



National  
Qualifications  
2015

**X733/76/11**

**Geography**

THURSDAY, 21 MAY

9:00 AM – 11:15 AM

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**Total marks — 60**

**SECTION 1 — PHYSICAL ENVIRONMENTS — 15 marks**

Attempt ALL questions.

**SECTION 2 — HUMAN ENVIRONMENTS — 15 marks**

Attempt ALL questions.

**SECTION 3 — GLOBAL ISSUES — 20 marks**

Attempt TWO questions.

**SECTION 4 — APPLICATION OF GEOGRAPHICAL SKILLS — 10 marks**

Attempt the question.

Credit will be given for appropriately labelled sketch maps and diagrams.

Write your answers clearly in the answer booklet provided. In the answer booklet you must clearly identify the question number you are attempting.

Use **blue** or **black** ink.

Before leaving the examination room you must give your answer booklet to the Invigilator; if you do not you may lose all the marks for this paper.



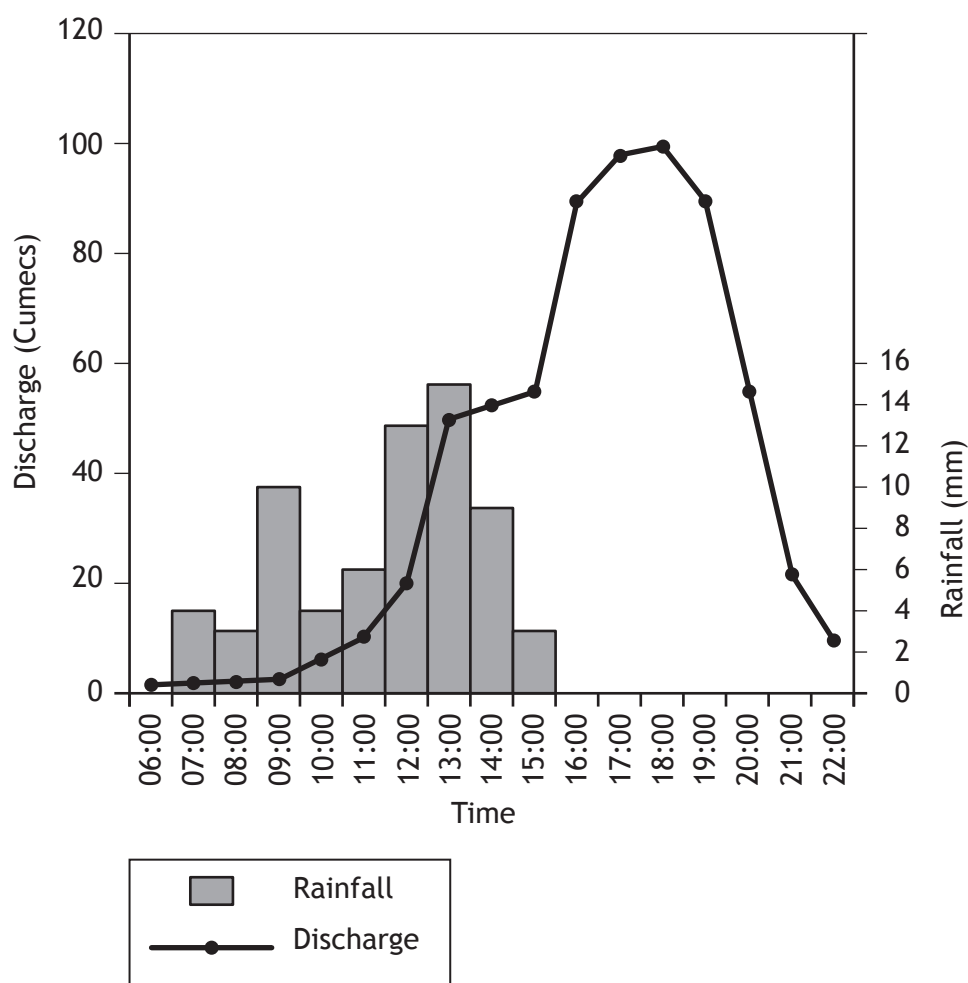
## SECTION 1: PHYSICAL ENVIRONMENTS - 15 marks

Attempt ALL questions

## Question 1

Study Diagram Q1 before answering this question.

