cities respectively.

Photograph A



Photograph B



- (i) Using Photograph A and Photograph B, compare the features of different housing types.

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..... [3]

- (ii) With reference to Photograph A, describe how formal housing impacts people.

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..... [3]

- (d) Using an example, describe **one** environmental feature that makes use of green technology in buildings to manage housing sustainably. State **one** benefit and **one** challenge of the strategy.

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..... [3]

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Name: _____()

Class: _____



ANGLICAN HIGH SCHOOL
END OF YEAR EXAMINATIONS 2022

S2

GEOGRAPHY

Secondary 2

Candidates answer on the Question Paper
Section C

30 September 2022
1 hour 15 minutes

READ THESE INSTRUCTIONS FIRST

Follow the instructions on the front cover of the question paper.
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.
Do not use paper clips, glue or correction fluid.

Answer **all** questions.
Write all answers in the Question Paper.

Hand in Section C separately.
The number of marks is given in brackets [].

Section C	Question 3		15 marks
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Section C

Answer **all** questions in this section.

- 3 (a) Study Table 2, which shows data on average daily ridership and the length of the MRT rail in Singapore from 2013 to 2017.

Table 2

	2013	2014	2015	2016	2017
Average daily ridership	2,623,000	2,762,000	2,871,000	3,095,000	3,122,000
MRT rail length (km)	153.2	154.2	170.8	170.8	199.3

Using information from Table 2, describe the relationship between average daily ridership and the length of MRT rail in Singapore.

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..... [3]

- (b) Describe where major transport nodes are located within a city.

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..... [2]

(c) Describe the roles of transport systems in cities.

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..... [2]

(d) Study Fig. 3, which shows the impact of transport systems on people in India.

According to a recent report, drivers in Bengaluru spent an average of 71% extra time on the road due to congestion in 2019. Friday evenings between 7 and 8 pm was the worst period for commuters. On average, drivers waste 243 hours being stuck on the roads that year.

In his office, Dr Kumar looks at the X-ray of a 50-year-old auto-rickshaw driver, who has been diagnosed with chronic persistent bronchial asthma. "It's an occupational disease, he's exposed to diesel fumes and other pollutants in the course of his work."

In 2020, Bengaluru city reported 657 deaths due to road accidents. According to traffic police commissioner, Mr Gowda said, "Many people who come to the city during weekends are in a hurry to return to their own hometowns on Sundays. They would then tend to speed leading to a higher number of road accidents and deaths."

Fig. 3

Using information from Fig. 3 and your contextual knowledge, describe how transport systems impact the environment and people in India.

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..... [4]

- (e) Explain how the use of mobile applications in the research and development strategy make transport systems more sustainable. Describe **one** benefit and **one** challenge of the strategy.

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..... [4]

END OF PAPER

Acknowledgements

Table 2:	https://tablebuilder.singstat.gov.sg/table/TSM651351
Fig. 2:	Adapted from https://data.unhabitat.org/datasets/urban-population-living-in-slums-by-country-or-area-1990-2018-thousands/explore
Photograph A	https://www20.hdb.gov.sg/fi10/fi10221p.nsf/hdb/2021/live-well.html
Photograph B	https://www.habitatforhumanity.org.uk/wp-content/uploads/2018/06/urbanisation-slums-4-1200x600-c-default.jpg
Fig. 3:	https://timesofindia.indiatimes.com/india/bengaluru-has-worlds-worst-traffic-congestion-mumbai-at-number-4/articleshow/73747725.cms https://vajiramias.com/current-affairs/greenpeace-analysis-of-cost-to-the-economy-due-to-air-pollution/602f31c81d5def23d73bdfef/ https://www.bbc.com/news/world-asia-india-48102417

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Class: _____



**ANGLICAN HIGH SCHOOL
END OF YEAR EXAMINATIONS 2022**

ANSWERS

S2

GEOGRAPHY

Secondary 2

Candidates answer on the Question Paper
Section A and B

30 September 2022

1 hour 15 minutes

Section A

Answer **all** questions in this section.

