X208/12/01

NATIONAL QUALIFICATIONS 2012

TUESDAY, 8 MAY
9.00 AM – 10.30 AM

GEOGRAPHY
HIGHER
Paper 1
Physical and
Human Environments

Six questions should be attempted, namely:

all four questions in **Section A** (Questions 1, 2, 3 and 4);

one question from **Section B** (Question 5 **or** Question 6);

one question from **Section C** (Question 7 **or** Question 8).

Write the numbers of the **six** questions you have attempted in the marks grid on the back cover of your answer booklet.

The value attached to each question is shown in the margin.

Credit will be given for appropriate maps and diagrams, and for reference to named examples.

Questions should be answered in sentences.

Note The reference maps and diagrams in this paper have been printed in black only: no other colours have been used.

PB X208/12/01 6/13610

Marks

SECTION A: Answer ALL four questions from this section.

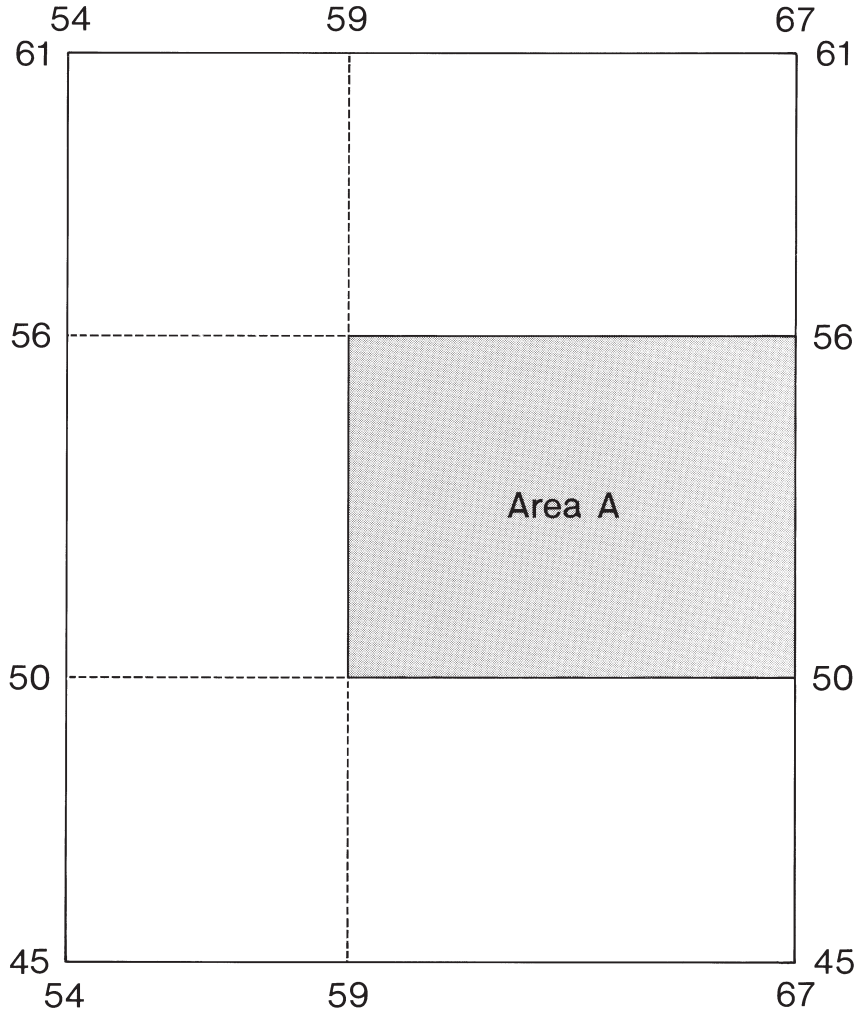
Question 1: Lithosphere

Study OS Map Extract number 1940/115: Snowdon (*separate item*), **and** Map Q1.

(*a*) **Describe** the evidence which shows that Area A, shown on Map Q1, has been affected by the processes of glacial erosion.

You should refer to specific named features and make use of grid references. **12**

Map Q1: Snowdon



(*b*) **Explain**, with the aid of an annotated diagram or diagrams, how **one** of the following features of glacial deposition is formed:

- terminal moraine
- esker
- drumlin. **6**

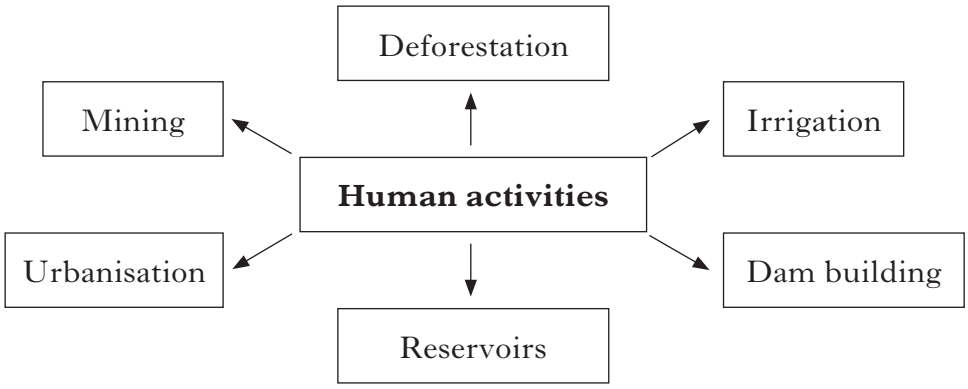
Marks

Question 2: Hydrosphere

(*a*) Study Diagram Q2A.

Describe and **explain** how human activities, such as those shown on Diagram Q2A, can impact on the hydrological cycle. **10**

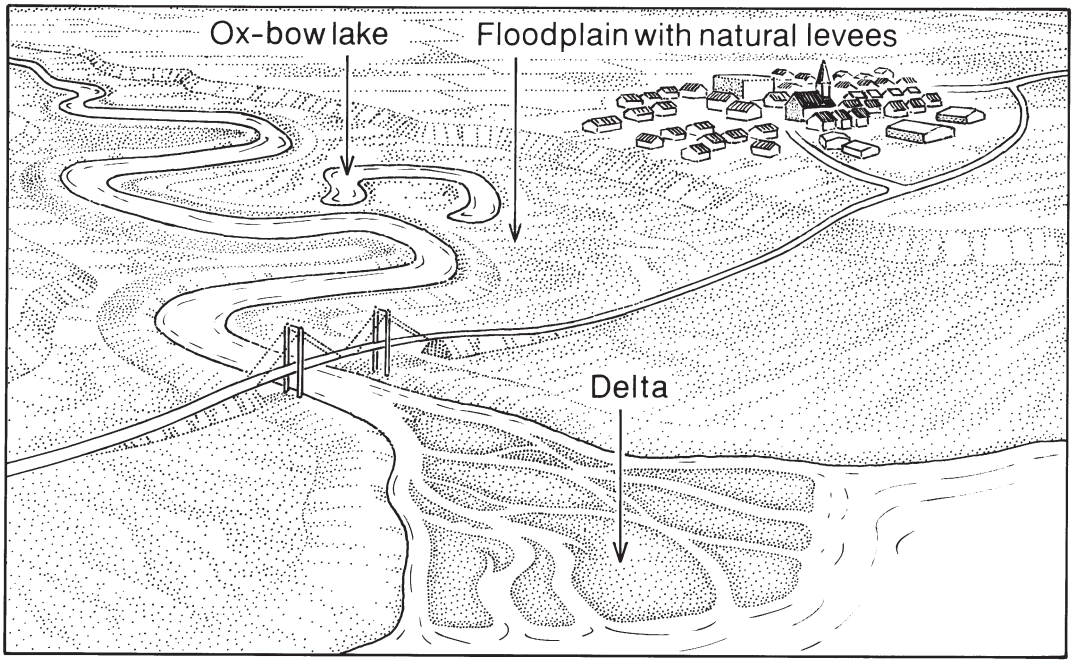
Diagram Q2A: Human activities affecting the hydrological cycle



(*b*) Study Diagram Q2B.

