Surname	Centre Number	Candidate Number
First name(s)		0

GCSE

3110U20-1

S23-3110U20-1

FRIDAY, 9 JUNE 2023 – MORNING

GEOGRAPHY

Unit 2: Environmental and Developmental Issues

1 hour 30 minutes

	For Examiner's use only		
		Maximum Mark	Mark Awarded
	Question 1	28	
	Question 2	28	
	Writing accurately	3	
either	Question 3	24	
or	Question 4	24	
	Total	83	

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ADDITIONAL MATERIALS

In addition to this paper you may use a calculator and a ruler if required.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use gel pen or correction fluid.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **both** questions in Section A.

Answer **one** question from Section B.

Write your answers in the spaces provided in this booklet.

Additional space is provided for some questions within the booklet (if required). If further space is required for any question, you should use the additional page(s) at the back of the booklet, taking care to number the question(s) correctly.

INFORMATION FOR CANDIDATES

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

Your ability to communicate and organise your ideas will be assessed in questions that are worth 6 or 8 marks. The accuracy of your writing will be assessed in your answer to question **2**(a)(iii).

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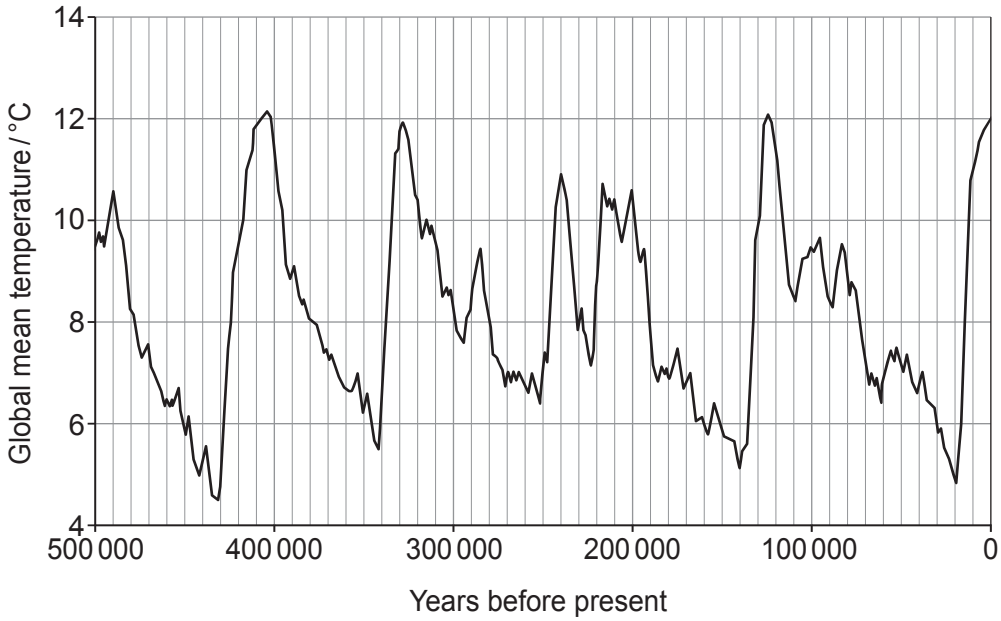
SECTION A – CORE THEMES

Answer **all** of the questions in this section.

THEME 5: Weather, Climate and Ecosystems

1. (a) Study the graph below.

Global Mean Temperatures Over the Past 500 000 Years



(i) Choose words from the word box to complete the following paragraph. [3]

glacial	seasonal change	heatwave
climate change	snowstorm	inter-glacial

In the last 500 000 years, average global temperatures have varied greatly. There were times when polar and mountain ice sheets covered much of the Earth. These are known as ..... periods. In between these icy periods, warmer temperatures are more common. These are known as ..... periods. This cyclical pattern of changing temperature is known as .....

