Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

0367578053

ENVIRONMENTAL MANAGEMENT **0680/13**

Paper 1 Theory **May/June 2020**

1 hour 45 minutes

You must answer on the question paper.

No additional materials are needed.

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- You may use a calculator.
- You should show all your working and use appropriate units.

INFORMATION

- The total mark for this paper is 80.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **20** pages. Blank pages are indicated.

[Turn over

Section A

1 Plate boundaries are where tectonic plates move in relation to each other.

(a) Draw a line from each plate boundary to its matching description.

plate boundary	description
conservative	plates move away from each other
constructive	plates slide past each other
destructive	plates move towards each other

[2]

(b) Movement at a plate boundary can cause an earthquake.

Suggest reasons why large earthquakes can cause **fewer** deaths than smaller earthquakes.

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..... [3]

[Total: 5]

2 Cholera is a major water-related disease, which causes large numbers of deaths in less economically developed countries (LEDCs) each year.

Providing people with safe drinking water helps prevent cholera.

(a) Describe how cholera is spread from one person to another.

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(b) Describe government strategies that can help people in rural areas have access to safe drinking water.

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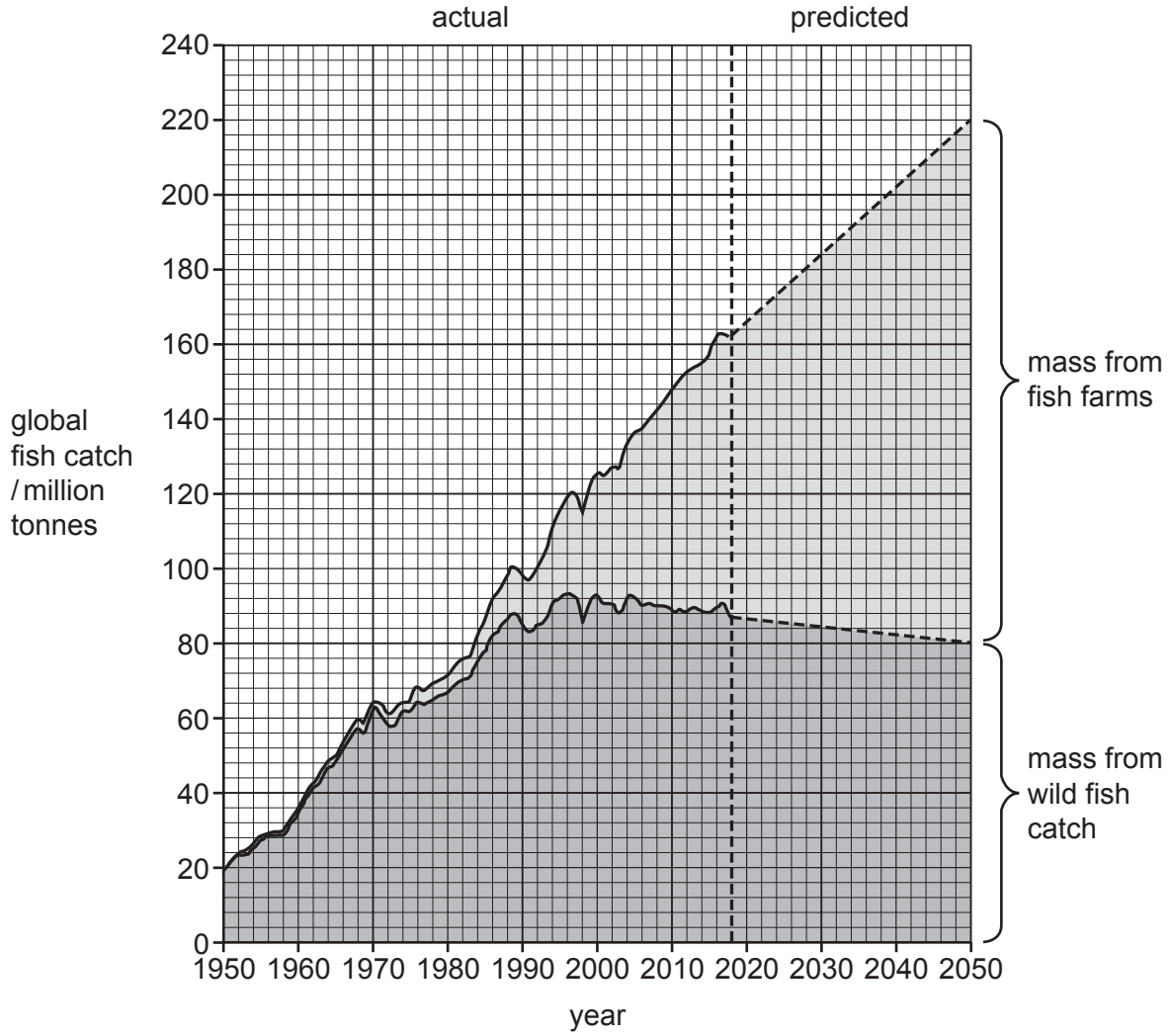
[Total: 6]