Explain, with the aid of an annotated diagram or diagrams, how **one** of the lower course river features, shown on Diagram Q2B, is formed. **8**

Diagram Q2B – Lower course river features



[Turn over

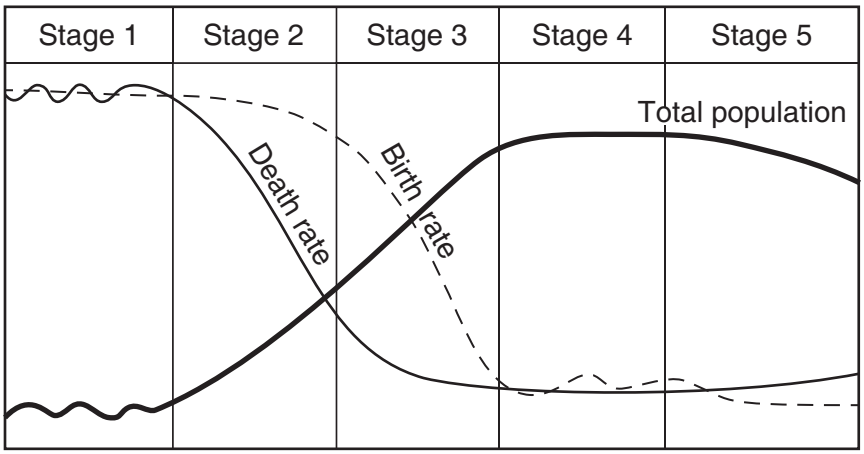
Marks

Question 3: Population

(*a*) Study Diagram Q3A.

Describe and **suggest reasons** for the changes that take place in **Stages 1 to 3** of the Demographic Transition Model. **10**

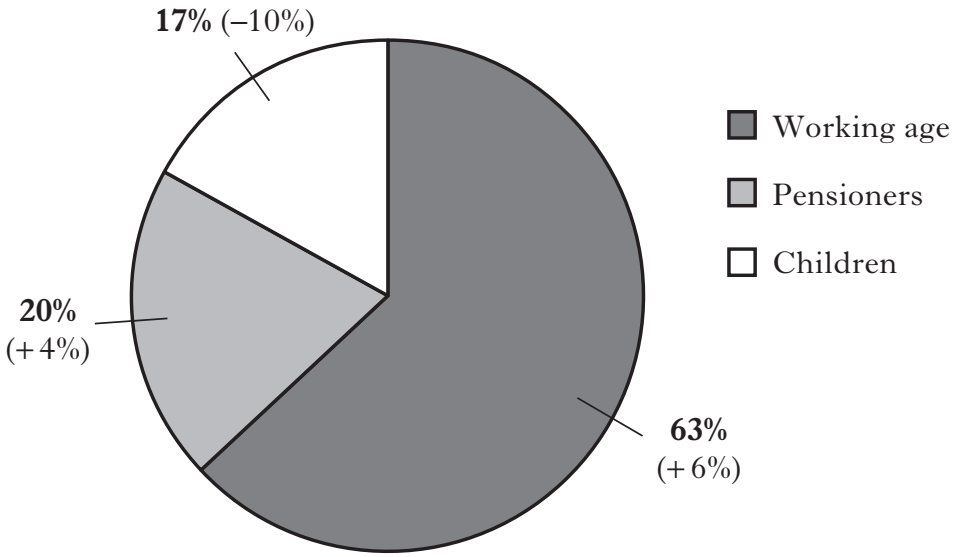
Diagram Q3A: The Demographic Transition Model



(*b*) Study Diagram Q3B.

Describe the changes which have taken place in Scotland's population structure and **suggest problems** that the government may face as a result of these changes. **8**

Diagram Q3B: Scotland's population 2012 (Change from 1974 in brackets)



Marks

Question 4: Industrial Geography

Study Diagram Q4 **and** Map Q4.

With reference to **named examples** within an area of industrial decline in the European Union which you have studied:

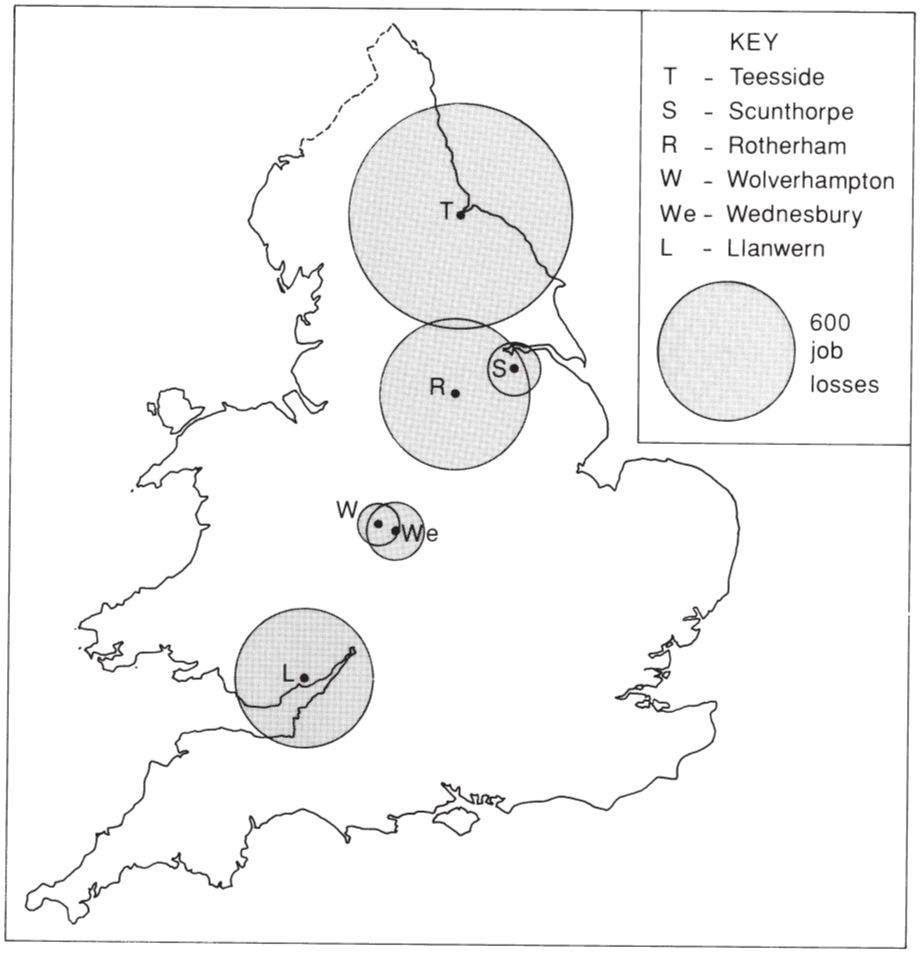
(*a*) **explain** reasons for industrial decline in areas like Teesside; **8**

(*b*) **describe** and **explain** the impact of industrial closures on people, the local economy and the environment in the surrounding area. **10**

Diagram Q4: Newspaper Extract

> "*Workers in one of the UK's biggest steel-making areas were dealt a savage pre-Christmas blow today with news that a giant plant in Teesside is to be closed with the loss of 1700 jobs. Job losses leave Corus workers devastated.*"
>
> Press Association December 2009

Map Q4: Corus Steelworks closures in England and Wales in 2009



Marks

SECTION B: Answer ONE question from this section, ie either Question 5 or Question 6.