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(ii) Describe the trend in mean temperature shown on the graph. Use data from the graph to support your answer. [3]

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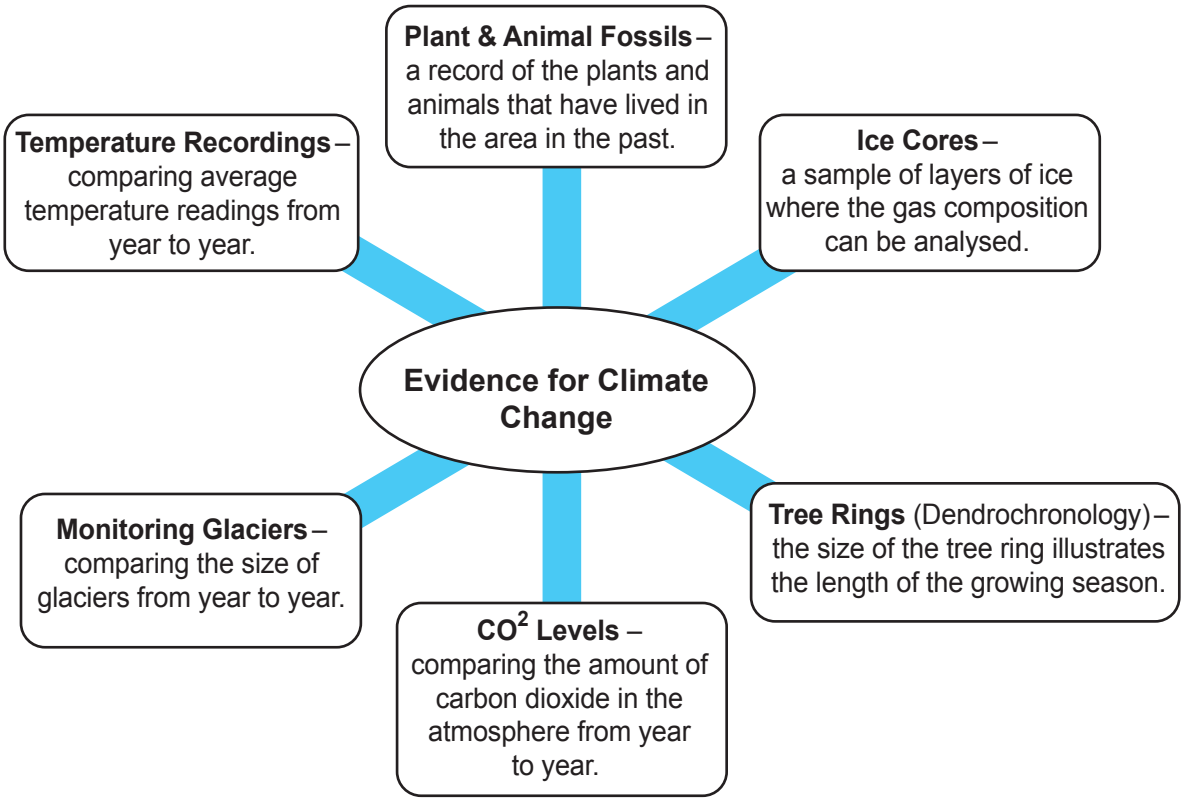
(b) Study the information about sources used to gather evidence of climate change.



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Compare the value of using ice cores as evidence of climate change with another source of evidence. [6]

