Edexcel GCE

Centre Number

Candidate Number

Geography
**Advanced Subsidiary
Unit 1: Global Challenges**

Tuesday 17 May 2011 – Afternoon
Time: 1 hour 30 minutes

Paper Reference
6GE01/01

You must have:
Resource 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 in Section A and **ONE** in Section B.
- Answer the questions in the spaces provided
  – *there may be more space than you need*.

Information

- The total mark for this paper is 90.
- 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.
- Spend approximately one hour on Section A and 30 minutes on Section B.
- Check your answers if you have time at the end.

Turn over ▶

SECTION A

Answer ALL questions.

You must use the Resource Booklet.
You are advised to spend approximately one hour on Section A.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 Study Figure 1.

(a) Match **two** of the different types of plate boundary with a place where they are found by putting the letters **X**, **Y** or **Z** into the table provided.

(2)

Place	Which boundary type (X, Y or Z)
Philippines	
Californian coast	

(b) Describe the processes at boundary type **Z** that cause earthquakes.

(3)

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(c) Which of the following is an additional natural hazard sometimes associated with earthquakes?

Put a cross in the correct box.

(1)

☒ **A** building collapse

☒ **B** firestorm

☒ **C** tsunami

☒ **D** famine

☒ **E** ozone depletion

(d) Explain why volcanic hazards are common in the Philippines but not on the Californian coast.

(5)

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(Total for Question 1 = 11 marks)

2 Study Figure 2.

(a) How high must the sea-level rise for Dhaka to flood?

Put a cross in the correct box.

(1)

☒ **A** 5.1 metre

☒ **B** 4.8 metre

☒ **C** 3.5 metre

☒ **D** 2.7 metre

☒ **E** 0.3 metre

(b) What best describes eustatic sea-level rise?

Put a cross in the correct box.

(1)

☒ **A** a global decrease in the volume of ocean water

☒ **B** a local rise in sea-level due to land subsidence

☒ **C** a widespread melting of Arctic Ocean sea ice

☒ **D** a global increase in the volume of ocean water

☒ **E** a local fall in sea-level due to uplifting of the land

(c) Explain how global warming leads to rising sea levels.

(4)

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P 3 8 8 5 4 A 0 4 2 0

(d) Explain why some nations will suffer more than others from the impact of predicted sea-level rises.

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(Total for Question 2 = 11 marks)

3 Study Figure 3.

(a) What is the minimum temperature rise the world can expect by 2100?

Put a cross in the correct box.

(1)

☒ **A** 0.0 °C

☒ **B** 2.1 °C

☒ **C** 2.9 °C

☒ **D** 3.2 °C

☒ **E** 5.5 °C

(b) Why does temperature rise in 'projection D' even though action has been taken to decrease emissions?

(3)

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(c) Which of the following groups of gases is responsible for the enhanced greenhouse effect?

Put a cross in the correct box.

(1)

⊠ **A**   carbon dioxide, methane, nitrogen

⊠ **B**   carbon dioxide, nitrous oxide, hydrogen

⊠ **C**   carbon dioxide, oxygen, nitrous oxide

⊠ **D**   carbon dioxide, methane, nitrous oxide

⊠ **E**   methane, sulphur dioxide, nitrogen

(d) Explain why the 'business as usual' projection shown in Figure 3 may bring irreversible ecological and environmental impacts to Arctic areas.

(5)

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(Total for Question 3 = 10 marks)

4 Study Figure 4.

(a) Which **two** global groupings do these countries belong to?

Put **one** cross in the correct box for Group 1 **and** for Group 2.

(2)

	Group 1	Group 2
Newly industrialised countries (NICs)	☒	☒
OPEC members	☒	☒
Least developed countries (LDCs)	☒	☒
G8 members	☒	☒
OECD members	☒	☒

(b) Suggest reasons for the difference shown in ICT use between Group 1 and Group 2 countries.

(4)

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(c) Explain how connectivity can be affected by:

(4)

physical factors

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political factors.

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(Total for Question 4 = 10 marks)

5 Study Figure 5.

(a) Describe the changes shown in the centenarian population.

(3)

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(b) Suggest reasons for the changes you have described.

(4)

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(c) Explain the factors that have caused fertility rates to vary over time in the UK.