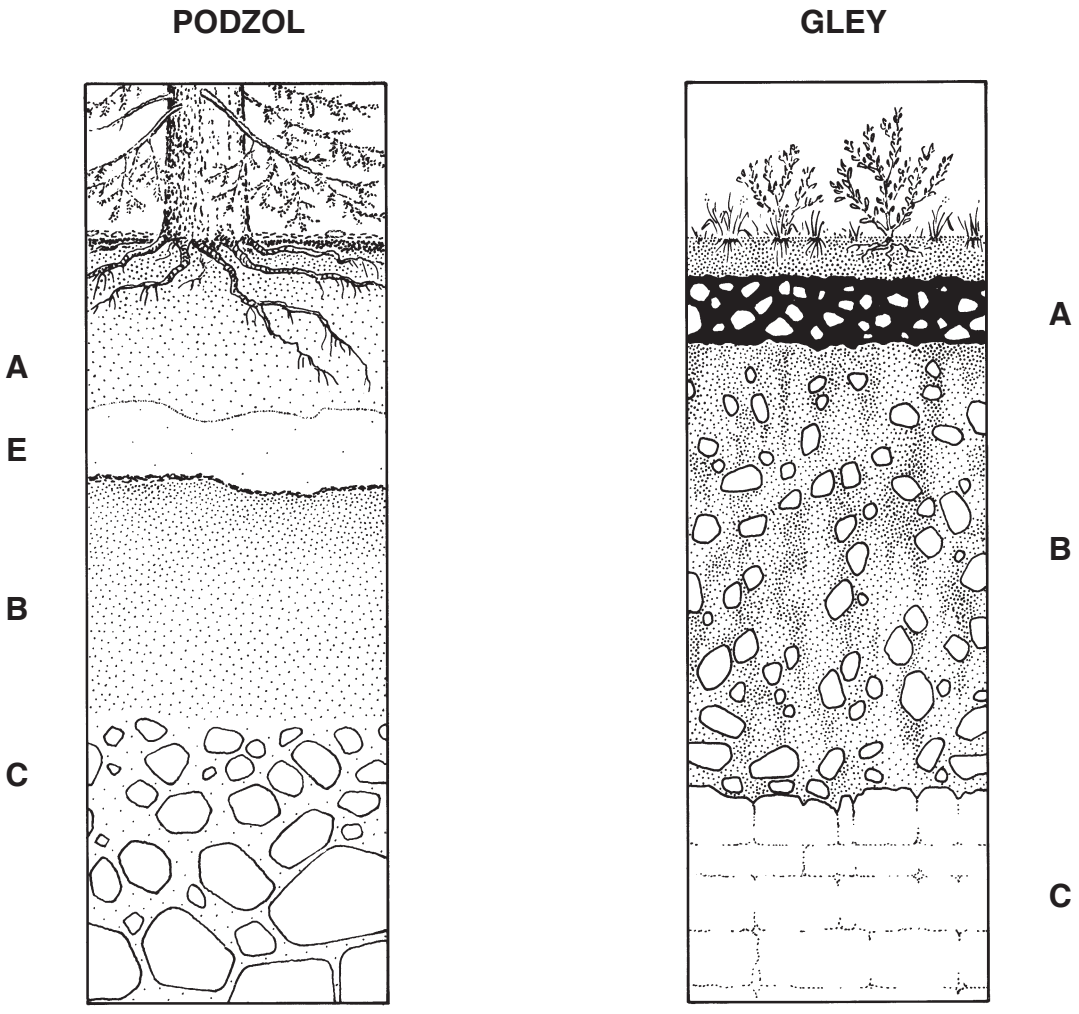
Question 5: Biosphere

(*a*) Study Diagram Q5.

Choose **one** of the soil profiles.

Describe the characteristics of the soil, including horizons, colour, soil biota, texture and drainage. **6**

Diagram Q5: Selected soil profiles



(*b*) **Explain** how factors such as natural vegetation, soil organisms, climate, relief and drainage have contributed to the formation and characteristics of a **brown earth** soil. **8**

Marks

DO NOT ANSWER THIS QUESTION IF YOU HAVE ALREADY ANSWERED QUESTION 5

Question 6: Atmosphere

(*a*) With the aid of an annotated diagram or diagrams, **explain** why there is a surplus of solar energy in the tropical latitudes and a deficit of solar energy towards the poles. **8**

(*b*) Study Diagram Q6.

Describe the possible consequences of global warming throughout the world. **6**

Diagram Q6: Newspaper Extract

"*Global warming is causing an increase in temperature throughout the World. In Scotland, some areas of Glasgow near the Clyde are in danger of serious flooding — and the risk is only going to get worse because of climate change due to global warming.*"

The Herald, 28 November 2009

[Turn over

Marks

SECTION C: Answer ONE question from this section, ie either Question 7 or Question 8.

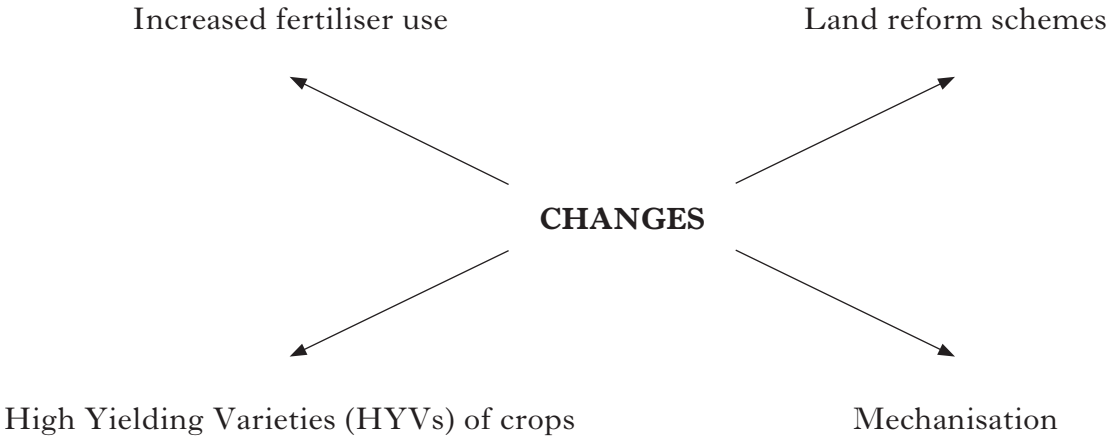
Question 7: Rural Geography

(*a*) **Describe** the main features of the shifting cultivation farming system. **6**

(*b*) Study Diagram Q7.

Describe and **explain** the advantages and disadvantages of **two** of the **changes** shown in intensive peasant farming. **8**

Diagram Q7: Recent changes in intensive peasant farming



Marks

DO NOT ANSWER THIS QUESTION IF YOU HAVE ALREADY ANSWERED QUESTION 7

Question 8: Urban

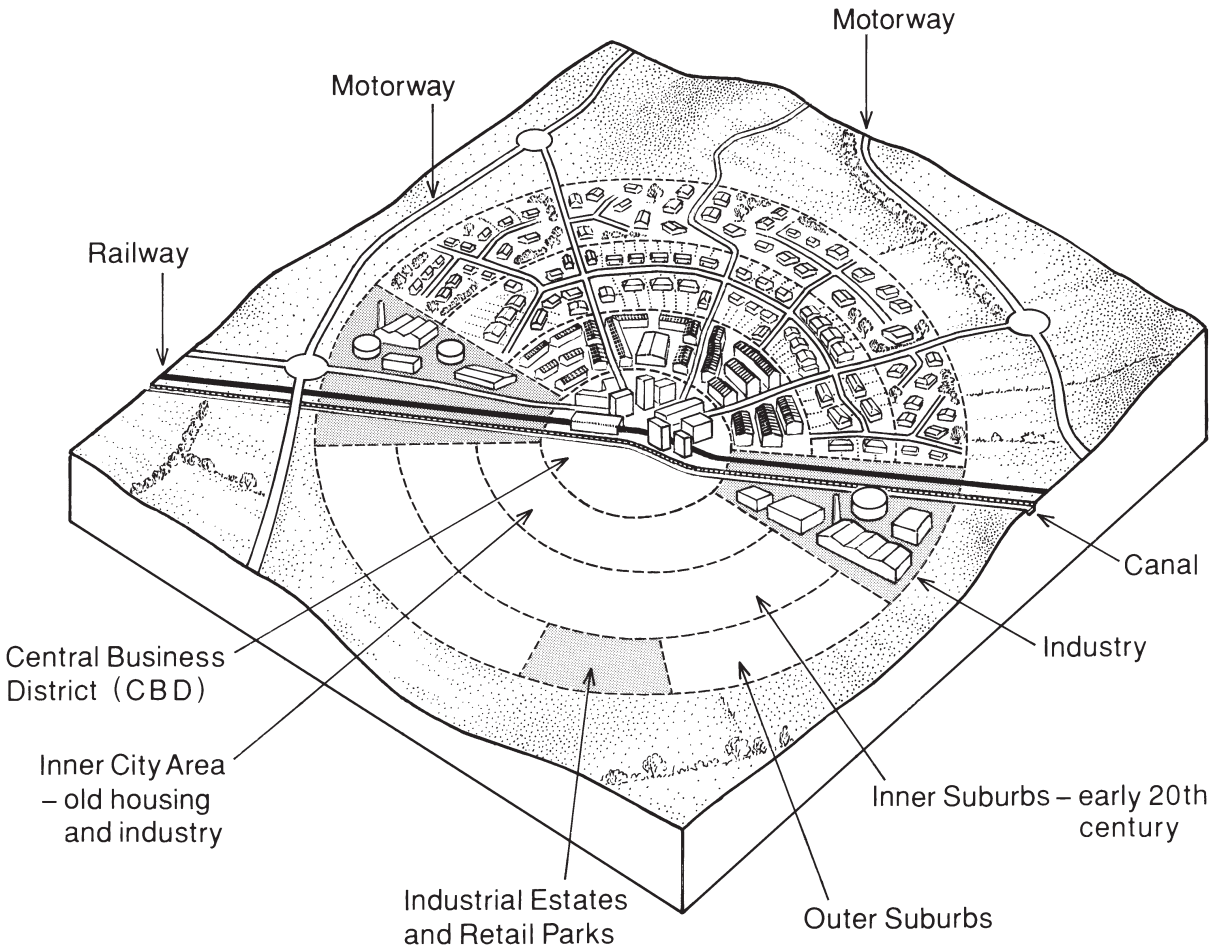
(*a*) For a named Developed World city you have studied, **describe** the changes that have taken place in the Central Business District (CBD).