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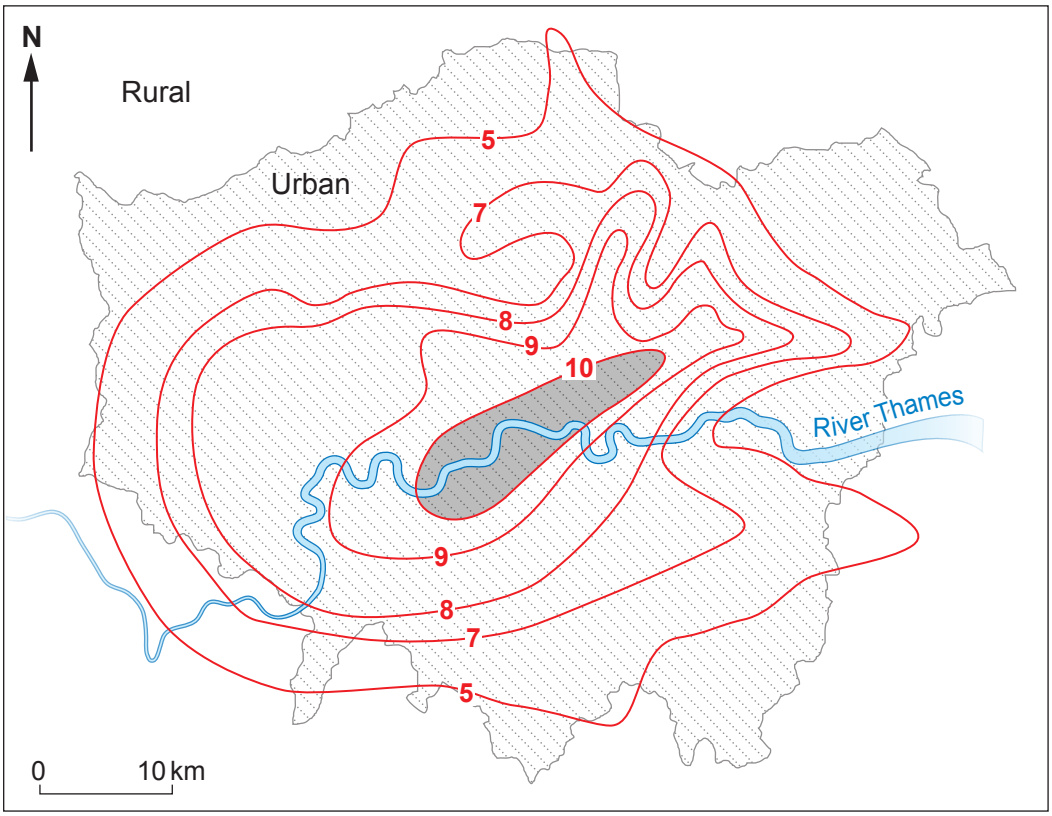
(c)

Mean Minimum Temperatures Recorded Across Greater London in the Month of May



Key: Higher building density | Lower building density | —9— Isoline temperature in °C

(i) Define the term microclimate. [1]

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(ii) Draw the 6 °C isoline onto the map. [2]

(iii) Identify **one** weakness of using this type of map for representing data about microclimates. [1]