(4)

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(Total for Question 5 = 11 marks)

6 Study Figure 6.

(a) Why does in-migration often lead to higher rates of natural increase for developing world megacities?

(2)

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(b) Outline the rural problems that cause migrants to leave rural areas in the developing world.

(3)

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(c) Identify **three** ways in which the growth model for a developed world megacity might differ from the one shown in Figure 6.

(3)

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(d) Explain why megacities usually attract more migrants than smaller cities.

(4)

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(Total for Question 6 = 12 marks)

TOTAL FOR SECTION A = 65 MARKS

SECTION B

Answer ONE question in this section.

**Use the evidence provided in the Resource Booklet and your own ideas.
You are advised to spend approximately 30 minutes on Section B.**

*7 Study Figure 7.

   (a) Suggest why many countries find El Niño weather anomalies very challenging.

            (10)

   (b) Explain why the human and economic costs of global hazards have increased rapidly over time.

            (15)

(Total for Question 7 = 25 marks)

*8 Study Figure 8.

   (a) Suggest why changes such as these make global warming a difficult challenge to tackle.

            (10)

   (b) Explain the natural causes of climate change.

            (15)

(Total for Question 8 = 25 marks)

*9 Study Figure 9.

   (a) Suggest why some people and not others benefit from the growth of Transnational Corporations (TNCs).

            (10)

   (b) Examine the main factors that have accelerated globalisation.

            (15)

(Total for Question 9 = 25 marks)

*10 Study Figure 10.

   (a) Suggest why the reasons for people migrating into and out of the UK may differ.

            (10)

   (b) Explain why the numbers of migrants entering the UK has varied over time.

            (15)

(Total for Question 10 = 25 marks)

Indicate which question you are answering by marking a cross in the box ⊠. If you change your mind, put a line through the box ⊠ and then indicate your new question with a cross ⊠.

Chosen Question Number:

Question 7 ⊠   Question 8 ⊠

Question 9 ⊠   Question 10 ⊠

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TOTAL FOR SECTION B = 25 MARKS
TOTAL FOR PAPER = 90 MARKS

Edexcel GCE

Geography

**Advanced Subsidiary
Unit 1: Global Challenges
RESOURCE BOOKLET**

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Do not return the Resource Booklet with the question paper.