Your answer should refer to specific named locations within your chosen city. **8**

(*b*) Study Diagram Q8.

Describe and **explain** the main urban landscape characteristics of **either** the inner city **or** the outer suburbs. **6**

Diagram Q8: A summary model of Land Use in a City



[*END OF QUESTION PAPER*]

ACKNOWLEDGEMENTS

Diagram Question 4—Newspaper Extract from *Press Association*, December 2009 Permission is being sought from Press Association Scotland.

Diagram Question 6—Newspaper Extract from *The Herald,* 28 November 2009. Reproduced by kind permission of Herald and Times.

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X208/12/02

NATIONAL QUALIFICATIONS 2012

TUESDAY, 8 MAY
10.50 AM – 12.05 PM

GEOGRAPHY
HIGHER
Paper 2
Environmental Interactions

Answer any **two** questions.

Write the numbers of the **two** questions you have attempted in the marks grid on the back cover of your answer booklet.

The value attached to each question is shown in the margin.

Credit will be given for appropriate maps and diagrams, and for reference to named examples.

Questions should be answered in sentences.

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PB X208/12/02 6/13610

Marks

Question 1: Rural Land Resources

(*a*) The Yorkshire Dales National Park is an area of Upland Limestone.

With the aid of annotated diagrams, **describe** and **explain** how the main physical features of upland limestone landscapes are formed.

Both surface **and** underground features should be included in your answer. **20**

(*b*) For the Yorkshire Dales National Park, **or** a named upland area you have studied, **describe** how this landscape has provided a variety of socio-economic opportunities. **10**

(*c*) Study Map Q1 and Diagram Q1.

Environmental conflicts such as this windfarm proposal for the Yorkshire Dales may occur in upland landscapes.

With reference to any named upland landscape that you have studied:

(i) **describe** and **explain** the environmental conflicts; **10**

(ii) **describe** the measures taken to resolve these environmental conflicts and **comment on** their effectiveness. **10**

(50)

Map Q1: Location of Yorkshire Dales National Park and Gargrave Windfarm

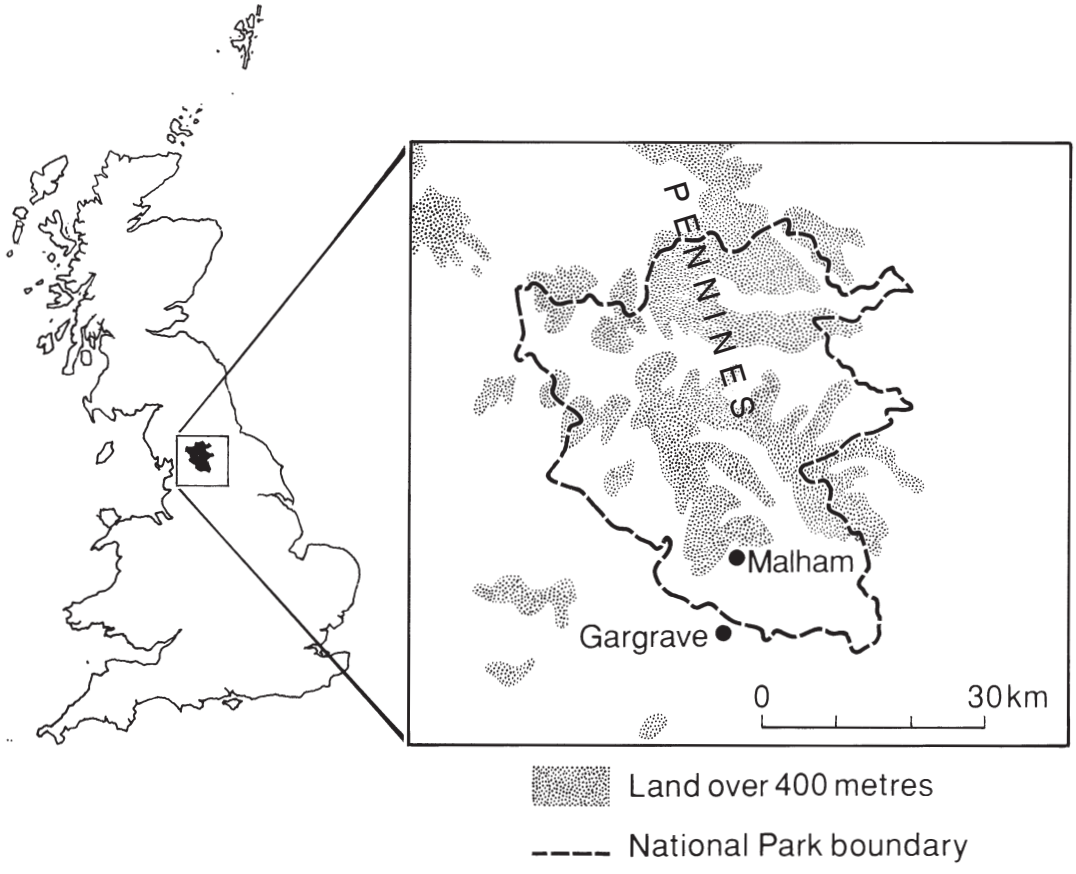


Diagram Q1: Newspaper Extract on Proposals for a wind farm at Gargrave

"***Celebrations as Dales windfarm plan is rejected***.

Hundreds of Yorkshire Dales residents in the Gargrave area were celebrating today over the decision by a government planning inspector to reject plans for a major windfarm which would have dominated the scenery for some 40 miles around. The turbines . . . would have been visible from some of the outstanding beauty spots of the Yorkshire Dales National Park."