- 1 A group of Secondary 2 students from XYZ School wanted to investigate whether the amenities in Town A and Town B met the needs of its residents. The group of students went to Town A and Town B on Monday at 3pm and 4pm respectively and recorded their observation. Both towns have the same population size and age group profile. Information gathered are shown in Table 1.

Table 1

No. of amenities	Playgrounds	Parks	Fitness corner	Senior activity centres
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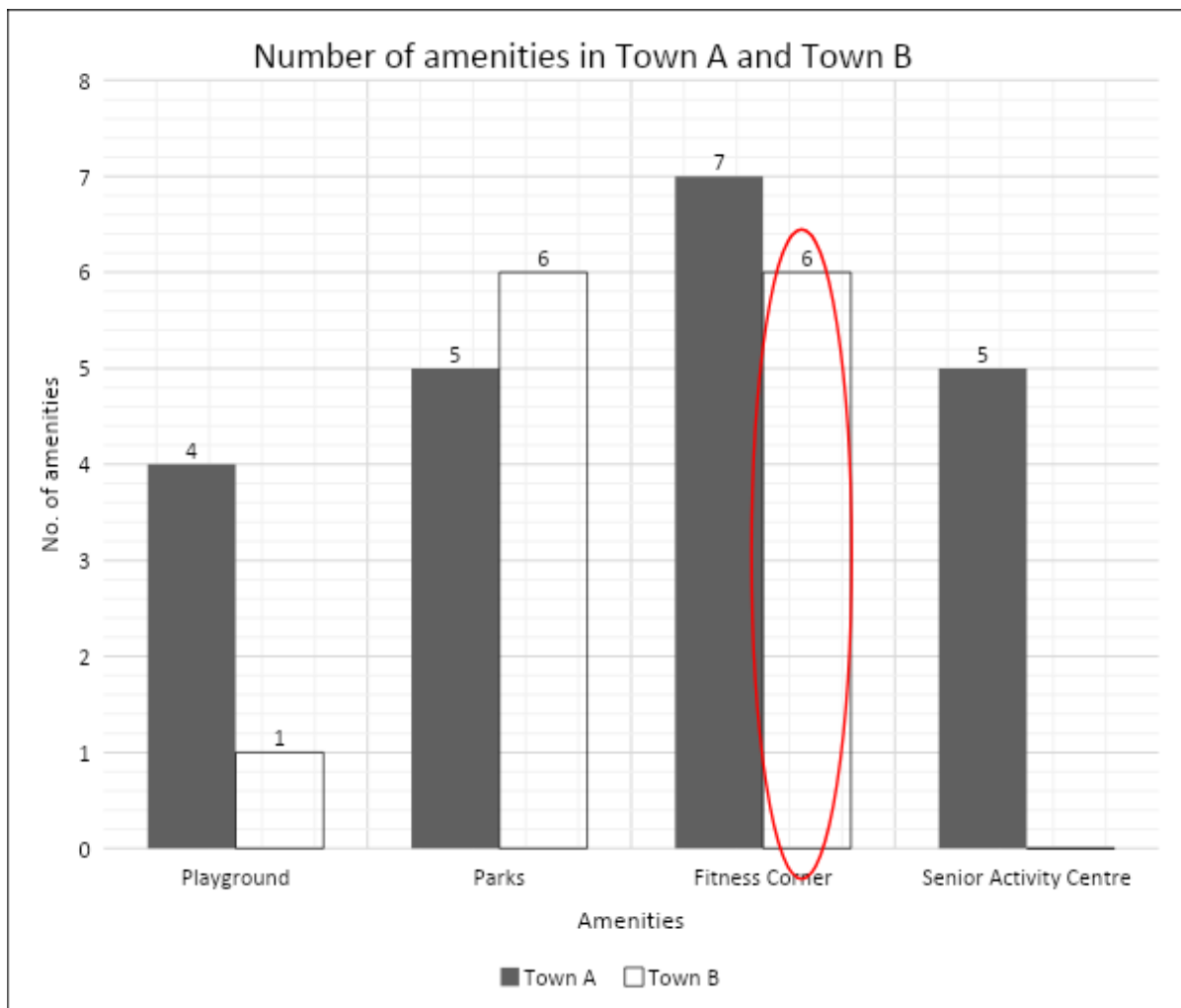