Turn over ▶

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Figure 1   **Three types of plate boundary movement**
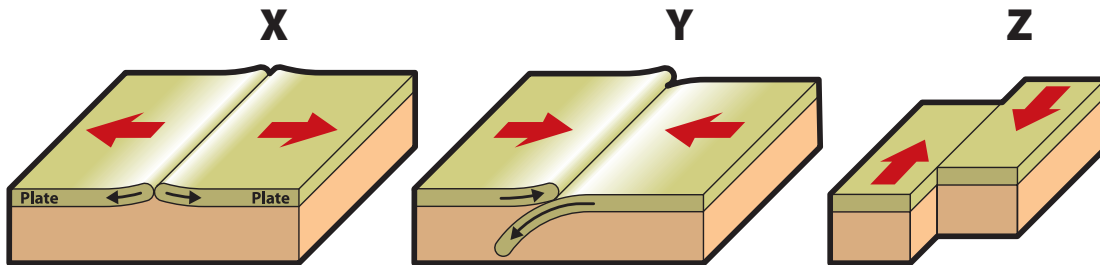
Figure 2   **The height of land above sea level in Bangladesh**
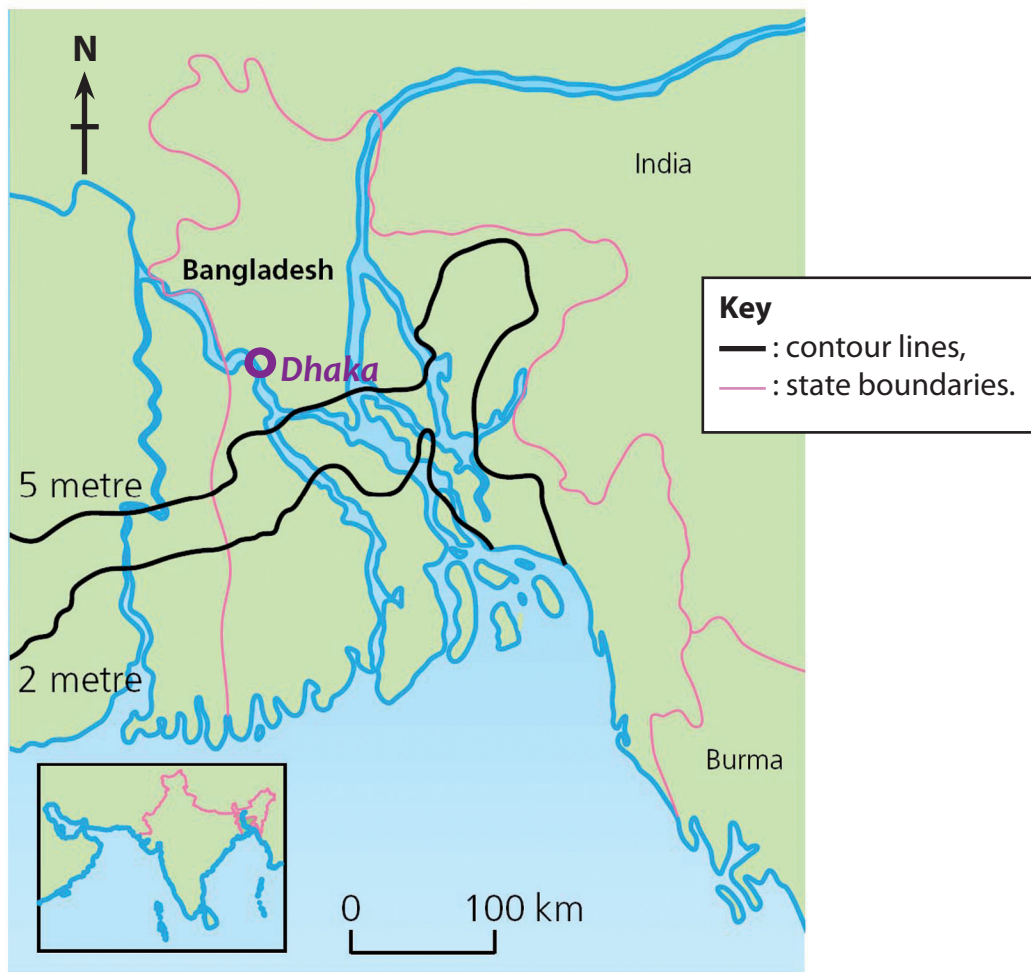
Figure 3   **Four projections for future greenhouse gas emissions**

132% increase in emissions by 2050

5.5-7.1°C rise in global temperature by 2100

Business as usual

A

76% increase in emissions by 2050

4-5.2°C rise in global temperature by 2100

Late and slow decline

B

2.9-3.8°C rise in global temperature by 2100

Early but slow decline

C

Emissions return to 1990 levels by 2050

Early and rapid decline

D

2.1-2.8°C rise in global temperature by 2100

47% decrease in emissions

(Source: *The Guardian*)

Figure 4   **An index of ICT use for two groups of countries**

ICT Index Value

High scores

Group	Country	Value
Group 1	Sweden	**7.50**
	South Korea	**7.26**
	Netherlands	**7.14**
	Norway	**7.09**
	Luxembourg	**7.03**
	Switzerland	**6.94**
	Finland	**6.79**
	UK	**6.78**
Group 2	Papua New Guinea	**1.14**
	Tanzania	**1.13**
	Mali	**1.12**
	Ethiopia	**1.03**
	Mozambique	**1.02**
	Eritrea	**1.00**
	Burkina Faso	**0.97**
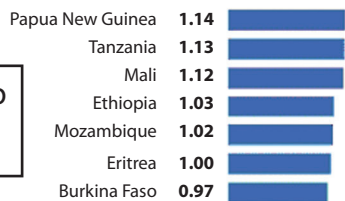
The ICT development index gives a guide to the level of communications use in a country. It includes all telephones, mobiles and internet use.
[ICT = Information & Communications Technology]

Low scores

(Source: *The Guardian*, 9 March 2009)