Yorkshire Dales Country News, 9 March 2010

[Turn over

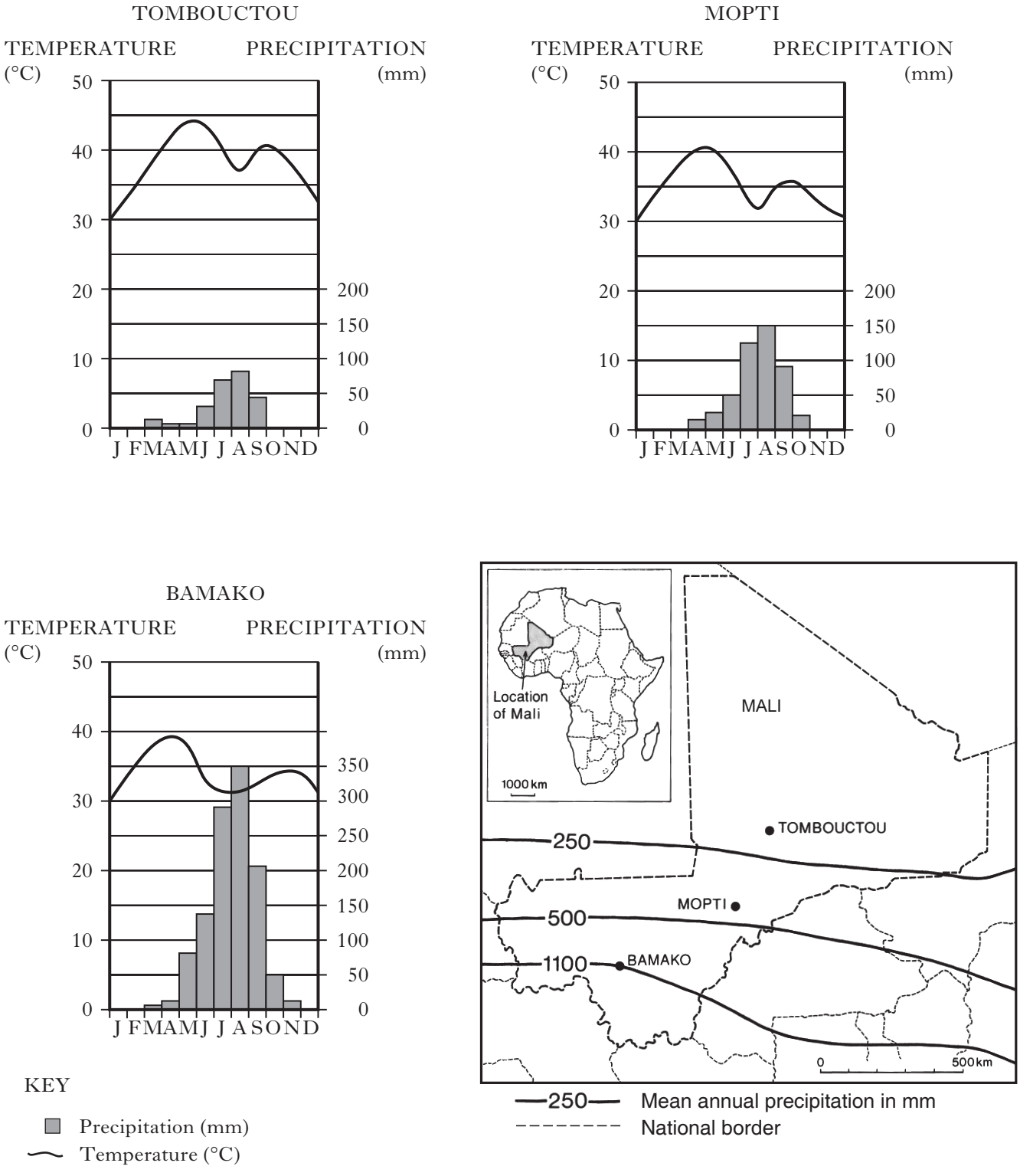
Marks

Question 2: Rural Land Degradation

(*a*) Study Map Q2

Describe the climatic conditions found in Mali and **explain** why such physical conditions may lead to the degradation of rural land. **10**

Map Q2: Climatic regions of Mali



Question 2 – continued

(*b*) Study Table Q2A.

Select **two** causes of land degradation from North America **and two** from **either** the Amazon Basin **or** Africa north of the Equator.

Referring to named areas, **explain** how these human activities have contributed to land degradation. **20**

Table Q2A: Causes of rural land degradation

North America	Africa north of the Equator OR The Amazon Basin	
Monoculture	Deforestation	Deforestation
Deep ploughing	Overcultivation	Cattle ranching
Farming marginal land	Overgrazing	Mining
Demand for wheat	Population increase	HEP schemes

(*c*) Study Table Q2B.

Select **two** soil conservation strategies from North America **and two** from **either** the Amazon Basin **or** Africa north of the Equator.

Referring to named areas:

(i) **describe** your chosen methods and **explain** how they help to conserve soil in rural areas;

(ii) **comment** on the effectiveness of each of your chosen methods. **20**

(50)

Table Q2B: Soil conservation strategies

North America	Africa north of the Equator OR The Amazon Basin	
Contour ploughing	Animal fences	Agro-forestry schemes
Diversification	Dams built in gullies	Crop rotation
Shelter belts	Stabilisation of dunes	Return to traditional farming
Strip cropping	"Magic Stones" (Diguettes)	Purchase by conservation groups

[Turn over

Marks

Question 3: River Basin Management

(*a*) "*The Zambezi river basin extends into 8 southern African countries. It is one of the most heavily dammed rivers in Africa.*"

Study Map Q3 and Tables Q3A and Q3B.

Describe and **explain** why there is a need for water management within the Zambezi river basin. **12**

(*b*) **Describe** and **explain** the physical and human factors which should be considered when selecting the site for any major dam and its associated reservoir. **14**

(*c*) **Describe** and **account for** the social, economic and environmental benefits **and** adverse consequences of a named water control project in Africa **or** Asia **or** North America. **24**

(50)

Map Q3: Zambezi River Basin

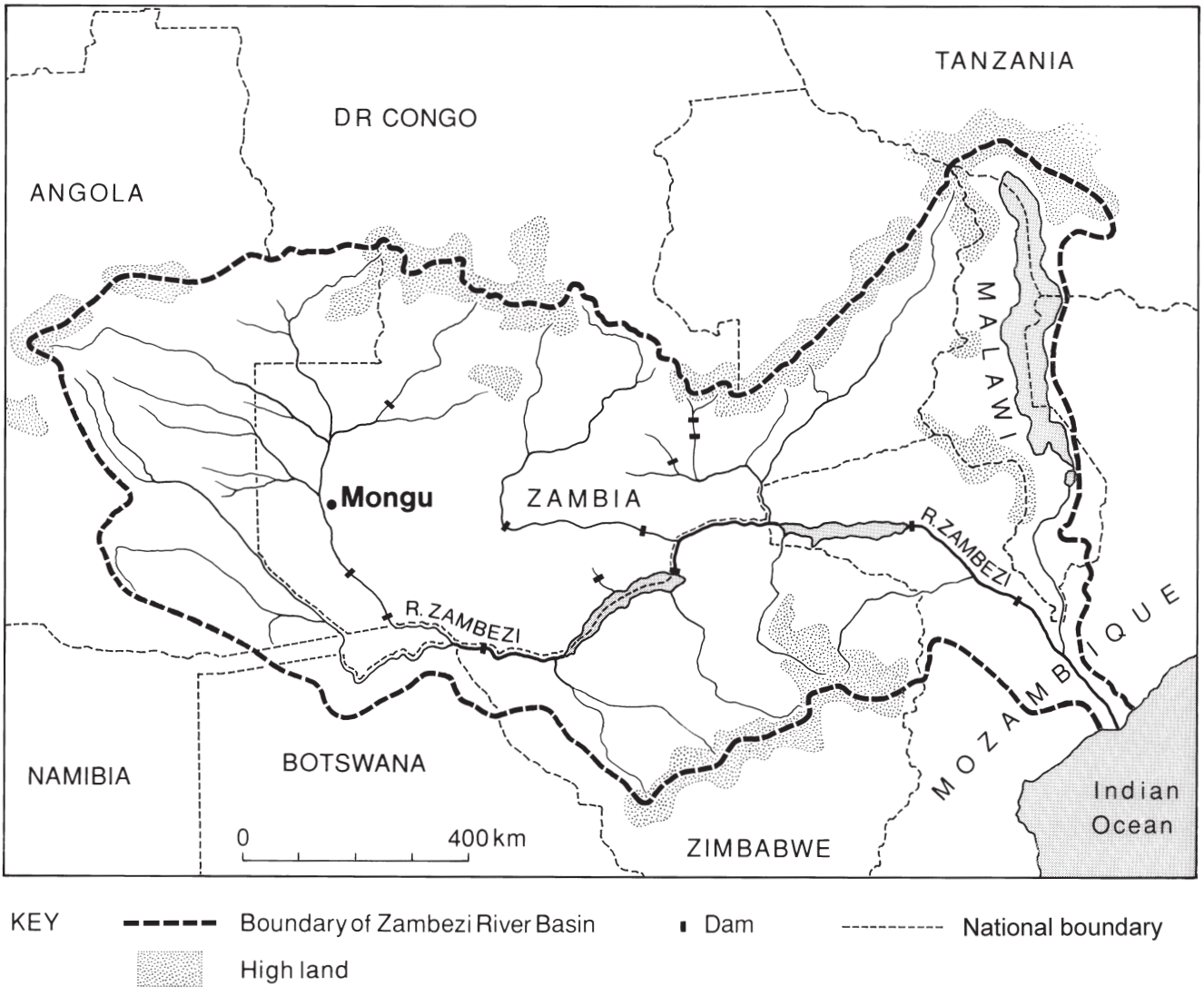


Table Q3A: Zambezi River Basin statistics

Country	% of River basin area	Population growth (%) per annum
Zambia	41	3·1
Angola	18	2·0
Zimbabwe	16	4·3
Mozambique	11	2·4
Malawi	8	2·8
Botswana	3	1·7
Tanzania	2	2·0
Namibia	1	0·9

Table Q3B: Climate figures for Mongu

	J	F	M	A	M	J	J	A	S	O	N	D
Max temperature (°C)	29	29	29	30	28	27	27	30	33	34	31	29
Precipitation (mm)	210	185	140	45	5	1	0	2	2	35	105	195

[Turn over

Marks

Question 4: Urban Change and its Management

(*a*) Study Map Q4A and Map Q4B.