3 The graph shows the source of the global fish catch and predicted future demand for fish between 1950 and 2050.



(a) State the global fish catch in 1950.

..... million tonnes [1]

(b) Suggest reasons for the predicted increase in demand for fish by 2050.

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..... [2]

(c) Suggest reasons why the wild fish catch is **not** predicted to increase.

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..... [2]

(d) Calculate the predicted percentage of the global fish catch in 2050 that will be from fish farms.

..... % [2]

(e) Explain reasons why fish farming is a more efficient way to meet the increase in global demand for fish than using wild fish catch.

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..... [2]

[Total: 9]

Section B

4 The newspaper article is about giant pandas.

Giant pandas are no longer endangered

A recent survey of the giant panda population living in the wild recorded a 17% increase between 2008 and 2018. The survey found 1864 giant pandas living in the wild in 2018. A further 375 giant pandas were living in captivity around the world.

The risk of extinction for giant pandas has been reduced from 'Endangered' to 'Vulnerable'.

Between 2008 and 2018 the number of wildlife reserves increased. The wildlife reserves have preserved large areas of bamboo forests. Bamboo is the main food source of giant pandas. Many giant pandas living in the wild are protected in wildlife reserves.

(a) Suggest reasons why the number of giant pandas living in the wild increased between 2008 and 2018.

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..... [3]

(b) **(i)** Scientists surveyed the giant panda population living in the wild using a systematic sampling method.

Describe how this survey could have been completed.

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..... [3]

(ii) Scientists have predicted a 20% increase in the giant panda population living in the wild between 2018 and 2028.

Calculate the predicted number of giant pandas living in the wild in 2028.

..... [2]

(c) Explain ways conserving the giant panda population living in the wild benefits other organisms in the area.

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..... [3]

(d) **(i)** Some giant pandas live in captivity.

Calculate the percentage of the **total** giant panda population in captivity in 2018.

..... % [2]

(ii) Records show that giant pandas can live over 30 years in captivity compared to 14–20 years in the wild.

Suggest reasons why giant pandas in captivity live longer than giant pandas in the wild.