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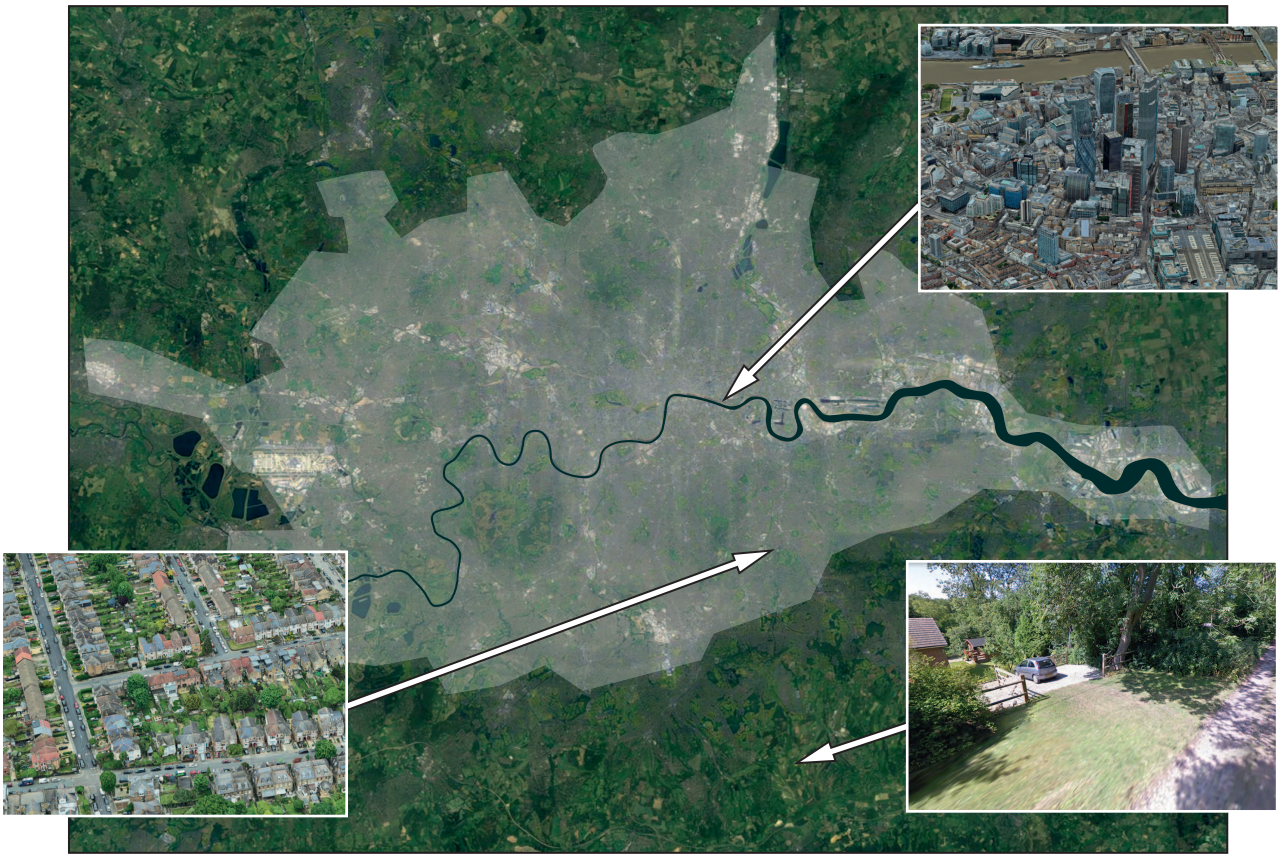
Satellite Image of Greater London



(iv) Suggest **one** factor that may influence microclimates across Greater London. Use evidence from the resources to support your answer. [3]

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(d) Study the table below:

Twenty of the Most Important Wildlife Corridors

Name of Wildlife Corridor	Country	Continent	Man-made or natural
Banff National Park	Canada	North America	Man-made
Natuurbrug Zanderij Crailoo	Netherlands	Europe	Man-made
US Highway 93 North	USA	North America	Man-made
Christmas Island National Park	Australia	Oceania	Man-made
Mt. Kenya National Forest	Kenya	Africa	Man-made
Eco-Link @BKE	Singapore	Asia	Man-made
Lower Rio Grande Valley National Wildlife Refuge	Mexico	North America	Man-made
Norway's Bee Highway	Norway	Europe	Man-made
Burnham Wildlife Corridor	USA	North America	Man-made
Yellowstone to Yukon Wildlife Corridor	USA	North America	Man-made
Sredneussuriisky Wildlife Corridor	Russia and China	Asia	Man-made
Kallhäll Nature Bridge	Sweden	Europe	Man-made
Madaraka Express railway	Kenya	Africa	Man-made
Mandai Wildlife Bridge	Singapore	Asia	Man-made
Railway Turtle Tunnels	Japan	Asia	Man-made
Kaziranga-Karbi Anglong Corridor	India	Asia	Natural
Terai Arc Landscapes	India and Nepal	Asia	Natural
Kanha Pench Corridor, Satpuda-Maikal Landscape	India	Asia	Natural
Sawantwadi-Dodamarg Wildlife Corridor	India	Asia	Natural
European Green Belt	Numerous – from Finland to Bulgaria	Europe	Natural

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(i) Define the term wildlife corridor. Tick (✓) the correct answer below. [1]

Definition	Tick (✓)
The management of land and the resources within it, required to maintain suitable populations of species.	
An agreement between poorer and richer nations to spend money on conservation projects to ensure greater friendship and trade.	
A strip of land that links habitats, allowing wildlife to move safely from one area to another.	