Diagram Q1: Flood Hydrograph for the River Valency at Boscastle, 16 August 2004



Explain the changes in discharge level of the River Valency at Boscastle on 16 August 2004.

4

**Question 2**

**Explain**, with the aid of annotated diagrams, the various stages and processes involved in the formation of:

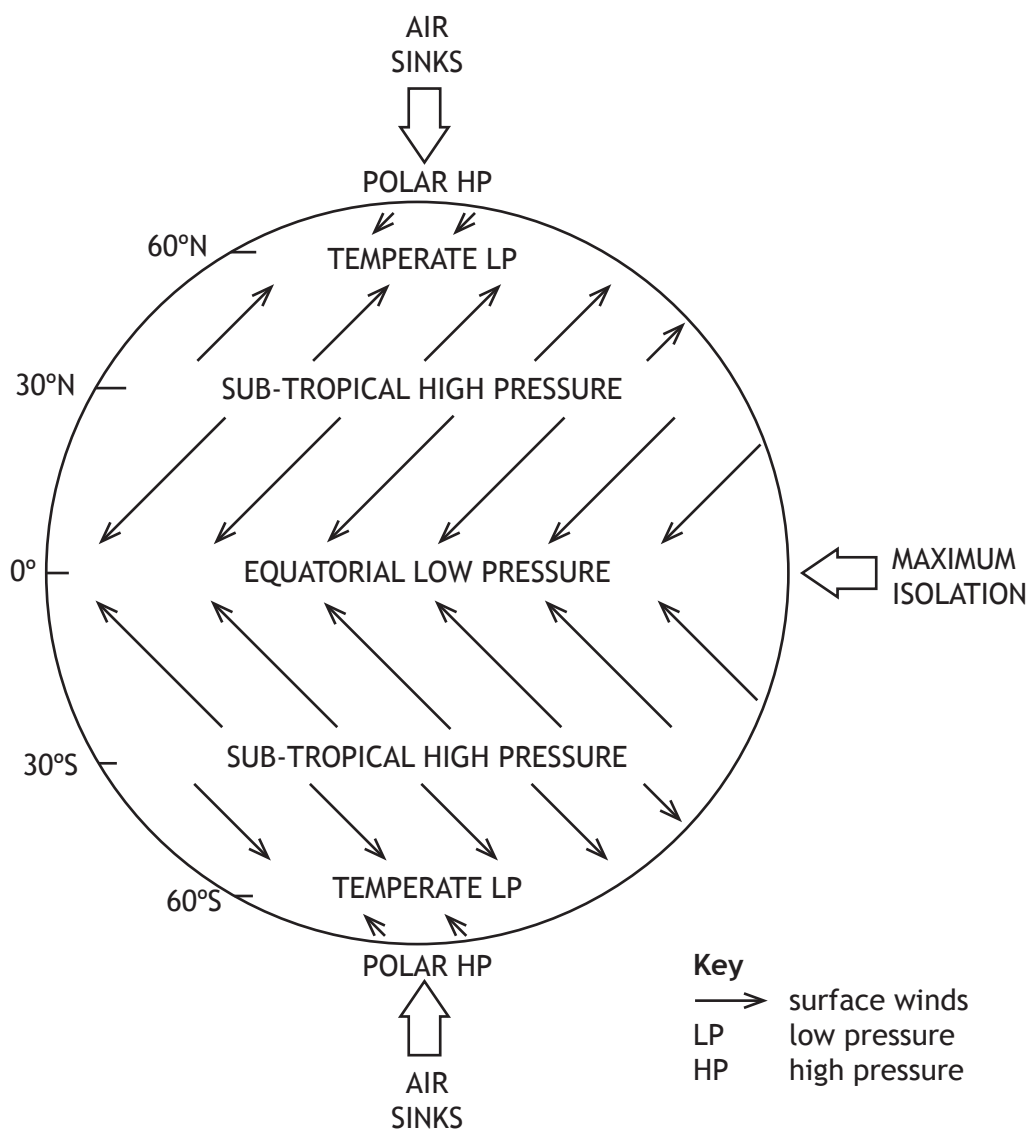
- (a) a stack; **and**
- (b) a sand spit.

**7****[Turn over**

## Question 3

Look at Diagram Q3 before answering this question.

Diagram Q3: Surface winds and pressure zones



**Explain** how atmospheric circulation cells and the associated surface winds assist in redistributing energy around the world.