Describe and **account** for the distribution of major settlements in **either** Australia **or** any other Developed Country that you have studied. **8**

(*b*) Study Map Q4C on *Page ten*.

With reference to Melbourne, **or** any named city you have studied in a Developed Country, **explain** ways in which its site and situation contributed to its growth. **8**

(*c*) Study Map Q4D on *Page ten*.

Referring to Melbourne **or** any named city you have studied in a Developed Country:

(i) **explain** the problems caused by urban sprawl;

(ii) **suggest ways** in which these problems may be resolved. **12**

(*d*) "*Lagos is one of the world's mega-cities — a crime-ridden, seething mass of some 15 million people crammed into the steamy lagoons of Southwest Nigeria. Two out of three Lagos residents live in a slum. The government estimates that Lagos will have expanded to 25 million residents by 2015 to be the third largest city in the world.*"

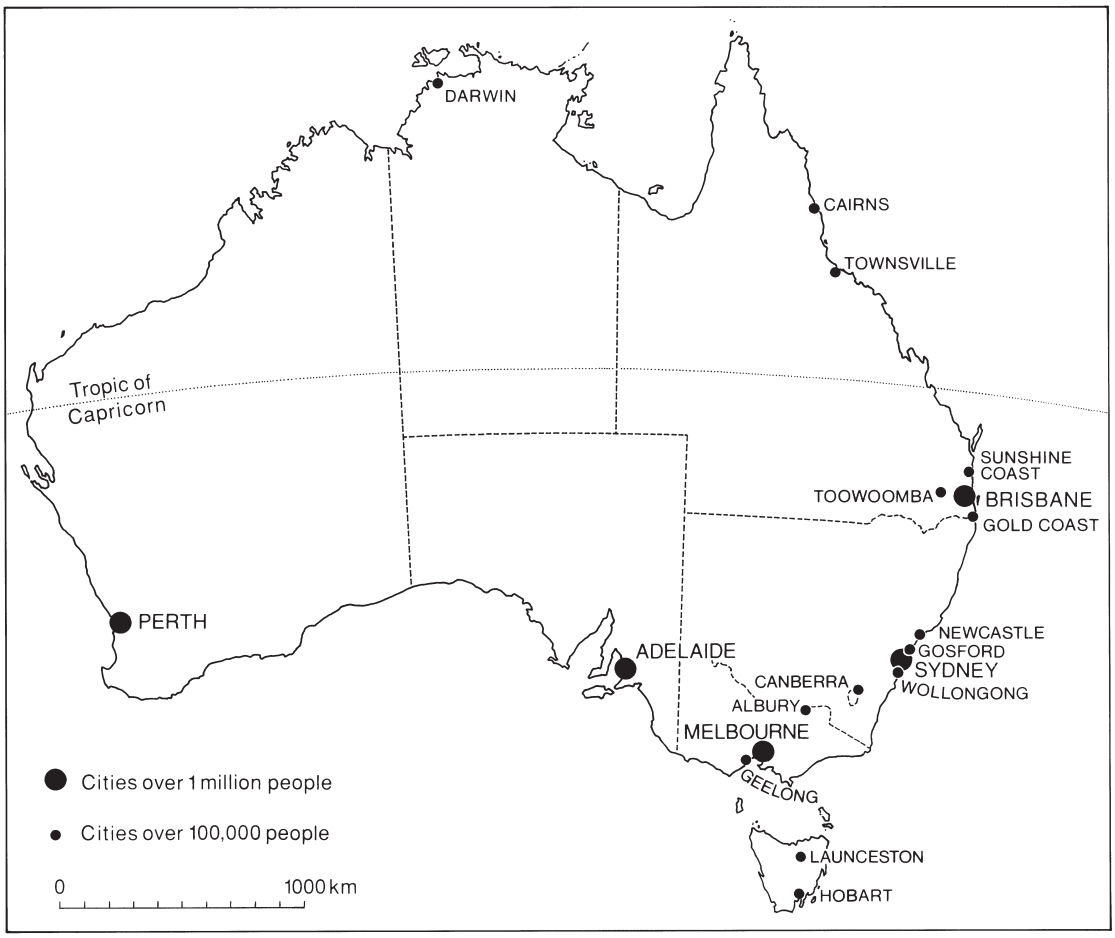
For Lagos **or** any named city you have studied in a Developing Country:

(i) **explain** why your chosen city has grown so rapidly; **10**

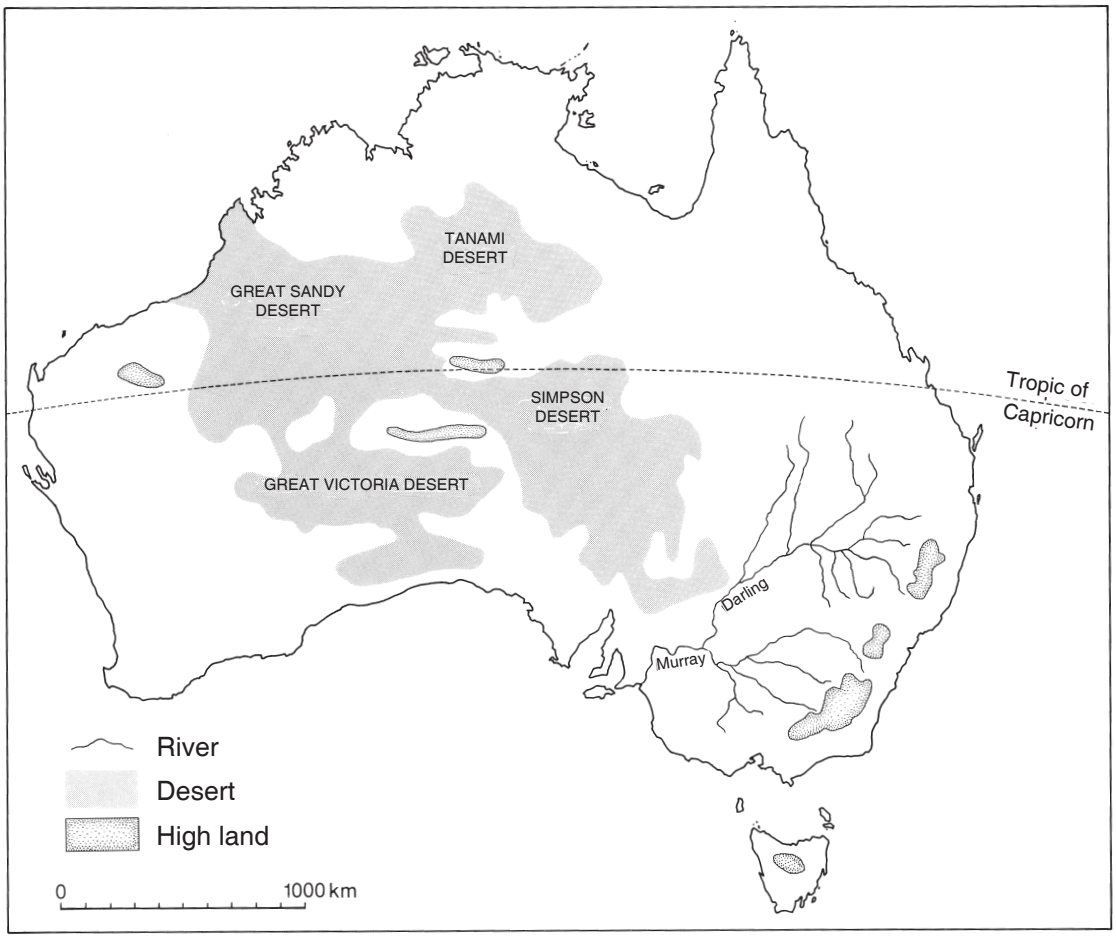
(ii) **describe** the socio-economic and environmental problems which have resulted from such rapid growth. **12**