(ii) Use the data in the table on page 8 opposite.

Calculate the percentage of wildlife corridors that are found in Asia. Show your working. [2]

Answer ..... %

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(iii) Explain why wildlife corridors are successful in managing habitats. Use an example you have studied in your answer. [6]

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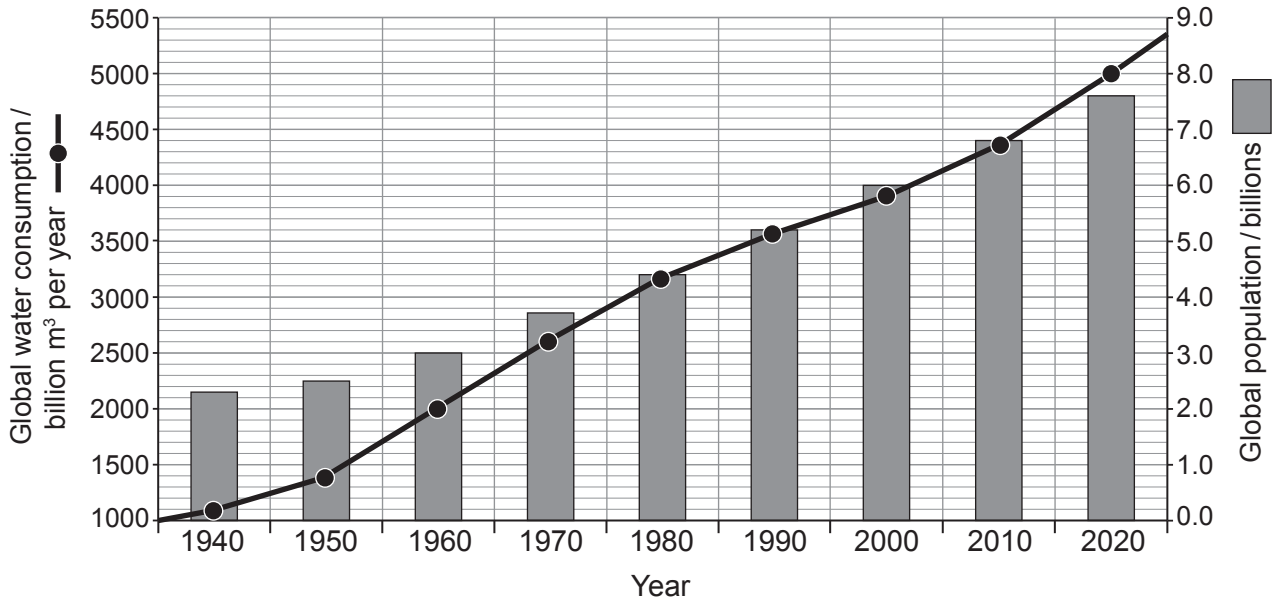
THEME 6: Development and Resource Issues

2. (a)

Global Water Consumption and Population Growth



(i) Give the global population in the year 2000. [1]

..... billion people.

(ii) Describe the relationship between water consumption and population. Use data in your answer. [3]

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(iii) The three factors listed below have all played a part in increasing the demand for water.

Population Growth	Growth of Consumerism	Agricultural Change

Choose the factor which, in your opinion, has had the greatest impact. Justify your choice. [8]

The accuracy of your writing will be assessed in your answer to this question. [3]

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(b)

Brazil's Top Trading Partners for Imports and Exports in 2018 (US$ billions)

(i) Circle the correct answers in the passage below. [2]

The value of Brazil's exports is **(more than / less than / the same as)** its imports, and the country that it does most trade with is **(USA / Germany / China)**.

(ii) What is a trade bloc? [2]

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(iii) Read the definitions below.