Figure 5   **Changes in the UK centenarian population (people aged 100 or over) 1911–2011**
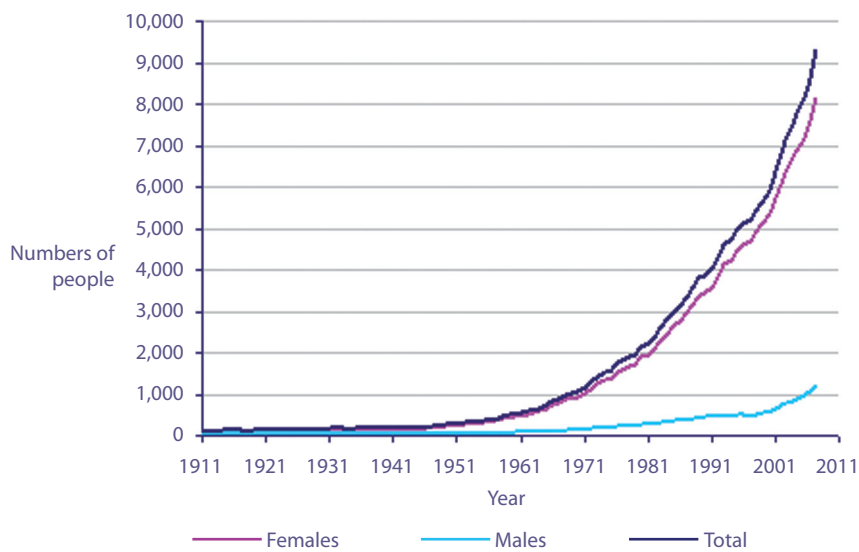
(Source: National Statistics)

Figure 6   **The growth of a developing world megacity**

International migration

Inter-urban migration

Megacity

Small city

High natural increase

Rural-urban migration

Rural-urban migration

Rural areas

Smaller flow

Larger flow
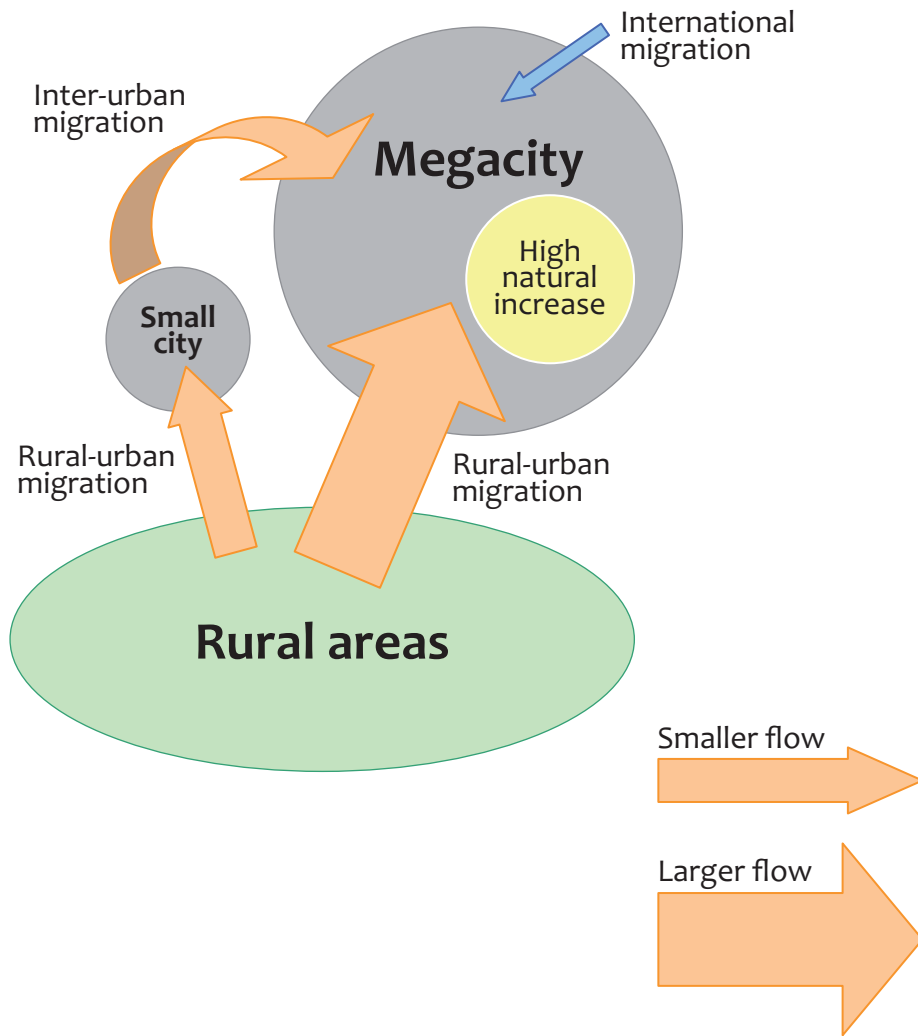
The following resources relate to Questions 7–10.