(50)

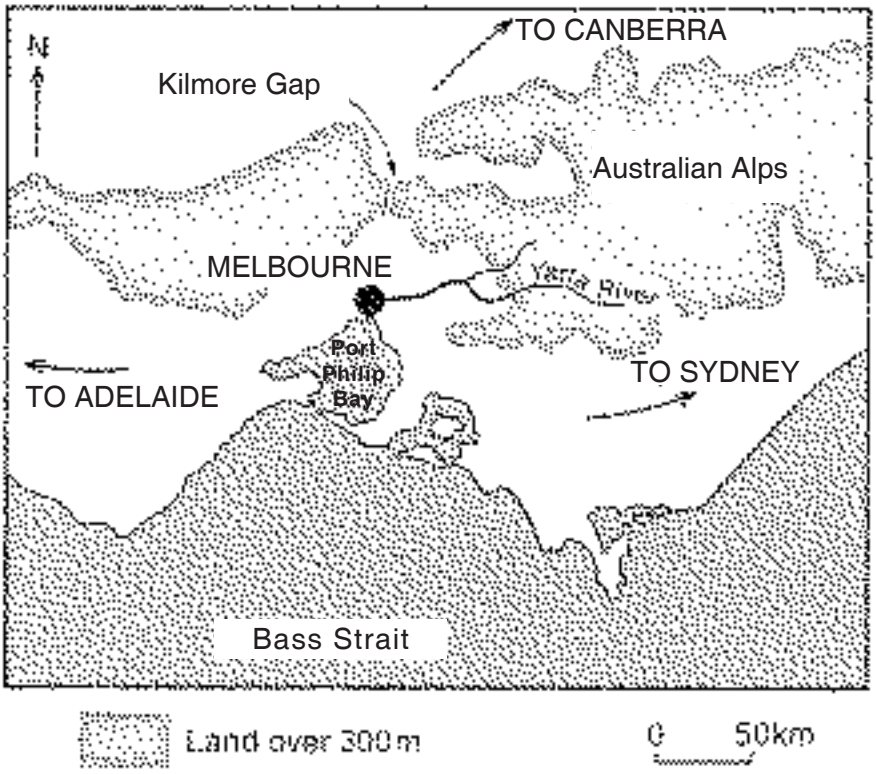
Map Q4A: Largest cities in Australia



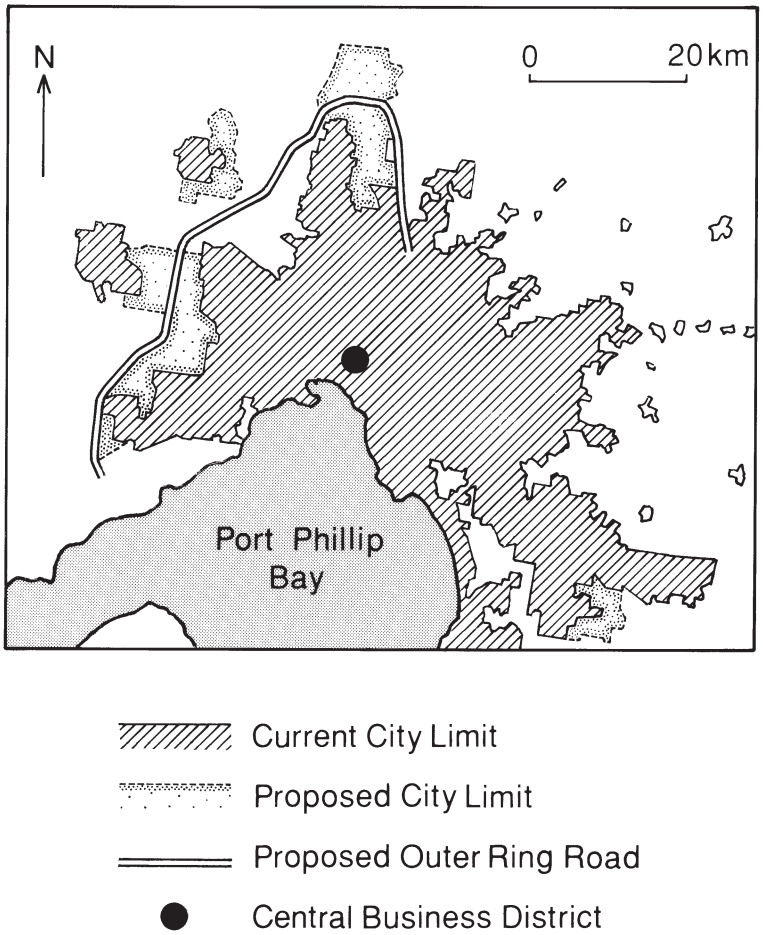
Map Q4B: Physical Map of Australia



Map Q4C: Site and Situation of Melbourne



Map Q4D: New Melbourne Urban Growth Boundary



[Turn over for Question 5 on *Page twelve*

Marks

Question 5: European Regional Inequalities

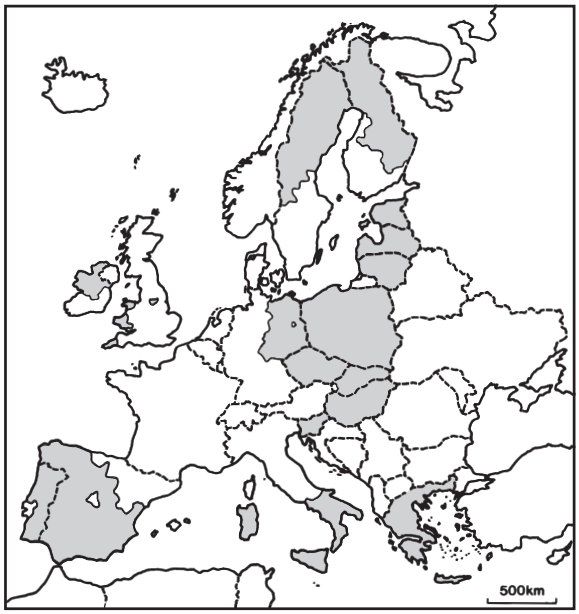
(*a*) Study Maps Q5A and Q5B.

Convergence Region Funding aims to raise the standard of living in the poorest EU countries and replaced Objective 1 Funding. This funding covers regions whose GDP per capita is below 75% of the EU average and aims at accelerating their economic development.

(i) **Describe** the changing distribution of areas towards which EU funding is directed. **8**

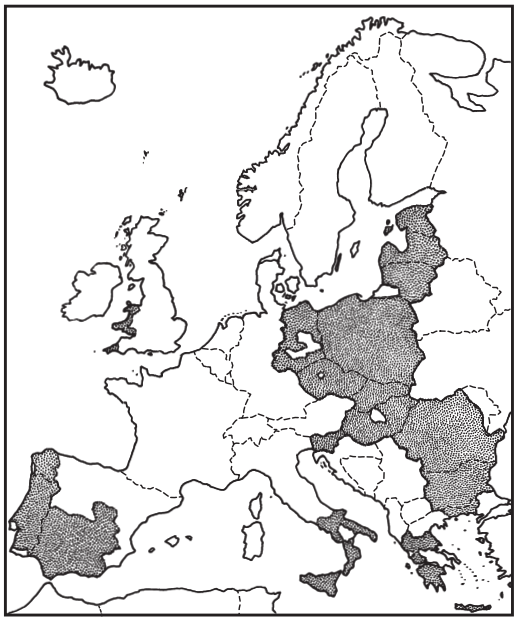
(ii) **Explain** how EU initiatives such as Convergence Region Funding might improve the development of less prosperous areas of the European Union. **10**

Map Q5A:
2003–2007 EU Objective 1 Funding



Regions eligible under Objective 1

Map Q5B:
2007–2012 Convergence Region Funding



Convergence Regions receiving most financial aid

(*b*) Study Table Q5

(i) **Describe** how the data shows a pattern of inequality across the European Union member states. **10**

(ii) **Suggest** both physical **and** human reasons for the variation in prosperity found across the 27 European Union member states. **14**

(*c*) "*Many European countries suffer from regional inequalities* ***within*** *them*."