Letter	Definition
A	Limits on the amount of goods imported
B	An agreement between two countries to trade together
C	Financial benefits given by the government to support businesses, for example farmers
D	The import and export of goods and services across international boundaries
E	Taxes imposed on imports

Add the letter of the correct definition to each of the terms below. One of the definitions will not be used. [4]

Term	Definition
Global trade	
Tariffs	
Quotas	
Subsidies	

(iv) Explain why global trade has contributed to uneven patterns of development. [4]

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(c) The term north–south divide refers to the inequality in social and economic development between southern England and the rest of the UK.

Give **one** economic and **one** social reason why there are differences in economic development between areas within the UK. [4]

Economic reason .....

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Social reason .....

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End of Question 2

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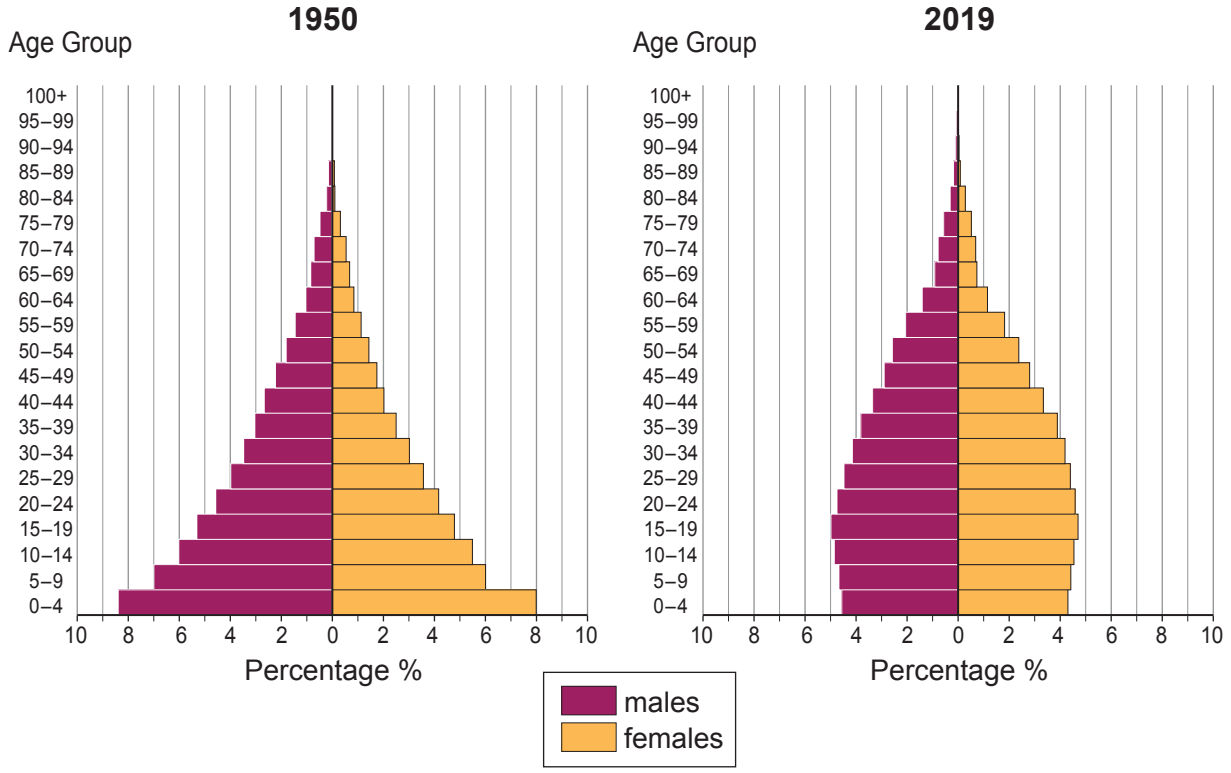
SECTION B – OPTIONS

Answer **one** question in this section, **either** Question 3 **or** Question 4.