## SECTION 2: HUMAN ENVIRONMENTS - 15 marks

Attempt ALL questions

MARKS

### Question 4

Study Diagrams Q4A and Q4B before answering this question.

Diagram Q4A: Population Pyramid for Ghana, 2013

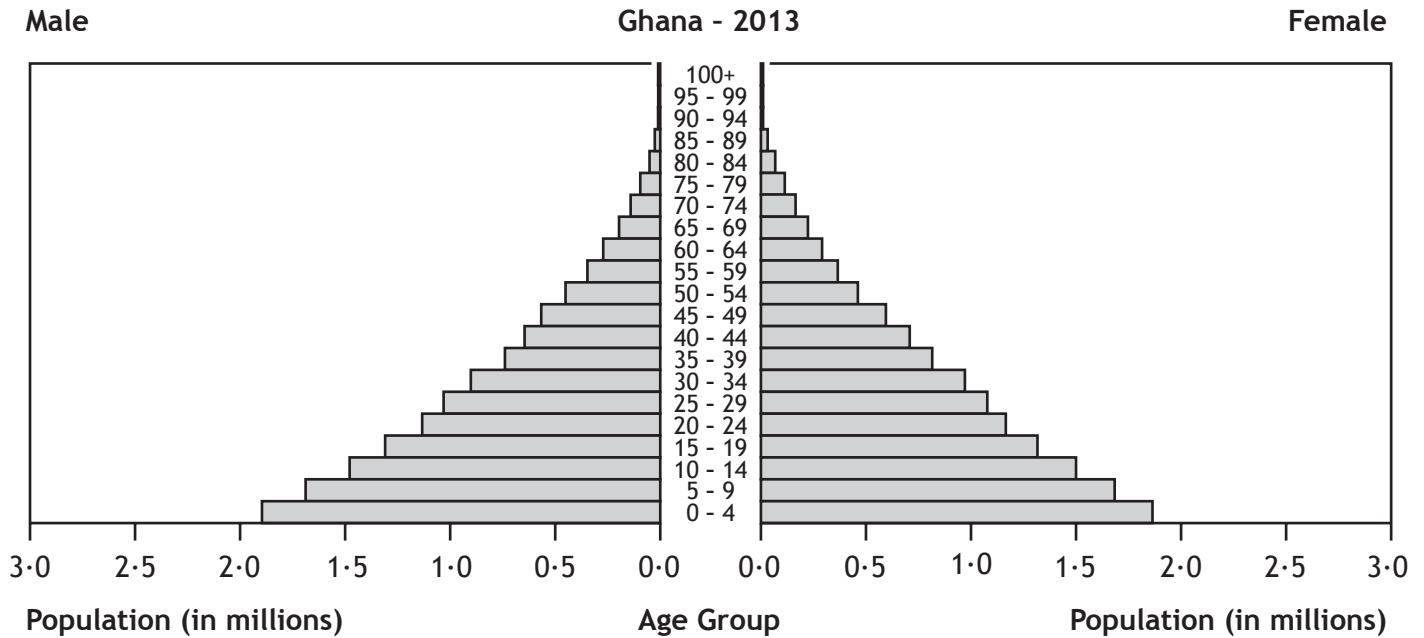
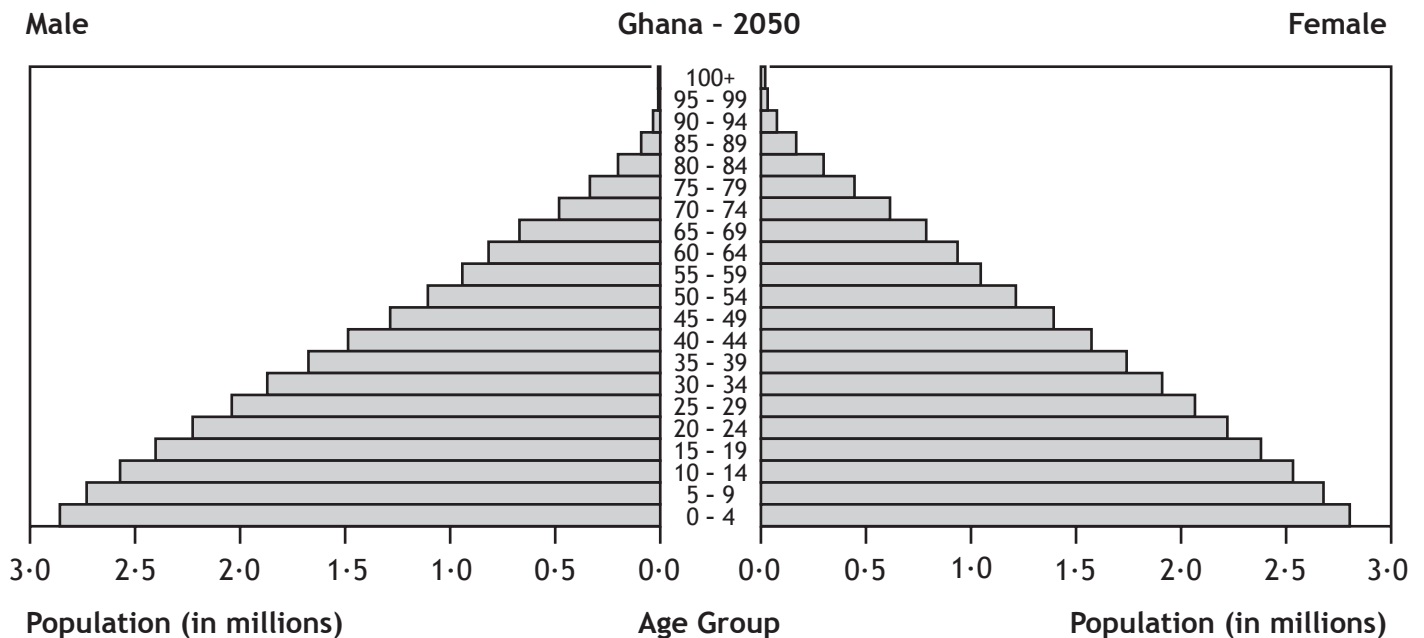