Fig. 1

wont penalise if no number on top
scale should be similar - not too fat/skinny

(a) Using Table 1, complete the bar graph in Fig. 1. [1]

(b) State and describe **one** other way students can gather data for this investigation. [2]

Reserve 1m for stating

- So I take photographs/ draw a sketch
- From internet/ Google
- From websites/ brochures/ town map
- Surveys done by other people/students prior

Reserve 1m for describe

- and take note of/ count/locate/research/**information on the amenities** available

(c) With reference to Table 1, what conclusion can the students make about their investigation? [3]

Overall conclusion to investigation - or any plausible answer with comparative terms.

[1]

- Amenities in Town A met the needs of its residents **more/better than in Town B.**
- Town A met the needs of **all/more** residents but Town B only met needs of **some**
- Town A meets the needs of **all residents** but Town B did not meet the needs of **elderlies & children**
- Town A is inclusive but not Town B
not accepted: A meet the needs while B does not- cannot be absolute.

1m for data + 1m for explanation on meeting specific age group needs

- Because Town A has amenities that **caters to all ages/ adults**, children, senior.
OR they can specify playground or senior activity centres is insufficient to accommodate **the children/seniors** .[1]
- While Town A has 4 playgrounds and 5 senior activity centres **which is higher/ more**, Town B has lower number (playground)/ no senior activity centers
OR
- Town A has 4 playgrounds but Town B only has 1 playground for children
Or
- Overall Town A has more amenities such as 4 plygnds/ 5 parks/ 7 fitness corners/ 5SACs than Town B with only 1 plygnds/ 6 parks /6 fitness corners /0 SAC [1]

Section B

Answer **all** questions in this section.

- 2 Study Fig. 2, which shows the number of people living in slum settlements in the world from 1990 to 2010.