THEME 7: Social Development Issues

3. (a) Study the graphs below.

Population Pyramids for Bangladesh, 1950 and 2019



(i) Calculate the total percentage of males and females aged 5–9 years in 1950. Show your working. [2]

Answer: ..... %

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(ii) Describe how the population structure of Bangladesh changed between 1950 and 2019. Use figures from the population pyramids to support your answer. [4]

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(iii) Describe how **one** economic factor affects death rates. [2]

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(iv) Explain why changing social factors affect population structure in South Asia. [4]

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(b) (i) State **two** factors that lead to people becoming refugees. [2]

1. .....

2. .....

(ii) Give **one** reason why asylum seekers may want to leave some South Asian countries. [2]

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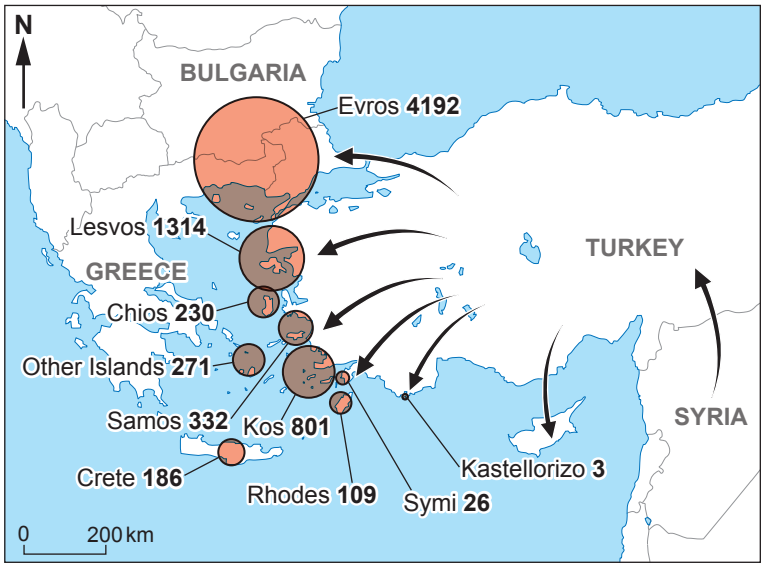
(c) Study the resources below.

Movement of Refugees from Turkey to the EU via Greece



Year	Official Refugee Arrivals in Greece
2014	43 300
2016	177 300
2018	50 500
2020	15 700

Key:

Circle size indicates number of people

Fact File – Managing refugees into Greece

- The European Union (EU) had a large increase of refugees from 2015.
- Some refugees from sub-Saharan Africa and Asia enter the EU by moving through countries like Turkey to Greece (an EU country).
- Many of these refugees came from Syria due to a civil war.
- Greece set up temporary emergency accommodation for the refugees.
- In 2016 an international agreement between the EU and Turkey was signed – Turkey agreed to discourage refugees moving to the EU in exchange for 6 billion euros.
- In 2020 Greece tried to stop refugees from arriving in the country by:
  - (i) Increasing border patrols with help from other EU nations
  - (ii) Removing support for those granted refugee status in the country.

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International agreements have been successful in reducing the movement of refugees. How far do you agree with this statement?

You may refer to other examples you have studied. [8]