Diagram Q4B: Population Pyramid for Ghana, 2050 (predicted)



Discuss the possible consequences for Ghana of the 2050 population structure.

5

## Question 5

Look at Diagram Q5 before answering this question.

Traffic congestion is a major problem in cities in the UK and across the **developed** world.

**Diagram Q5: Most congested UK cities, 2013**

| Rank | City           | Congestion trend |
|------|----------------|------------------|
| 1    | Belfast        | Up               |
| 2    | Bristol        | Level            |
| 3    | Brighton       | Up               |
| 4    | Edinburgh      | Down             |
| 5    | London         | Up               |
| 6    | Leeds/Bradford | Down             |
| 7    | Manchester     | Up               |
| 8    | Leicester      | Up               |
| 9    | Sheffield      | Up               |
| 10   | Liverpool      | Up               |

**Explain** the strategies employed to combat the problems of traffic congestion in a **developed** world city you have studied. You should refer to specific named examples from your chosen city.

5

## Question 6

Look at Diagram Q6 before answering this question.

Rapid urbanisation in **developing** world cities has resulted in many housing problems.

Diagram Q6: Photograph of Dharavi Slum, Mumbai, India



**Evaluate** the impact of strategies employed to manage housing problems in a **developing** world city you have studied.

5

[Turn over

**SECTION 3: GLOBAL ISSUES - 20 marks**

**Attempt TWO questions**

|                    |                            |         |
|--------------------|----------------------------|---------|
| <b>Question 7</b>  | River Basin Management     | Page 9  |
| <b>Question 8</b>  | Development and Health     | Page 10 |
| <b>Question 9</b>  | Global Climate Change      | Page 11 |
| <b>Question 10</b> | Trade, Aid and Geopolitics | Page 12 |
| <b>Question 11</b> | Energy                     | Page 13 |

**Question 7: River Basin Management**

- (a) **Explain** the human **and** physical factors which need to be considered when selecting a site for a major dam and its associated reservoir. **5**
- (b) Referring to a water control project you have studied, **explain** the **positive** social **and** economic impacts created by the construction of a major dam and its associated reservoir. **5**