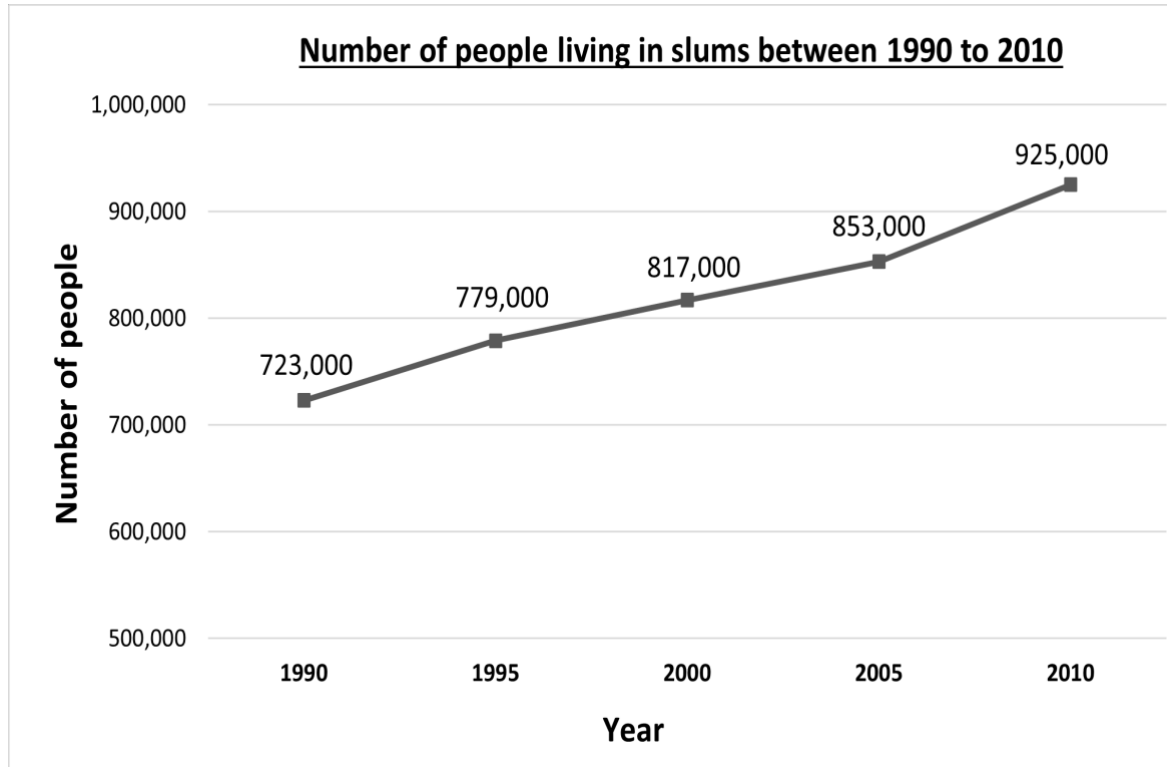


Fig. 2

- (a) With reference to Fig. 2, describe the trend in the number of people living in slum settlements in the world from 1990 to 2010.

Overall reserve 1m	3m
There was an increasing trend in the number of people living in slum settlements in the world between 1990 to 2010 , with an increase of 202,000 people	
Any one for 1m (max 2) max 1m if missing data	
The greatest increase in number of people living in slum settlements was between 2005 to 2010, by 72,000 people (from 853,000 in 2005 to 925,000 in 2010).	
The smallest increase in number of people living in slum settlements was between 2000 to 2005, by 36,000 people (from 817,000 in 2000 to 853,000 in 2005).	

- (b) Explain how land-use planning affects the location of formal and informal housing.

1m for describing factor and how it affects location of housing

Land-use planning includes guidelines drawn up by planning authorities to **zone** cities/activities in cities. OR

Zoning restricts the type of **activities/land-use** OR **allows/enables** various activities/ **land-use** on specific sites or areas, such as housing

1m for effect on location on formal housing

Hence, formal housing is usually **located on desirable sites/** near greenery/ near amenities/ away from pollution

1m for effect on location on informal housing

However informal housing is **located on unwanted land/** near landfills/ near sewage treatment plants/ near neglected infrastructure development/ near industrial sites OR can occur **regardless of land-use planning**

Study Photograph A and Photograph B, which show the characteristics of formal and informal housing in two different cities respectively.



Photograph A



Photograph B

- (c) (i) Using Photograph A and Photograph B, compare the features of different housing types.

Each comparison 1m (comparison point) - any 2 Reserve 1m for presence of details/evidence from photographs If answers have no point to point comparison but in 2 separate para (max 1m) -1m overall if no however, but, etc	3m
1. Quality of building materials (types of materials, protection from elements) Photograph A shows formal housing made of better/higher quality materials like concrete whereas Photograph B shows informal housing made of lower/poorer quality materials like wood and zinc/metal sheets	
2. Access to basic services (electricity, water, sewage) Photograph A shows formal housing that have access to basic services such as electricity and sewage whereas Photograph B shows informal housing that has does not have access to basic services such as electricity and sewage	
3. Height Photograph A shows formal housing that is high-rise with multi-storey, but Photograph B shows informal housing that is low-rise and of single-storey.	
4. Stability Photograph A shows formal housing that that are of stronger foundation like concrete whereas Photograph B shows informal housing that has weaker/unstable foundation like wooden poles.	
amenities/ facilities	

- (ii) Using Photograph A, describe how formal housing impacts people.