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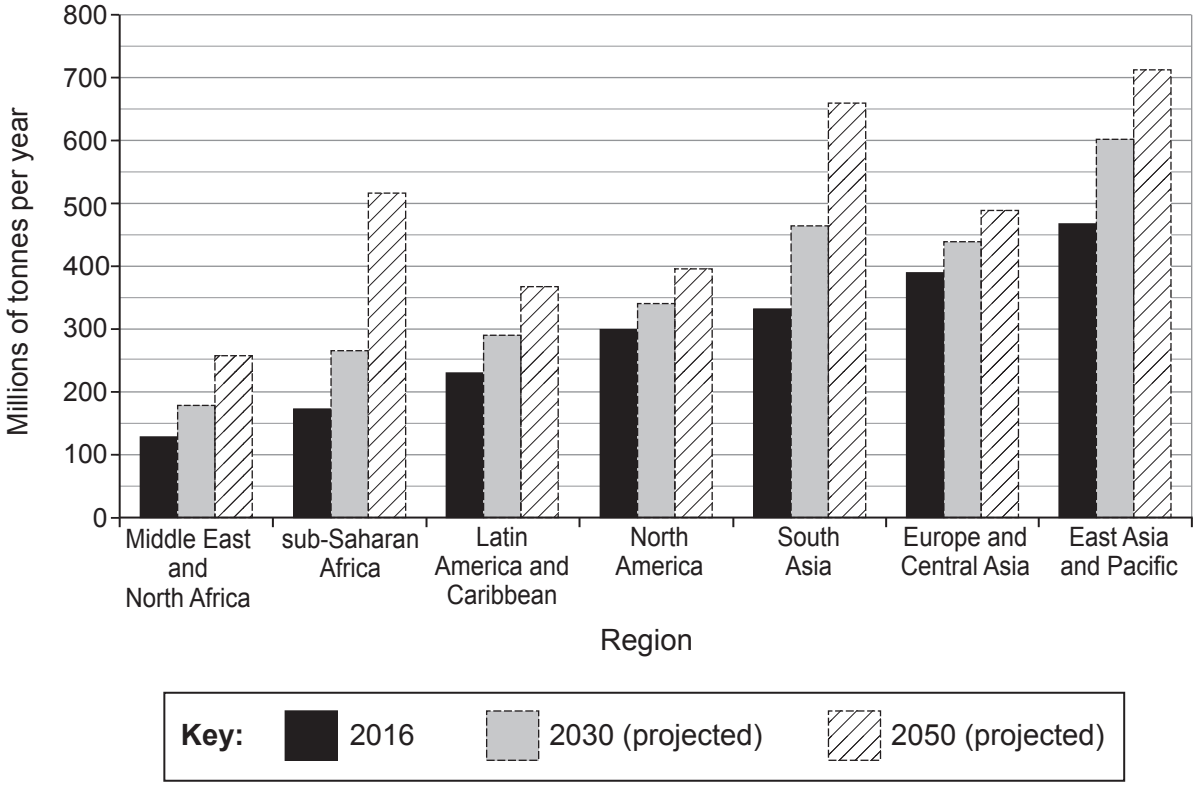
If you have answered Question 3 **do not** answer Question 4

THEME 8: Environmental Challenges

4. (a) Study the graph below.

Waste Generation by Region



(i) Calculate the projected change in waste production in North America between 2016 and 2050. Show your working. [2]

Answer: ..... million tonnes

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(ii) Describe how the pattern of predicted global waste changes from 2016 to 2050. [4]

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(iii) Describe **one** way that waste can be disposed of. [2]

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(iv) Explain why consumerism has led to a change in the amount of waste produced. [4]

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(b) (i) In recent years there has been a rapid rise in the amount of e-waste created across the planet. Discarded computers account for much of this waste.

Name **two** other sources of e-waste. [2]

1. .....

2. .....

(ii) Give **one** reason why the growth of e-waste affects people. [2]

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(c) Study the resource box below.

The Conservation and Management of Elephants in Kenya

Year	Number of Elephants in Kenya
1973	167 000
1990	20 000
2021	36 200

Kenya Wildlife Conservation – Elephants

- From 1973–1990 there was a large reduction in the number of elephants in Kenya.
- In 1990, conservation management was put in place with the aim of elephants having a "peaceful and beneficial co-existence with people".
- Anti-poaching teams have significantly reduced the illegal killing of elephants in the area.
- The conservation of elephants benefits the whole ecosystem.
- Human population increase leads to competition for land and water for the elephants.
- Climate change is reducing the number and size of watering holes in the region.

Management schemes aimed at preserving habitats are always successful. How far do you agree with this statement? You may refer to other examples you have studied. [8]

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