Figure 7   **Weather anomalies (unusual events) attributed to El Niño**
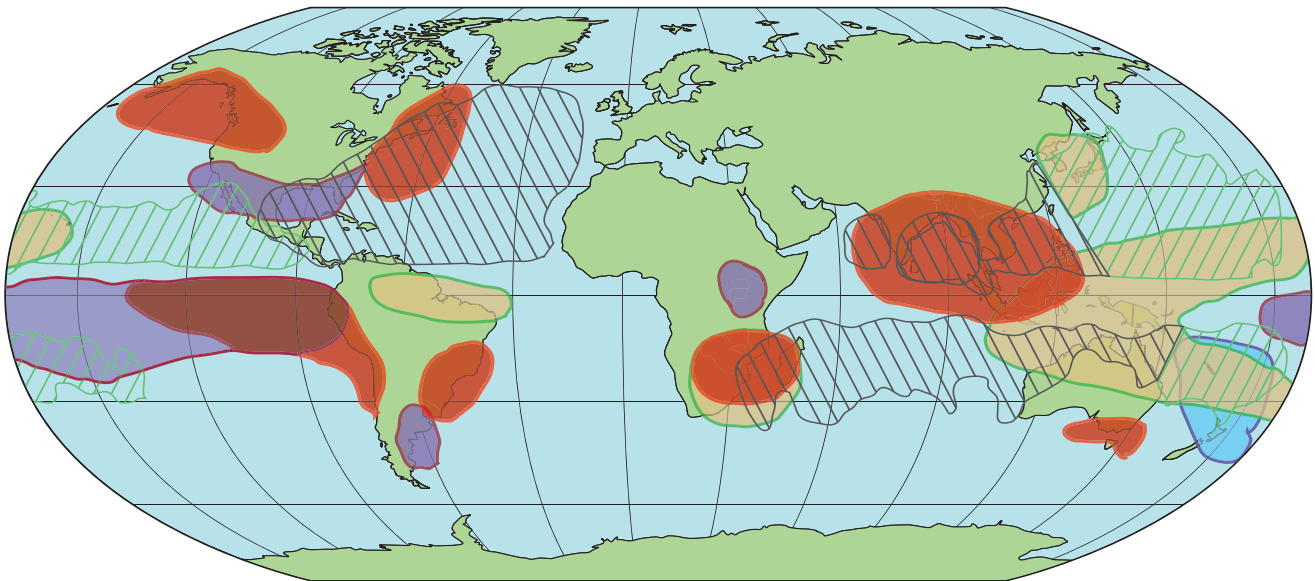
Anomalies during El Niño

Weather conditions	Tropical cyclone activity
■ wetter	▱ fewer storms
■ drier	▨ more storms
■ cooler	
■ warmer	

(Source: munichre.com)

Figure 8   Milestones for climate change governance and world population change 1987–2009

