

Write your name here

Surname

Other names

Centre Number

Candidate Number

Edexcel GCSE

Citizenship Studies

Unit 3: Citizenship in Context

Option A: Environmental Change and Sustainable Development

Monday 23 May 2011 – Afternoon

Time: 1 hour 15 minutes

Paper Reference

5CS03/3A

You must have:

Sources Booklet (enclosed)

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 50.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
– *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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Study the sources in the Sources Booklet.

Answer ALL questions.

For Questions 1–7, choose an answer A, B, C or D and put a cross in the box ☒. Mark only one answer for each question. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

- 1** Which area of the UK would be worst affected by the rise in sea levels projected in Source A? (1)
- A** South and East of England
 - B** North and West of England
 - C** Scotland
 - D** Wales
- 2** According to Source B, each of the following contribute to methane emissions except (1)
- A** cows
 - B** landfill sites
 - C** road vehicles
 - D** sheep
- 3** According to the bar chart in Source C, in which West London borough were recycling rates lowest in 2008/09? (1)
- A** Brent
 - B** Ealing
 - C** Hillingdon
 - D** Hounslow
- 4** According to Source C, the greatest saving from recycling is achieved (1)
- A** in air pollution when we recycle paper
 - B** in energy when we recycle aluminium
 - C** in air pollution when we recycle glass
 - D** in energy when we recycle paper



5 Source B points out that 'methane is a greenhouse gas which causes 20 times as much global warming as carbon dioxide'. This statement is a fact rather than an opinion because (1)

- A it can be proved to be true
- B it cannot be proved to be true
- C it has been stated on a radio programme
- D it has been stated on the internet

6 The definition 'resource use that aims to meet both current and future human needs while preserving the environment' refers to (1)

- A carbon footprint
- B conservation
- C sustainable development
- D environmental impact

7 In Source D, biomass production is criticised because it (1)

- A produces heat for homes and industry
- B uses production that would otherwise go to landfill
- C helps the UK meet its 'renewables' targets
- D sometimes causes rainforests to be cut down

(Total for Questions 1–7 = 7 marks)

8 Suggest **two** actions, other than recycling, that a person could take to reduce their own carbon emissions and energy use. (2)

1

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2

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(Total for Question 8 = 2 marks)



9 Using Source D, suggest **one** possible advantage of the greater use of biomass and **one** possible disadvantage. (2)

Advantage

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Disadvantage

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(Total for Question 9 = 2 marks)

10 If sea levels rose to cause the widespread flooding suggested in Source A, what would be the **three** biggest changes in the lives of people in the UK, compared to the present day? (3)

1

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2

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3

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(Total for Question 10 = 3 marks)



12 (a) UK government policies promote renewable energy and discourage the use of fossil fuels. Give **two** reasons why some individuals oppose these policies.

(2)

1

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(b) Give **two** reasons why the switch to renewable energy should not be delayed.

(2)

1

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(Total for Question 12 = 4 marks)



13 Using Source B and your own knowledge, give **three** reasons why the need to reduce methane emissions is not as well understood as the need to reduce carbon dioxide (CO₂) emissions.

(3)

1

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(Total for Question 13 = 3 marks)

14 Using evidence from Source E and your own knowledge, do you agree that countries are entitled to sell or cut down their rainforest because 'they are our rainforests and we'll do what we like with them'?

Give reasons for your opinion showing that you have considered an **alternative point of view**.

(8)

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(Total for Question 14 = 8 marks)



Handwriting practice area with 25 horizontal dotted lines.



(Total for Question 15 = 15 marks)

TOTAL FOR PAPER = 50 MARKS



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Edexcel GCSE

Citizenship Studies

Unit 3: Citizenship in Context

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Do not return this booklet with the question paper.

Turn over ►

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Study the following sources and answer the questions in the question paper.

Source A: What if global warming is not stopped and the ice melts?

The map shows what the UK would look like if all the world's ice melted and sea levels rose by about 80 metres. Many of the towns and cities shown on the map would be under water.



(Source: <http://www.abuhrc.org/>)
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Source B: Cows or cars – which is the biggest cause of climate change?

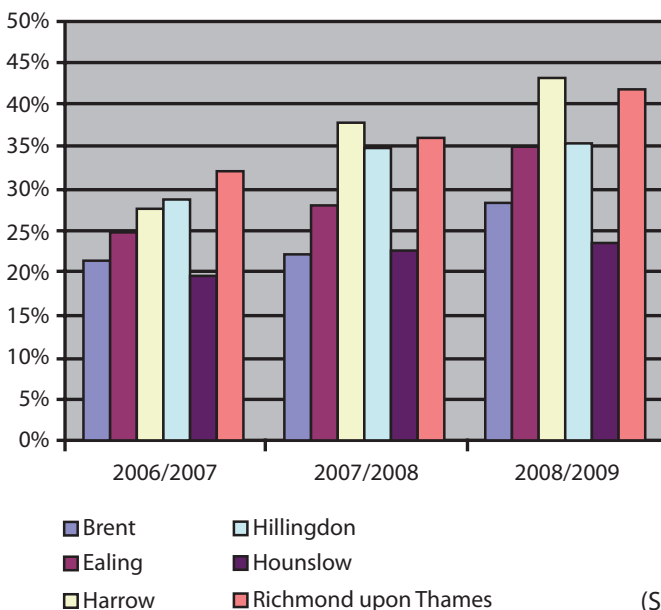


Methane is a greenhouse gas which causes 20 times as much global warming as carbon dioxide.

- It comes from both ends of cattle and sheep. This makes up about a quarter of the methane in Britain's atmosphere.
- Every day each of the UK's 10 million cows does as much damage to the atmosphere as one big car.
- The government wants scientists to develop new types of grass which will reduce the problem.
- Methane is also created from rotting material in landfill sites.

(Source: adapted from Lewis Smith at <http://www.timesonline.co.uk>)

Source C: Recycling rate increases in West London








Far less energy is used in recycling than when unprocessed raw materials are used to manufacture goods. So recycling cuts down CO₂ emissions.

- Recycling aluminium, such as drinks cans, saves 95% of energy and cuts air pollution by 95%.
- Recycling paper saves on energy by 40% and cuts down air pollution by 70%.
- Recycling glass saves up to 30% on energy and cuts air pollution by 20%.

(Source: adapted from <http://www.richmond.gov.uk>)

Source D: Sustainability, biomass and the environment

Biomass is a source of renewable energy because it is produced from waste that would go into landfill. It is a very special kind of recycling.

Types of Biomass	
	Wood fuel
	Rubbish
	Alcohol fuels
	Crops
	Landfill gas

- It is the UK's largest source of green energy.
- It produces 2% of the UK's electricity, enough to power more than 2 million homes.
- It helps the UK meet its targets for the production of energy from renewable sources.
- Biomass production sometimes leads to the cutting down of rainforest.
- When land is used to grow biomass crops instead of food, this can lead to price rises, food shortages, hunger or death.
- Biomass schemes are less likely to be opposed by Not In My Back Yard (NIMBY) campaigners.

(Source: adapted from Tony Grayling in <http://www.guardian.co.uk>)

Source E: Rainforests in danger

The Amazon rainforests have long helped to slow down climate change yet now some are being sold off and destroyed.

- Some governments are effectively saying 'They are our rainforests and we'll do what we like with them'.
- The Amazon accounts for more than half the world's rainforest.
- Cutting down rainforest can cause the loss of many rare species which may have contributed to medical and other scientific advances in the future.
- Rainforests are now being damaged by drought which is caused by global warming.



(Source: adapted from <http://www.impactlab.com>)

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