

Surname	Centre Number	Candidate Number
First name(s)		0



GCSE

3110U20-1



S24-3110U20-1

WEDNESDAY, 5 JUNE 2024 – 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	

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.

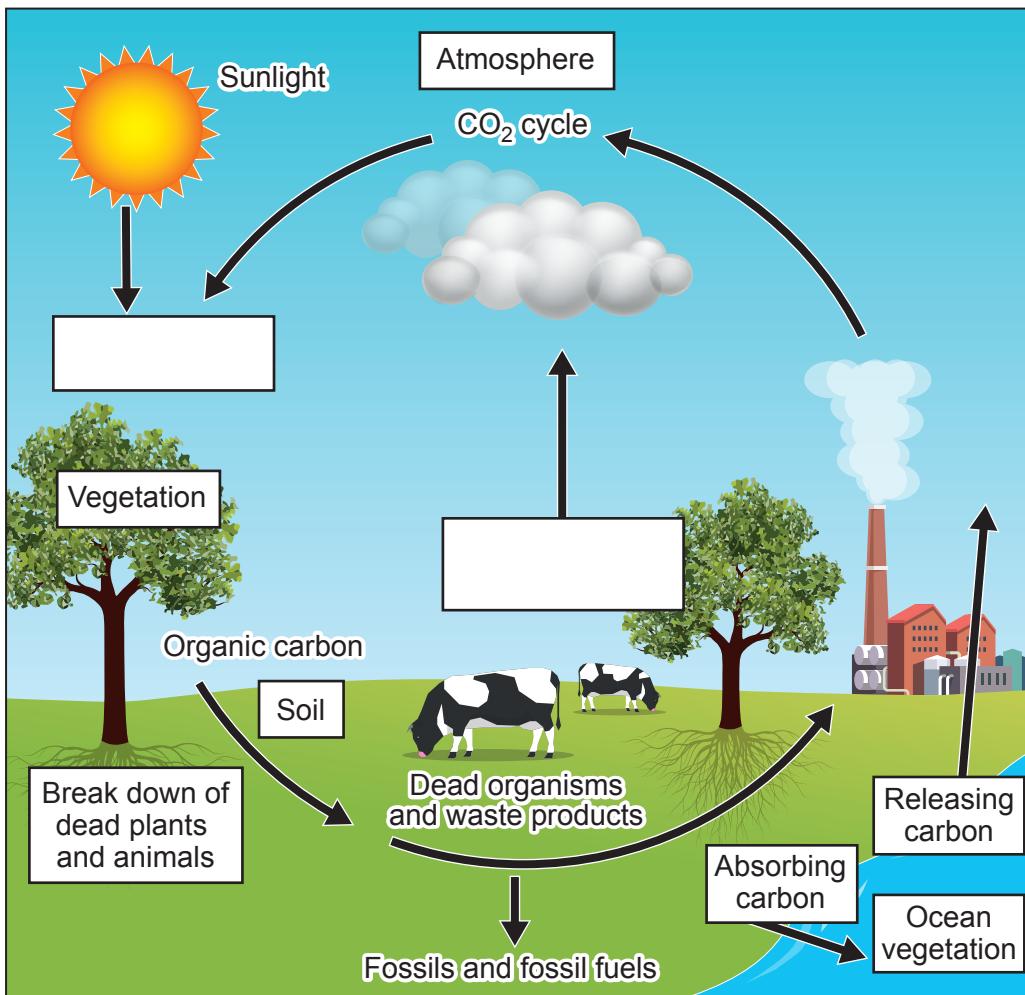
Your ability to communicate and organise your ideas will be assessed in questions that are worth 6 or 8 marks. The accuracy of your writing will be assessed in your answer to question 2(b)(ii).



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SECTION A – CORE THEMESAnswer **all** of the questions in this section.**THEME 5: Weather, Climate and Ecosystems**

1. (a) Study the diagram below.

The Carbon Cycle

(i) Complete the diagram above using **two** labels from the box below:

[2]

Photosynthesis

Contamination

Infiltration

Respiration

Decomposition



02

(ii) Describe how **one** natural process transfers carbon from the land to the atmosphere.