[Turn over

## Question 8: Development &amp; Health

Diagram Q8: Development indicators for selected developing countries

| Country | Indicators of Development    |                                  |                          |                                    |                                              |                                |
|---------|------------------------------|----------------------------------|--------------------------|------------------------------------|----------------------------------------------|--------------------------------|
|         | GDP<br>(US \$<br>per capita) | Employment<br>agriculture<br>(%) | Adult<br>literacy<br>(%) | Birth rate<br>(births per<br>1000) | Life<br>expectancy<br>at birth<br>(in years) | Hospital<br>beds<br>(per 1000) |
| Mexico  | 15,400                       | 14                               | 93                       | 18                                 | 76                                           | 1.7                            |
| Brazil  | 11,700                       | 16                               | 90                       | 15                                 | 73                                           | 2.3                            |
| Cuba    | 10,200                       | 20                               | 99                       | 10                                 | 78                                           | 5.1                            |
| Kenya   | 1,800                        | 75                               | 87                       | 30                                 | 63                                           | 1.4                            |
| Malawi  | 800                          | 90                               | 75                       | 40                                 | 53                                           | 1.3                            |

- (a) Study Diagram Q8 above before answering this question.

In **what ways** does the information in the table suggest that the five countries are at different levels of development?

4

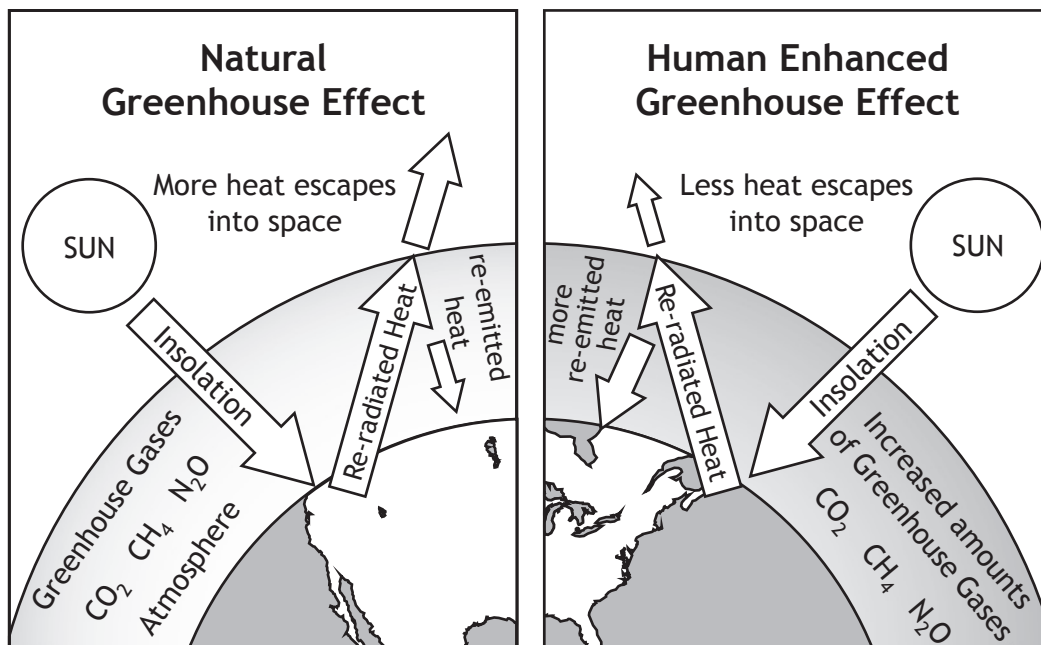
- (b) **Suggest reasons** for the wide variations in development which exist between developing countries. You may wish to refer to countries that you have studied.

6

## Question 9: Global Climate Change

Look at Diagram Q9.

Diagram Q9: Natural and Enhanced Greenhouse Effect



Many scientists believe that human activity has led to an enhanced greenhouse effect.

- (a) **Explain** the human factors that may lead to climate change. 4
- (b) **Discuss** a range of possible effects of climate change. You should support your answer with specific examples. 6

[Turn over

### Question 10: Trade, Aid and Geopolitics

Read the quotation in Diagram Q10a below.