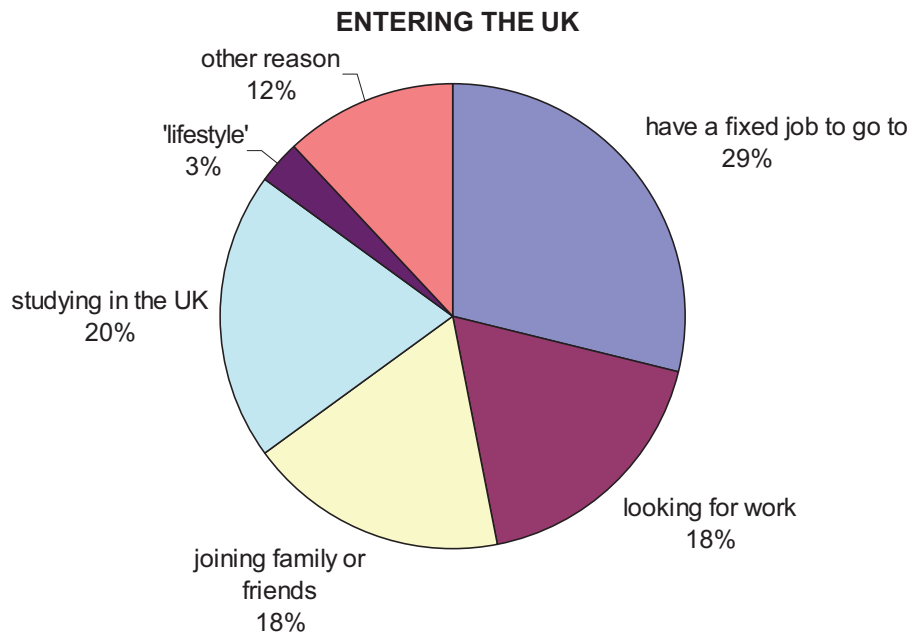**2009** Copenhagen conference moves international debate forwards

1997 Kyoto Protocol; by 2008 most developed nations have signed it

1992 IPCC first reports greenhouse gases are causing global warming

1988 Intergovernmental Panel on Climate Change (IPCC) set up by U.N.

FUTURE

1987 World population reaches 5 billion, 40% living in urban areas

1999 Population reaches 6 billion, putting more pressure on resources

2007 China overtakes USA to become largest CO2 polluter

2009 1.4 billion people still need to get out of poverty (less than $1.25 a day)

Figure 9   One view on how the TNC Coca-Cola impacts on lives in India

(Source: B. Deutsch, leftycartoon.com)

Figure 10   **Reasons stated by a sample of migrants entering or leaving the UK**

ENTERING THE UK

other reason
12%

'lifestyle'
3%

studying in the UK
20%

joining family or
friends
18%

have a fixed job to go to
29%

looking for work
18%

LEAVING THE UK

other reason
14%

'lifestyle'
18%

studying abroad
3%

joining family or
friends
15%

have a fixed job to go to
28%

looking for work
22%
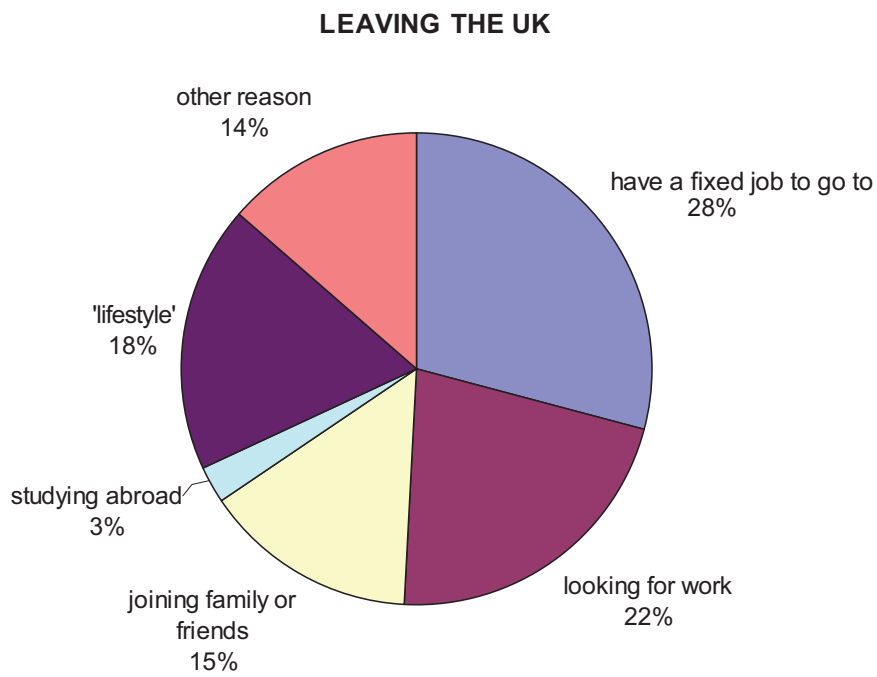
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