[2]

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(iii) Explain why human activity can increase the amount of carbon in the atmosphere.

[2]

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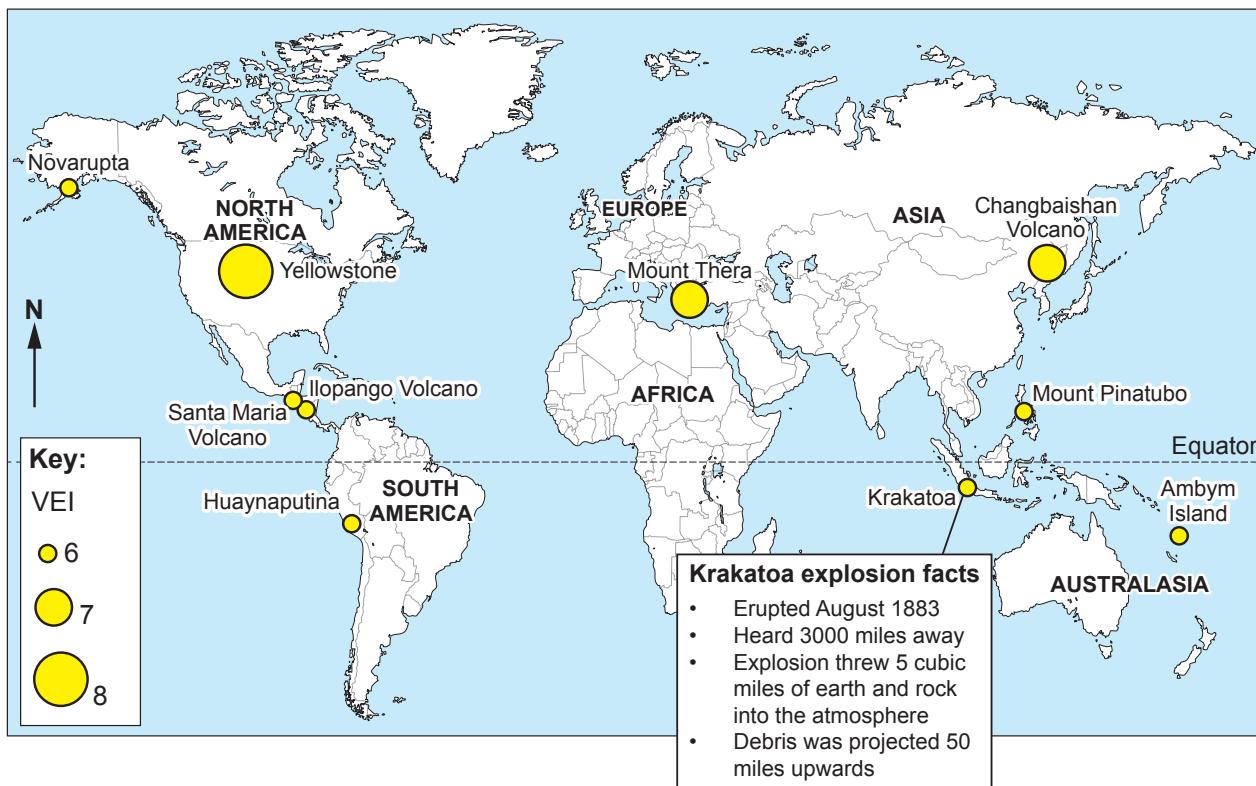
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(b) Study the information in the map below.

VEI Figures for Selected World Volcanoes



The power of exploding volcanoes is measured using a numbered scale. The scale is called the Volcanic Explosivity Index (VEI).

(i) Tick (✓) the mode of the VEI for the volcanic eruptions shown on the map.

[1]

Mode	Tick (✓)
6	
8	
10	



(ii) Describe the distribution of the volcanic eruptions shown on the map.

[3]

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(iii) Suggest why the eruption of Krakatoa may have caused climate change. Refer to information from the map on page 4 to support your answer.