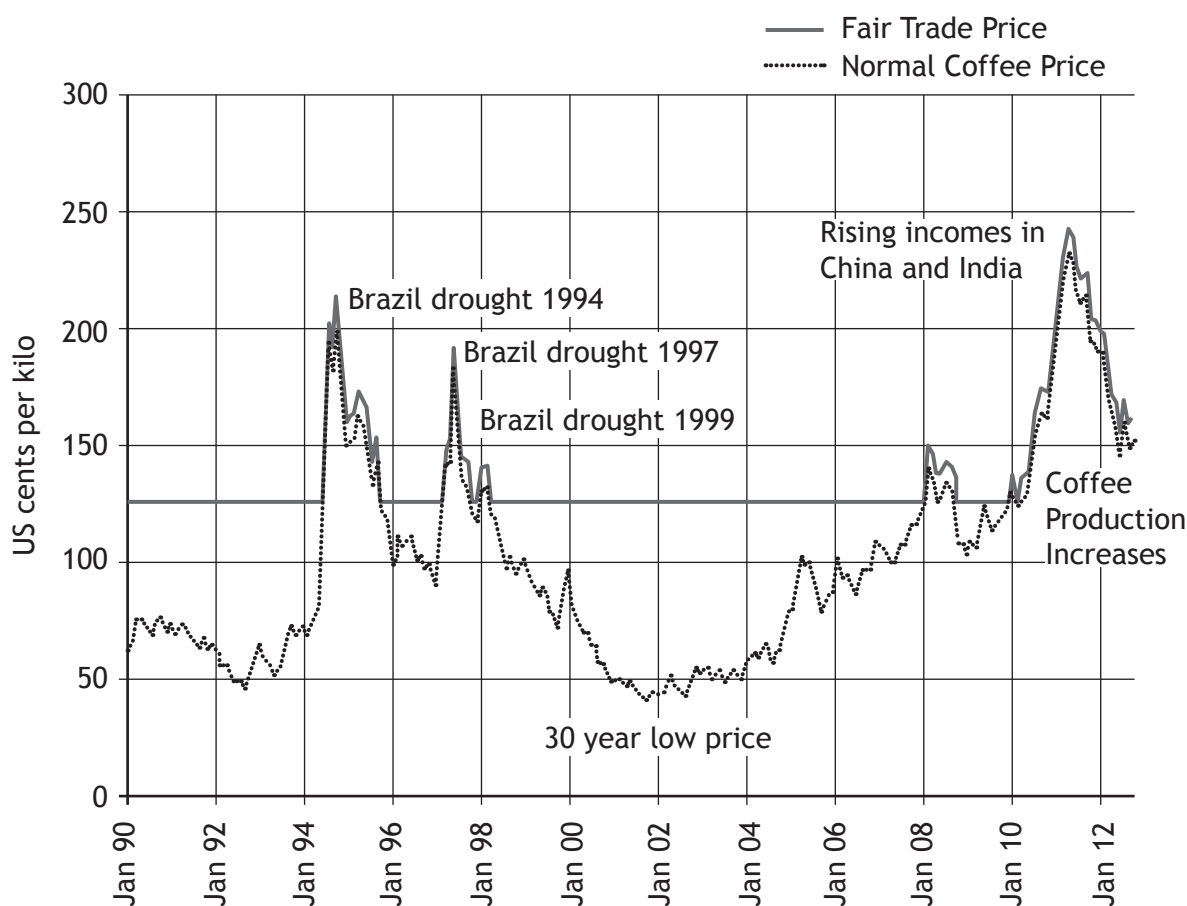
**Diagram Q10a: Quotation from Nelson Mandela (22nd November 2000)**

“Where globalisation means, as it so often does, that the rich and powerful now have new means to further enrich and empower themselves at the cost of the poorer and weaker, we have a responsibility to protest in the name of universal freedom.”

- (a) **Explain** the social and economic impacts of unfair trade on people and countries in the **Developing World**.

4

**Diagram Q10b: Fair Trade and Normal Coffee prices**



- (b) Study Diagram Q10b.