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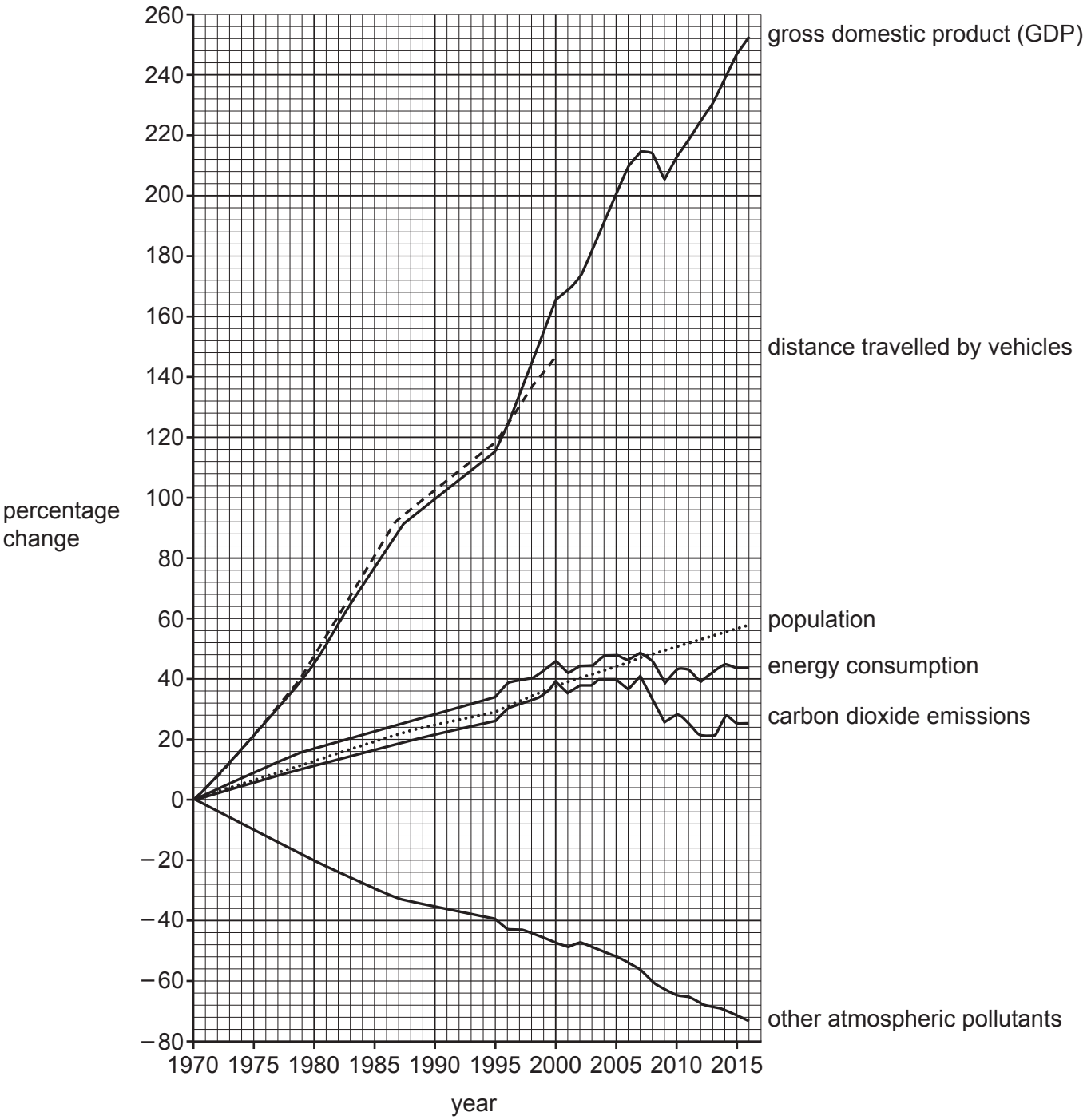
..... [2]

[Total: 15]

[Turn over

5 Scientists have published data comparing some indicators of economic development, population change and air pollution in the USA. The graph shows these data as percentage change from 1970 to 2016.

The dashed line on the graph is distance travelled by vehicles. The line is incomplete.



(a) (i) Complete the graph for distance travelled by vehicles using the information in the table.

year	percentage change
2005	170
2010	168
2016	190

[2]

(ii) Determine the percentage change in other atmospheric pollutants between 1970 and 2016.

..... % [1]

(iii) Use the graph to describe the population change in the USA between 1970 and 2016.

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..... [2]

(iv) Gross domestic product, GDP, is an indicator of annual economic activity in a country.

Suggest why the increase in GDP has resulted in an increase in the distance travelled by vehicles between 1970 and 2016.

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..... [1]

(b) Describe ways a country could reduce the amount of air pollution it emits and still increase its GDP.