[3]

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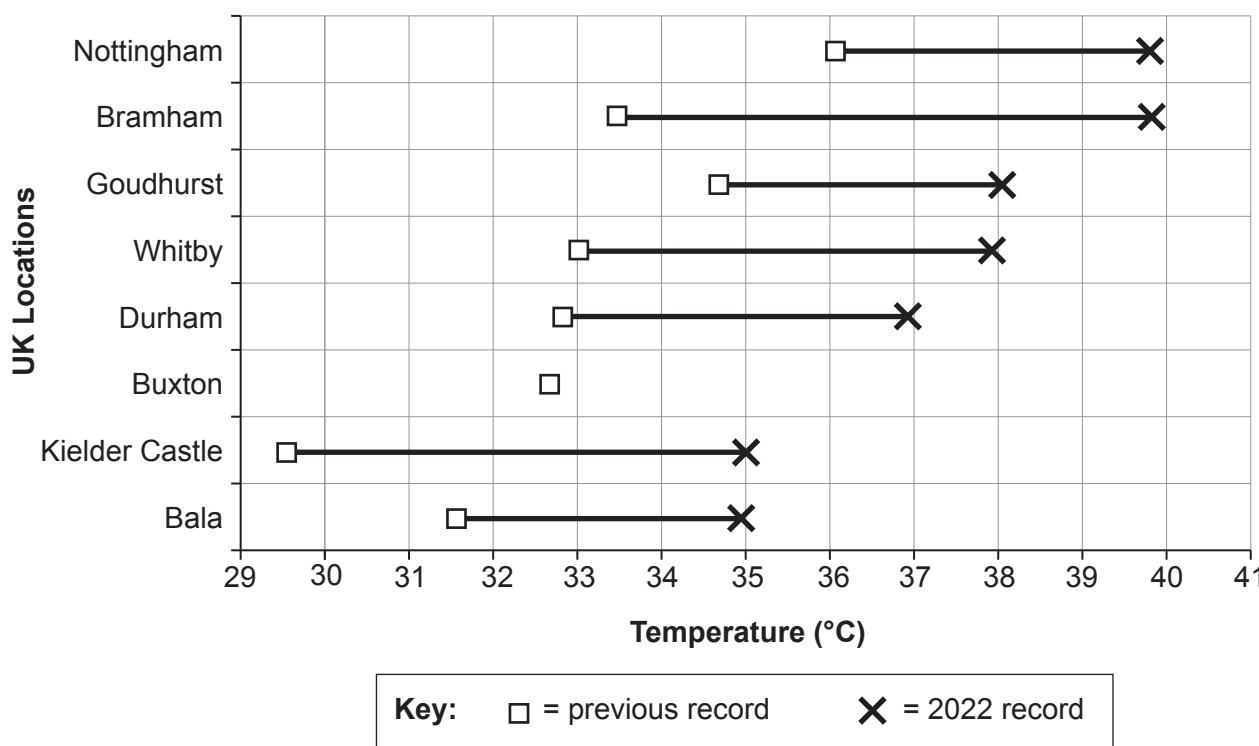
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(c) More intense high pressure systems are creating record temperatures in the UK.

Study the information below:

Locations with a Large Increase in Record Temperatures in 2022



(i) Complete the graph by adding the 2022 temperature for Buxton.

[1]

Buxton	36
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(ii) Name the location with the largest increase in record temperature.

[1]

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(iii) Calculate the range of temperature increase for Goudhurst.
Show your working.

[2]

Answer °C



(d) Study the resource box below.

Effects of Drought in Australia, 2019–2020

Failed crops



Wildfires endangering wildlife



- Long-lasting high pressure resulted in low rainfall and high temperatures.
- This was the warmest period on record in most of Australia.
- Large numbers of fish died due to lack of water in rivers.
- Many parts of Australia experienced extreme water stress.
- Extreme water restrictions left many farmers unable to plant crops.
- Many tourists stayed away from drought-affected areas.
- 18 million hectares were burned in wildfires, destroying 5900 buildings.
- An estimated one billion animals died as a result of the wildfires.



High pressure hazards have more severe consequences on the economy than the environment. To what extent do you agree with this statement?