For any named European Union country you have studied **describe** the steps taken by the national government to reduce inequalities and **comment** on their effectiveness. **8**

(50)

Table Q5: European Union Statistics, 2011

Country (Year of membership)	HDI (ranked)*	GDP per capita (Euros)	% of population aged 15–64 in employment	% Internet users
Belgium (1957)	10	28 200	62	78
France (1957)	4	26 300	64	69
Germany (1957)	12	26 900	71	79
Italy (1957)	11	24 300	58	52
Luxembourg (1957)	5	65 700	65	85
Netherlands (1957)	2	30 700	77	89
Denmark (1973)	7	29 600	76	86
Ireland (1973)	1	34 200	62	66
UK (1973)	12	27 800	70	83
Greece (1981)	14	22 900	61	46
Portugal (1986)	17	17 500	66	48
Spain (1986)	7	24 700	60	63
Finland (1995)	6	27 500	69	85
Sweden (1995)	3	29 300	72	93
Austria (1995)	7	30 000	72	75
Cyprus (2004)	16	21 603	70	39
Czech Republic (2004)	18	18 500	67	66
Estonia (2004)	20	16 100	70	75
Hungary (2004)	23	15 300	55	62
Latvia (2004)	25	12 600	61	68
Lithuania (2004)	24	13 200	60	59
Malta (2004)	19	18 100	55	59
Poland (2004)	21	12 300	59	58
Slovakia (2004)	21	15 000	60	74
Slovenia (2004)	15	20 700	68	65
Bulgaria (2007)	26	8600	64	48
Romania (2007)	27	9100	59	36

HDI Human Development Index (combined indicator which includes a measure of wealth, health and education in a country)

***** Ranking 1–27 with 1 best and 27 worst

Marks

Question 6: Development and Health

(*a*) Infant Mortality Rate per 1000 live births is a social indicator of development.

Name **one** other social indicator and **one** economic indicator of development and **explain** how they show a country's level of development. **8**

(*b*) Referring to named **developing countries** that you have studied, **suggest reasons** why there is such a wide range in levels of development **between** developing countries. **12**

(*c*) Study Table Q6 and Map Q6.

Many African countries have been trying to eliminate water-related diseases like malaria, cholera and bilharzia/schistosomiasis.

For **one** of the above diseases:

(i) **describe** the physical **and** human factors which put people at risk of contracting the disease; **8**

(ii) **describe** the measures that can be taken to combat the disease. **12**

(*d*) Study Diagram Q6.

Many Developing Countries are attempting to reduce the death rate of children under 5 by implementing Primary Health Care strategies.

Describe some specific Primary Health Care strategies and explain why these strategies are suited to people living in developing countries. **10**

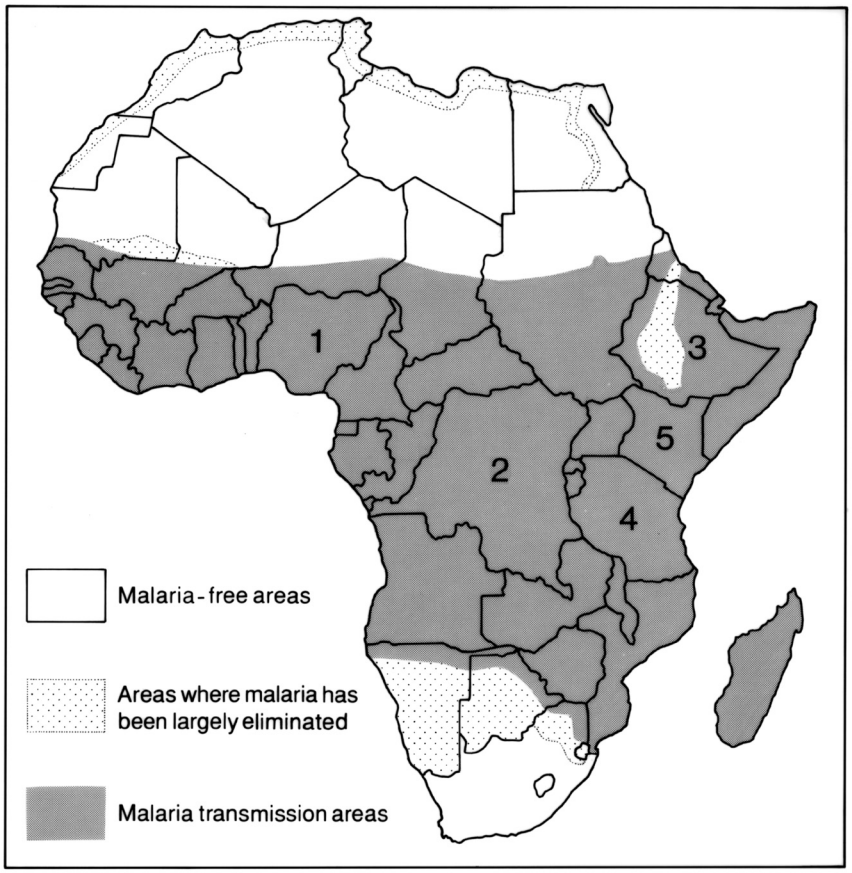
(50)

Table Q6: Statistics on Malaria

- 3·3 billion people in 109 countries are at risk from malaria
- 247 million annual cases of malaria
- 850 000 people die from malaria each year
- 91% of deaths caused by malaria are in Africa
- 85% of deaths caused by malaria are of children aged under 5

Extract from article "Why can't we rid the world of malaria?"
Daily Telegraph, 8 July 2010

Map Q6: Areas in Africa affected by Malaria

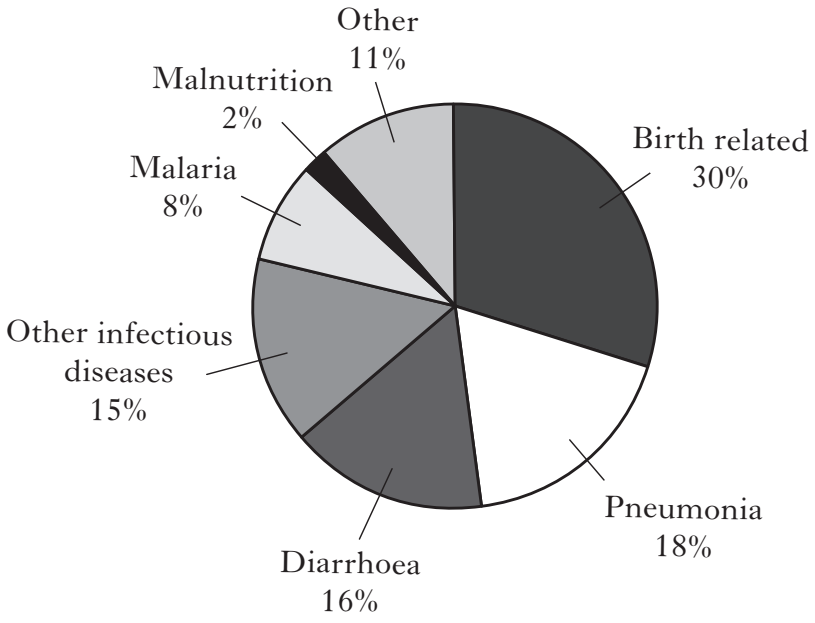


Most infected countries

1 Nigeria (57·5 million)
2 DR Congo (23·6 million)
3 Ethiopia (12·4 million)
4 Tanzania (11·5 million)
5 Kenya (11·3 million)

In brackets are the number of people infected.

Diagram Q6: Major causes of deaths of children under 5 in the Developing World, 2008



[*END OF QUESTION PAPER*]

ACKNOWLEDGEMENTS

Diagram Question 1—Newspaper Extract on Proposals for a wind farm at Gargrave, from Yorkshire Dales Country News, 9 March 2010. Reproduced by kind permission of Daelnet.

Table Question 6—Adapted extract from article "Why can't we rid the world of malaria?", taken from *Daily Telegraph*, 8 July 2010. Reproduced by permission of Telegraph Media Group Ltd. ©Telegraph Media Group Limited 2010.