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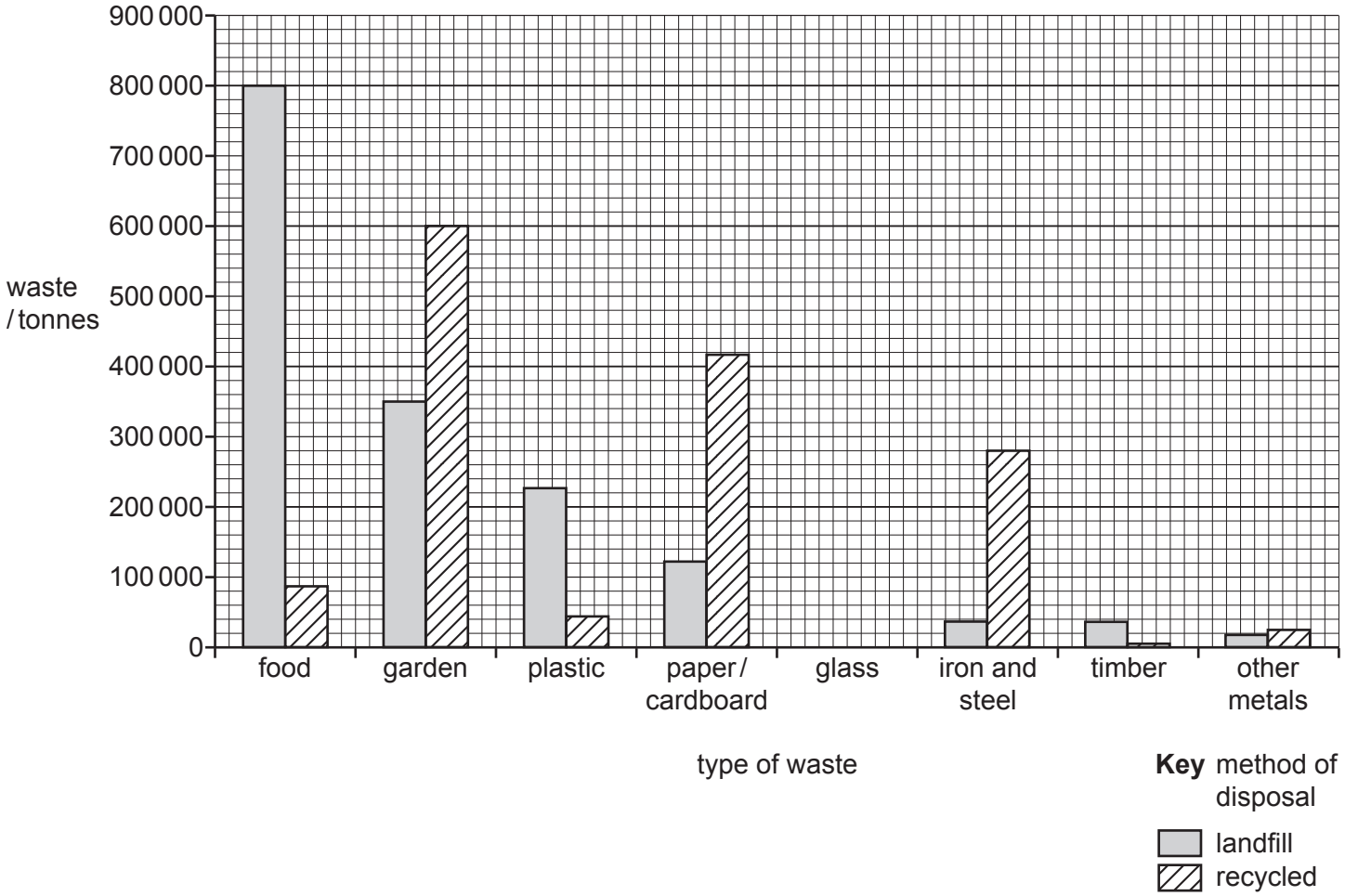
..... [4]

[Total: 10]

6 The bar chart shows the mass of waste that goes to landfill or is recycled in one Australian state.



(a) (i) Complete the bar chart using the information for glass.

method of disposal	mass of glass waste / tonnes
landfill	80 000
recycled	200 000

[2]

(ii) Determine which type of waste has the greatest total mass.

..... [1]

(iii) The ratio of landfill to recycled waste for garden waste is 3.5 : 6.

Determine which type of waste has the greatest proportion that is recycled.

..... [1]

(b) The government are concerned about the mass of food waste that goes to landfill.

Suggest **two** environmental impacts of the large mass of food waste.

1 .....

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2 .....

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[2]

(c) Suggest **two** ways the government could generate income from recycled food waste.

1 .....

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2 .....

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[2]

(d) Describe strategies to increase recycling of waste.

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..... [3]

[Total: 11]

7 The photograph shows part of a large field.

(a) (i) Circle the **two** words that best describe the type of agriculture shown in the photograph.

arable **commercial** **mixed**

pastoral **subsistence**

[2]

(ii) Explain why this field is at risk of soil erosion.

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..... [2]

(b) A farmer stated that crop rotation is a good method of ensuring sustainable agriculture.

Describe other management strategies for sustainable agriculture.