[6]

Additional space for question 1(d) only:

3110U201
09



(e) (i) Define the term National Parks. Tick (✓) **one** box in the table below.

[1]

Definition	Tick (✓)
An area of land divided into zones to protect wildlife.	
Land where strips of vegetation cover allow animals to move freely.	
An area of important landscape, protected for people to enjoy.	

(ii) Explain why creating National Parks is used as a strategy to manage habitats. [4]

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End of Question 1



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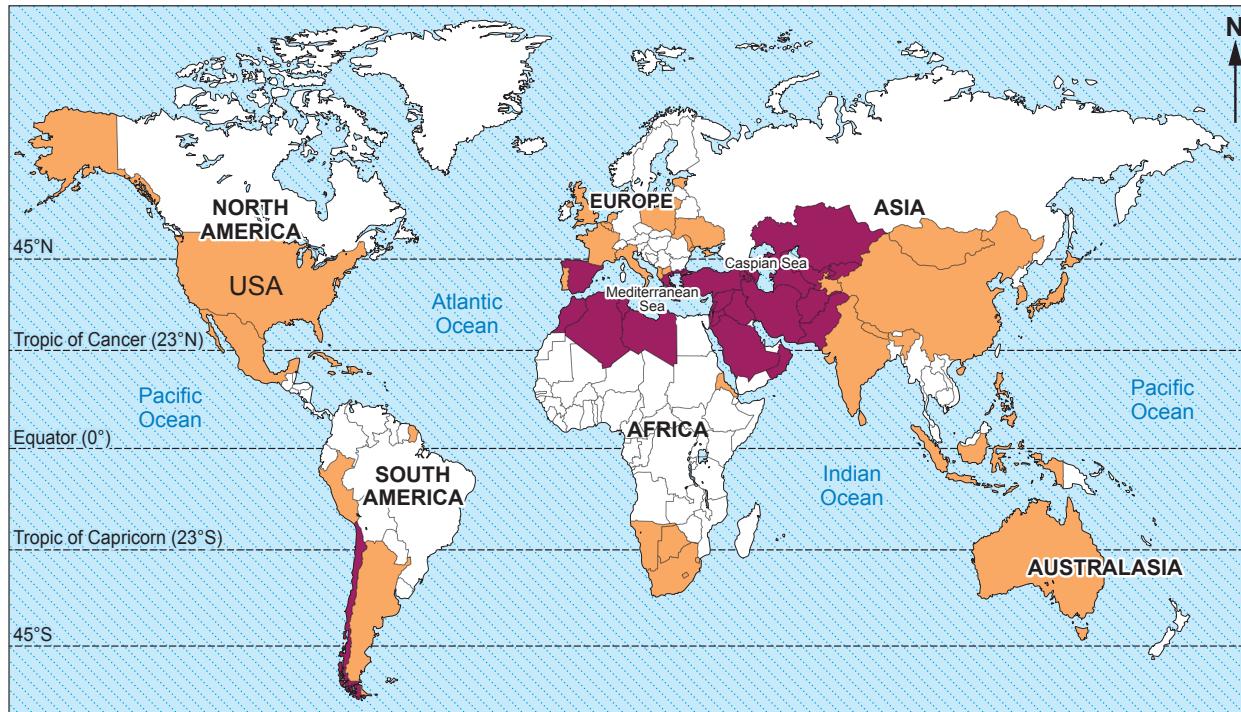
11

THEME 6: Development and Resource Issues

2. (a) Study the information below.

Water stress occurs when the demand for water in an area is more than the water available for supply in that area.

Predicted Water Stress by Country in 2040



(i) Identify the mapping technique shown above.

[1]

(ii) Describe the pattern of areas predicted to have very high levels of water stress in 2040 [2]

11
[2]



(iii) Give the predicted water stress level for the USA.

[1]

Answer: %

(iv) Give **one** reason why agricultural change leads to increased demand for water. [2]

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(v) Give **two** strategies used to manage water resources.