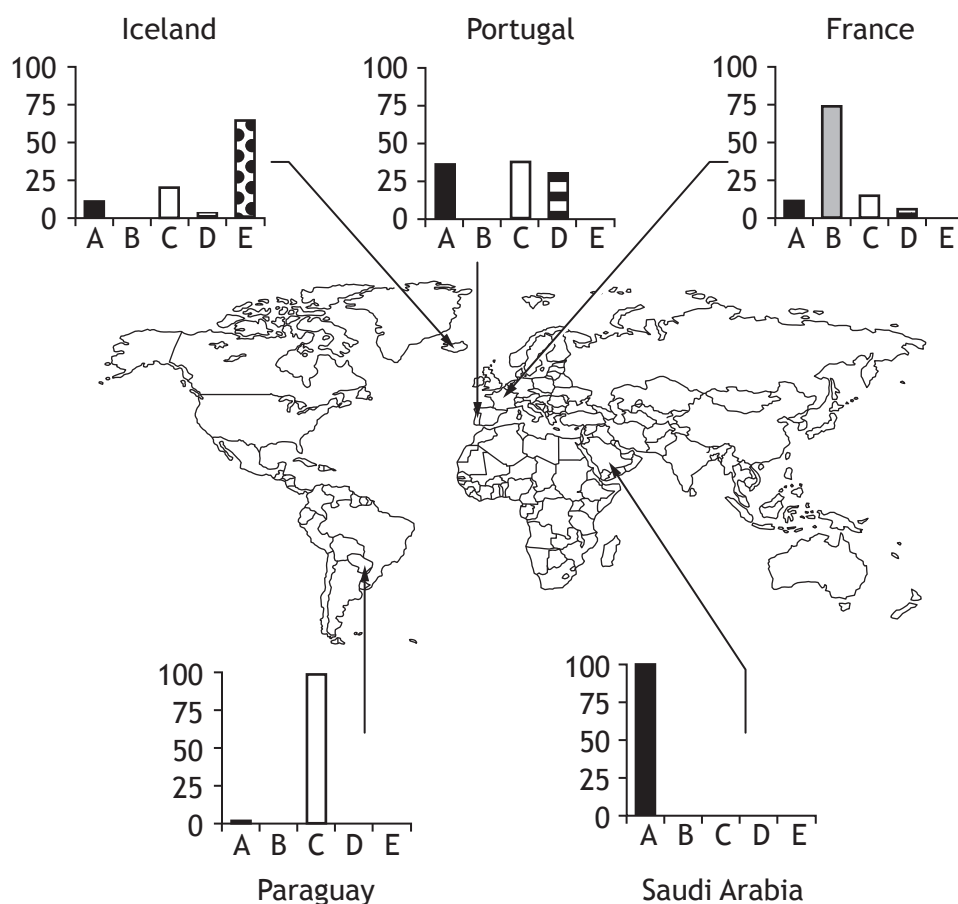
Using the information in Diagram Q10b, and also your knowledge of fair trade, **explain** how fair trade:

- (i) helps to reduce inequalities in world trade; and
- (ii) impacts on farming communities.

6

## Question 11: Energy

Diagram Q11: % Energy Production in Selected Countries

**Key:**

- A Fossil Fuels (oil, gas and coal)  
 B Nuclear  
 C Hydroelectric Power (HEP)  
 D Other Renewables (solar and wind power)  
 E Geothermal Power

Study Diagram Q11.

- (a) Using the information in the diagram **suggest reasons** for the different patterns of energy production in the countries shown. 4
- (b) Choose **one** renewable **and one** non-renewable approach to energy production, and for each approach, **evaluate** its effectiveness in meeting energy demands. 6

## Question 12

There is a proposal to develop the site at 468057 on the OS Map extract as an Outdoor and Environmental Education centre at Dalmellington, East Ayrshire.

The specifications required for this development are listed below.

Specifications for an Outdoor & Environmental Education Centre:

- offer a range of land-based activities — hillwalking, orienteering, mountain biking and abseiling/rock-climbing
- provide facilities for fishing and water-sports
- allow opportunities for environmental education, fieldwork and conservation in the local area, eg biology and geography studies.