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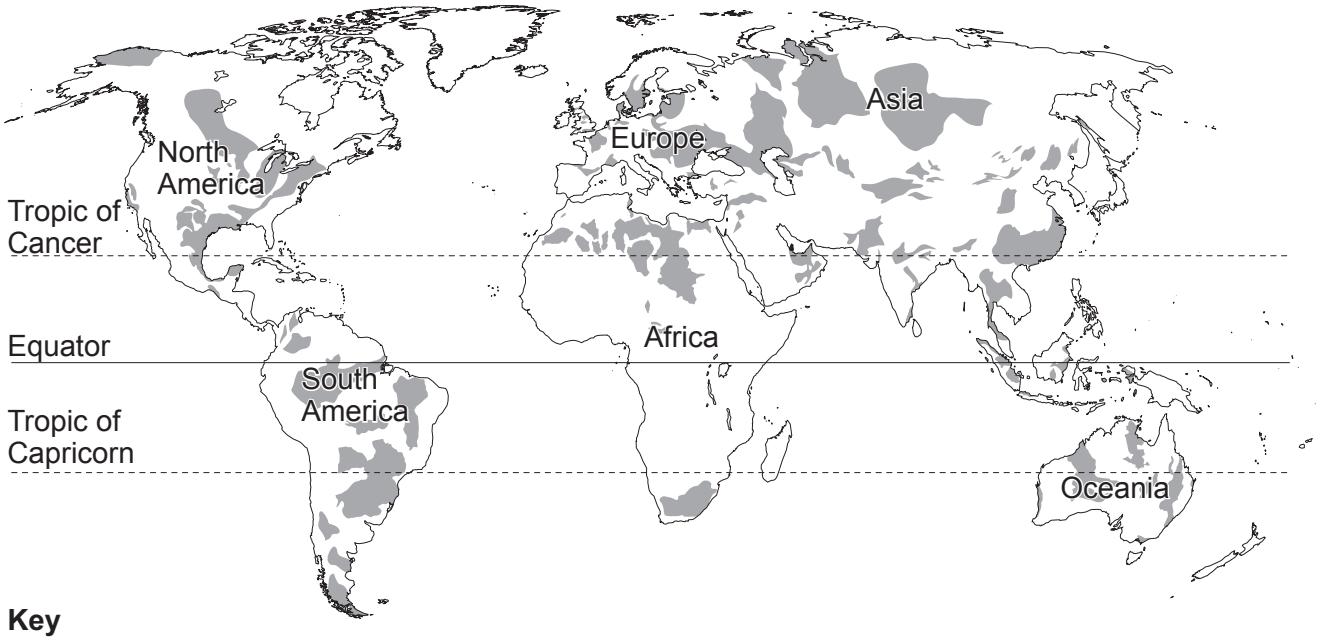
[Total: 9]

8 World reserves of oil and gas are finite. Extra reserves have been found stored in shale.

These oil and gas reserves could be extracted by fracking shale.

The map shows the locations of these reserves.



Key

oil and gas reserves in shale

(a) (i) Describe the location of the oil and gas reserves in shale in North America.

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..... [2]

(ii) Explain how gas or oil is extracted by fracking shale.

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..... [4]

(iii) Suggest reasons why some people are opposed to fracking.

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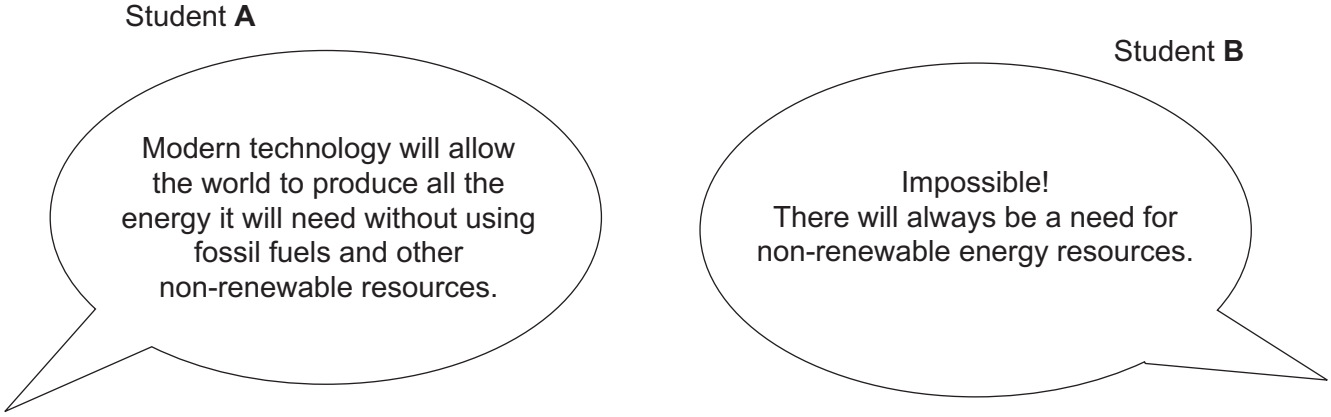
..... [3]

PLEASE TURN OVER FOR QUESTION 8(b)

(b) Two students are debating the future of energy production.



To what extent do you agree with these views about the future of energy production? Give reasons for your answer.

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..... [6]

[Total: 15]

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