[2]

Strategy 1:

Strategy 2:

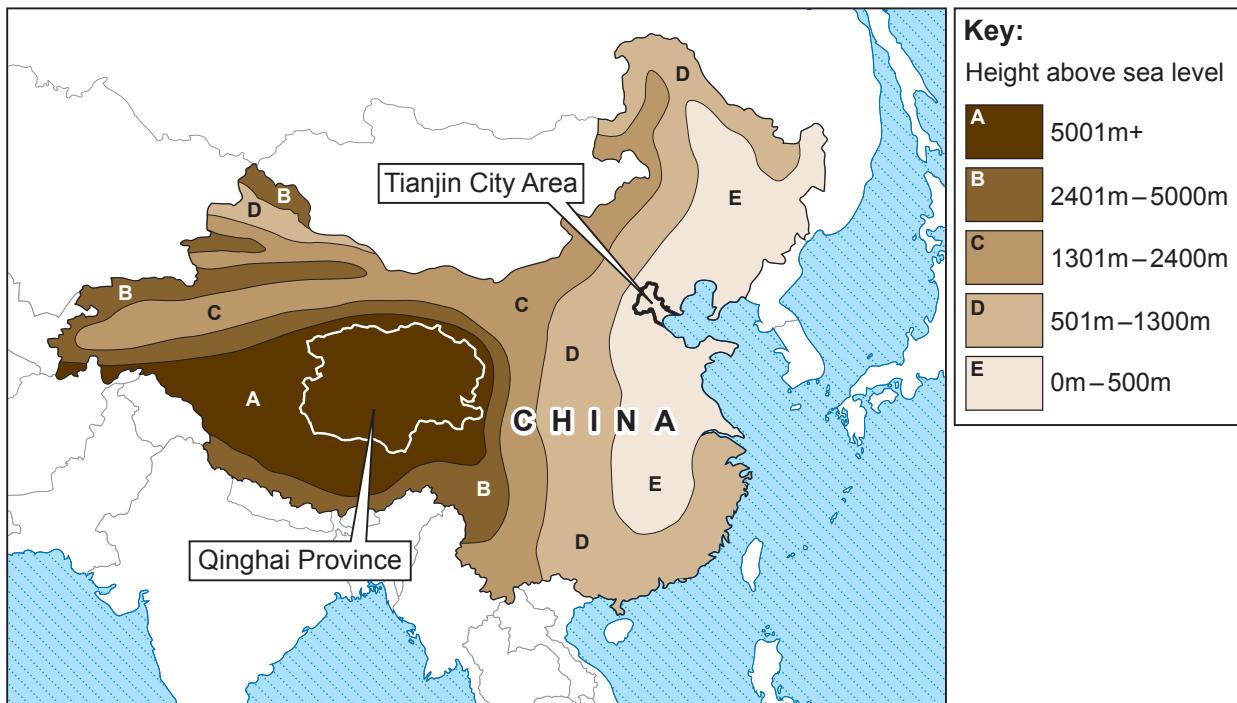
(vi) Explain why the management of water resources at an international scale can have economic and environmental consequences.

[6]



(b) Study the resource box below.

The locations of Tianjin City Area and Qinghai Province, China.



	Tianjin City Area	Qinghai Province
Region of China	North	Northwest
GDP (USD)	204 billion	43 billion
Development indicators	Major industries	Petrochemical, textiles & car manufacturing
	Infant mortality rate (number of deaths per 1000 live births)	2.3
	Literacy rate (percentage of the population that can read and write)	95.2
	Human Development Index (measures development by considering education, life expectancy and average income, a higher figure equals greater development)	0.838
Other factors	Distance from the coast (km)	0
	Population (million)	13.8
	Height above sea level (m)
	Temperature range	–3.4 to 26.8°C



Examiner
only

- (i) Use the map to complete the table opposite, giving the height above sea level for the two regions in China. [2]
- (ii) Countries have differences in the level of economic development between their regions.

Three factors that contribute towards these regional inequalities are:

Economic

Social

Environmental

Evaluate these factors that result in inequalities between regions.

[8]

You must refer to the information on the map and table opposite. You may use examples you have studied to support your answer.

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

3110U201
15



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Additional space for Question 2(b)(ii) only:



(c) Levels of economic development also vary within Wales.