1m for each reference to photo (cause or effect) Reserve 1m for outcome (resultant impact on people)	3m
Cause: Fitness corners in formal housing provides space for people to meet (1m) Outcome: as people can form relationships/feel a sense of belonging to the community. (1m) OR is inclusive as it allows different people from all walks of life to meet . (1m)	
Cause: Formal housing allows for the provision of basic needs as there is presence of shelter/sanitation/access to electricity . (1m) Outcome: This allows people to improve their quality of life as it improves their health/well-being of people/prevents an outbreak of disease/ provides convenience . (1m)	
Cause: Fitness corners where people can exercise (1m) Outcome: This allows people to improve their quality of life as it improves their physical health and well-being (1m)	

- (d) Using an example, describe **one** environmental feature that makes use of green technology in buildings to manage housing sustainably. State **one** benefit and **one** challenge of the strategy.

	3m
<u>Any 1 point of description of strategy for 1m:</u> One environmental feature in buildings are solar panels that offset/reduce electrical consumption Other features: Water efficient fittings that minimise water consumption, use of green roofs and walls to reduce surrounding temperatures/regulate internal temperatures	
<u>Reserve 1m for benefit:</u> One benefit of this strategy is that there are cost savings in the long term OR reduction of carbon emissions/footprint OR reduction of natural resource consumption OR mitigates urban heat island effect/saves energy and encourages biodiversity in the city (for green roofs)	
<u>Reserve 1m for challenge:</u> However, one challenge of this strategy is that solar panels are expensive to purchase/install OR takes time to implement/ for cost savings to materialise OR not operational 24/7 because it is weather dependent/no sunlight at night OR not suitable in countries with limited sunlight installing green roofs and wall requires good planning/is time consuming . (plants by itself is NOT EXPENSIVE but cost of maintenance - inbuilt irrigation system, designing the where/how to place and manpower compared to other forms of green tech)	

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ANGLICAN HIGH SCHOOL
END OF YEAR EXAMINATIONS 2022

S2

GEOGRAPHY

Secondary 2

Candidates answer on the Question Paper
Section C

30 September 2022
1 hour 15 minutes

Section C

Answer **all** questions in this section.

- (a) Study Table 2, which shows data on average daily ridership and the length of the MRT rail in Singapore from 2013 to 2017.

Table 2

	2013	2014	2015	2016	2017
Average daily ridership	2,623,000	2,762,000	2,871,000	3,095,000	3,122,000
MRT rail length (km)	153.2	154.2	170.8	170.8	199.3

Using information from Table 2, describe the relationship between average daily ridership and the length of MRT rail in Singapore. [3]

Reserve 1m for overall r/s

- **Positive** relationship: as the length of MRT rail increases, the average daily ridership increases too. OR the longer the length of MRT rail, the higher the average daily ridership. [1]

1m for each contrasting data

- In 2013, when the MRT rail length is at the shortest at 153.2km, the average daily ridership is at its lowest at 2,623,000. [1]
- In 2017, when the MRT rail length is at the longest at 199.3km, the average daily ridership is at its highest at 3,122,000. [1]

-1m overall if only 1 comparatives missing if 2 significance given.
no comparative in both - no marks
-1m for no numerical data

(b) Describe where major transport nodes are located within a city. [2]

Major transport nodes are located at:

- areas with high concentration of activities/services (NOT AMENITIES) ranging from finance and banking to retail and leisure/ in central area (city centres) and popular tourist attractions [1]
- **MUST BE WRITTEN AS A SEPARATE LOCATION, NOT PART OF EXPLANATION:** high level of accessibility such as interchanges where many different destinations can be reached with relative ease/ short travel time & low cost

[1]

Max 1m:

- **listing of examples - in central areas/CBD or at interchanges, at terminals around city centres/ interchanges & bus stops found in business districts**
- **understanding of concept: places where tourist frequent & economic/financial activities takes place, places with many commercial/business/heritage buildings/ places that allows travel to many destination easily/conveniently/fastest/more connectivity**
- **when level of accessibility is written as part of the reason for high concentration of activities and not as a separate location**
 - **eg. at commercial places where it allows access to people to go different destination more conveniently**

not accepted: busiest part of the city, where most people live, amenities by itself with no other egs., housing & amenities, high density of people, places where there are banks

(c) Describe the roles of transport systems in cities. [2]

1m for people + 1m for goods & services with accompanying reason

- Facilitates everyday movement / mobility of people such as commute to work/school
- allows people to go to different places/ Provide access to social activities and amenities
- Depend on services for daily needs such as water supply trucks
- Obtaining food supplies from farms/ other countries to local market
- facilitates economic activities

Max 1m: stating movement of people and goods & services only

**help to move people and freight from one place to another conveniently
(without purpose -go where, do what)**

not accepted: delivery of goods - must have either from/ to

(d) Study Fig. 3, which shows the impact of transport systems on people in India.

According to a recent report, drivers in Bengaluru spent an average of 71% extra time on the road due to congestion in 2019. Friday evenings between 7 and 8 pm was the worst period for commuters. On average, drivers wasted 243 hours due to being stuck on roads that year.

In his office, Dr Kumar looks at the X-ray of a 50-year-old rickshaw driver, who has been diagnosed with chronic persistent bronchial asthma. "It's an occupational disease, he's exposed to diesel fumes and other pollutants in the course of his work,"

In 2020, Bengaluru city reported 657 deaths due to road accidents. According to traffic police commissioner, Mr Gowda said, "Many people who come to the city during weekends are in a hurry to return to their own hometowns on Sundays. They would then tend to speed leading to a higher number of road accidents and deaths.

Fig. 3

Using information from Fig. 5 and your contextual knowledge, describe how transport systems impact the environment and people in India. [4]

-1m for no data/evidence

reserve 2m for impact on environment (cause 1m + impact 1m)

- Increased carbon footprint/ pollution worsened air quality/global warming/enhanced greenhouse effect

average drivers wasted 243 hours due to idling on roads

he's exposed to diesel fumes and other pollutants

not accepted: harm/affect the environment - air/land/water?

reserve 2m for people

- late for work/ long travelling time/ physical & emotional well being

71% extra time on the road due to congestion in 2019. Friday evenings between 7 and 8 pm was the worst period for commuters

average drivers wasted 243 hours due to idling on roads

- **poor** health from pollutants

auto-rickshaw driver diagnosed with chronic persistent bronchial asthma.

he's exposed to diesel fumes and other pollutants

- **safety compromised** – as traffic volume increase

tend to speed leading to a higher number of road accidents and deaths.

- (e) Explain how the use of mobile applications in the research and development strategy make transport systems more sustainable. State one benefit and one limitation of this strategy. [4]

1m for description of strategy + 1m for sustainable

- Trip planning mobile apps provide real- time traffic **information** on travel time cost and possible routes to undertake.
not accepted: check for bus/train timing etc. strategy is not limited to just one kind of transport or one type of info (time). Concept of providing information needed
- **Therefore**, makes a more informed decision/ effective/convenient when travelling in choosing different modes of transport to travel in

1m for any 1 limitation and 1m for any benefit

Limitation:

- inaccurate information may cause inconvenience to commuters.
- Developing of apps is time consuming as r&d is ongoing and not fool-proof
- high cost due to research for **long period** of time
not accepted: cost to put up on buses/stations - key word is **mobile apps**

Benefit:

- commuters can better plan their journeys using mobile apps (cannot be used as reasoning for sustainable - **so what** if they can plan journey)
- make public transport more attractive form of travel as information is given (bus timings, availability of seats, wheelchair facilities)
- Shape travel habits, may choose alternative transport - walking

not accepted: accessible to everyone/elderly - thats the purpose of any strategy,