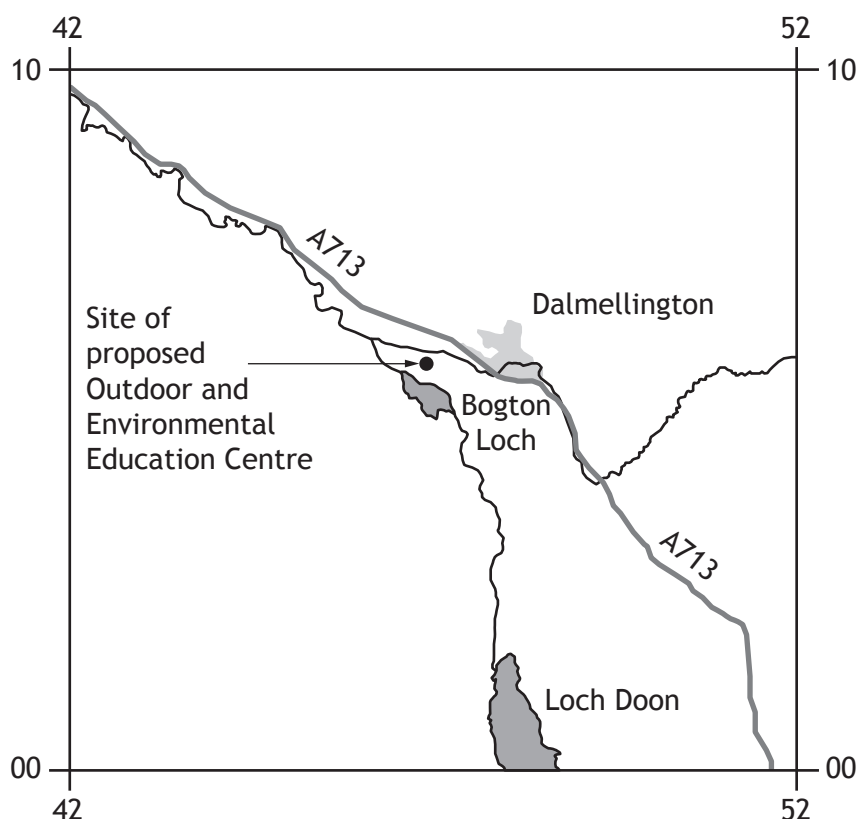
Study Diagram Q12a - Location of Proposed Development; OS Map (Extract 2144/EXP327: Dalmellington), Diagram Q12b, Diagram Q12c, Diagram Q12d and Diagram Q12e before answering this question.

Referring to map evidence from the OS Map extract, and other information from the sources, **discuss**:

- the advantages and disadvantages of the proposed location; and
- any possible impacts on the local area and East Ayrshire.

10

**Diagram Q12a : Location of Proposed Development**



## Question 12 (continued)

**Diagram Q12b : Photograph of Bogton Loch & Dalmellington Moss looking SW from GR 466065**

Dalmellington Moss is a Scottish Wildlife Trust Nature Reserve. Rare heathers and moss along with birds such as curlew and snipe can be found here.

Auchenroy Hill

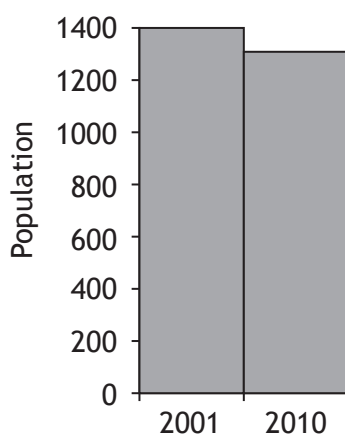


Bogton Loch is a Site of Special Scientific Interest because of the flora and fauna, including water birds, such as Teal and Reed Warblers, the Whooper swan and Greylag goose.

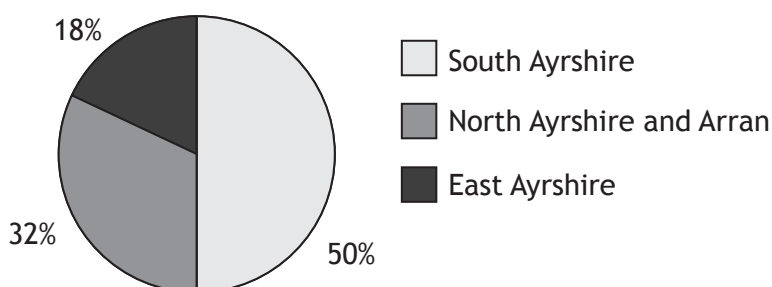
**Diagram Q12c: Unemployment rates (%) for East Ayrshire and Scotland, 2008 - 2010**

|               | 2008 | 2009 | 2010 |
|---------------|------|------|------|
| East Ayrshire | 5.6  | 8.0  | 9.7  |
| Scotland      | 4.5  | 5.9  | 7.6  |

**Diagram Q12d: Population Change for Dalmellington and Burnton 2001 - 2010**



**Diagram Q12e: Where tourists spend their money in Ayrshire and Arran**



**[END OF QUESTION PAPER]**

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## ACKNOWLEDGEMENT

Diagram 6 – gary yim/shutterstock.com