Describe **one** economic and **one** social impact of uneven development within Wales. [4]

Economic:

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Social:

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End of Question 2



SECTION B – OPTIONS

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

THEME 7: Social Development Issues

3. (a) Study the table below.

Social Development Indicators for Egypt and the UK

	Egypt		UK	
	2000	2019	2000	2019
Literacy rate (%)	61	71.2	99	99
Access to electricity (%)	97.7	100	100	100
Net migration	-74 000	-190 000	992 000	1 303 000
Carbon dioxide emissions (metric tonnes per capita)	1.7	2.5	9	5.2

(i) **Circle** the correct response in the sentences below.

[2]

From 2000 to 2019:

Literacy rates in Egypt have increased by (**10.2%** / **11%** / **12.1%**).

Carbon dioxide emissions in the UK have nearly (**halved** / **doubled** / **tripled**).



(ii) Describe how the development gap is changing between Egypt and the UK. Use evidence from the table on page 18. [4]

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(iii) There are other indicators of social development.

Give **one** health and **one** gender indicator used to measure social development. [2]

Health indicator:

Gender indicator:



(b) In 2020, 160 million children globally were involved in child labour.

(i) Explain why some children in sub-Saharan Africa have to work.

[6]

(ii) Describe **one** consequence of child labour.

[2]

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(c) Study the images below.

Examples of different strategies used to reduce child labour

Local Strategies

Primary school in Togo, West Africa



Sign against child labour in Ghana

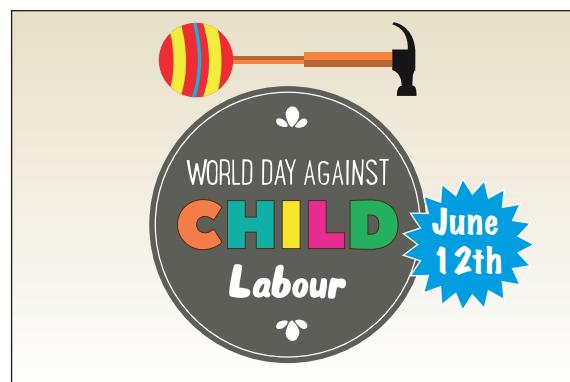


Global Strategies

Global conference on child labour



World day against child labour



Evaluate the effectiveness of local and global-scale strategies designed to reduce child labour. You may refer to examples you have studied. [8]

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End of Question 3



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If you have answered Question 3 **do not** answer Question 4**THEME 8: Environmental Challenges**

4. (a) Study the table below.

E-waste Data for China and the UK

	China		UK	
	2015	2019	2015	2019
E-waste generated (in kilotons)	8045	10 129	1483	1598
Percentage of e-waste that is collected for recycling (%)	16	16	45	58
Weight of e-waste that is collected for recycling (in kilotons)	1412	1546	663	871
Population (million)	1370	1400	65.1	66.8

(i) **Circle** the correct response in the sentences below. [2]

From 2015 to 2019:

The population in the UK has increased by (**1.7m / 2.7m / 3.1m**).

The percentage of e-waste collected for recycling in the UK has increased by nearly (**a half / three quarters / a third**).

(ii) Compare the changing approach to e-waste in China and the UK. Use evidence from the table. [4]

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(iii) Give **one** impact e-waste has on people and **one** impact it has on the environment. [2]

People:

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Environment:

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(b) The global average temperature today is estimated to be 1.17°C higher than it was 100 years ago.

(i) Describe **one** short-term effect of climate change experienced in the UK. [2]

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(ii) Explain why some people will need to consider living differently as a result of climate change. [6]

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(c) Study the images below.

Examples of different strategies used to tackle climate change

Individual Strategies

Cyclists in Amsterdam



Volunteers planting trees



Government Strategies

United Nations Climate Change Conference



Offshore wind farm



Evaluate the importance of individuals and governments in tackling climate change. You may refer to examples you have studied. [8]

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Additional space for Question 4(c) only:

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End of Question 4

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Question number	Additional page, if required. Write the question number(s) in the left-hand margin.	Examiner only



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