

New Specification



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General Certificate of Education
2010

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71	
Candidate Number	
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Geography
Assessment Unit AS 2
assessing
Human Geography
[AG121]



FRIDAY 4 JUNE, AFTERNOON

TIME

1 hour 30 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Section A: candidates must answer this section.

Section B: answer **all three** questions in this section.

You should write your answers for Section A and Section B in the spaces provided in this question paper.

Section C: answer any **two** questions from this section. Write your answers to Section C on the lined pages at the end of this paper.

You are provided with an insert sheet for use with question 2.

Do not write your answers on this insert.

INFORMATION FOR CANDIDATES

The total mark for this paper is 90.

Quality of written communication will be assessed in **all** questions.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	
5	
6	
7	

Total Marks	
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Section A

Answer this section.

- 1 (a) Study **Resource 1A** which shows population totals for the states of the Central Region of Mexico.

Resource 1A

Number on map (Resource 1B)	Central Mexican State	Population Total
1	Federal District	8 500 000
2	Hidalgo	2 250 000
3	Morelos	1 500 000
4	Puebla	5 000 000
5	Queretaro	1 500 000
6	State of Mexico	13 000 000
7	Tlaxcalo	1 000 000

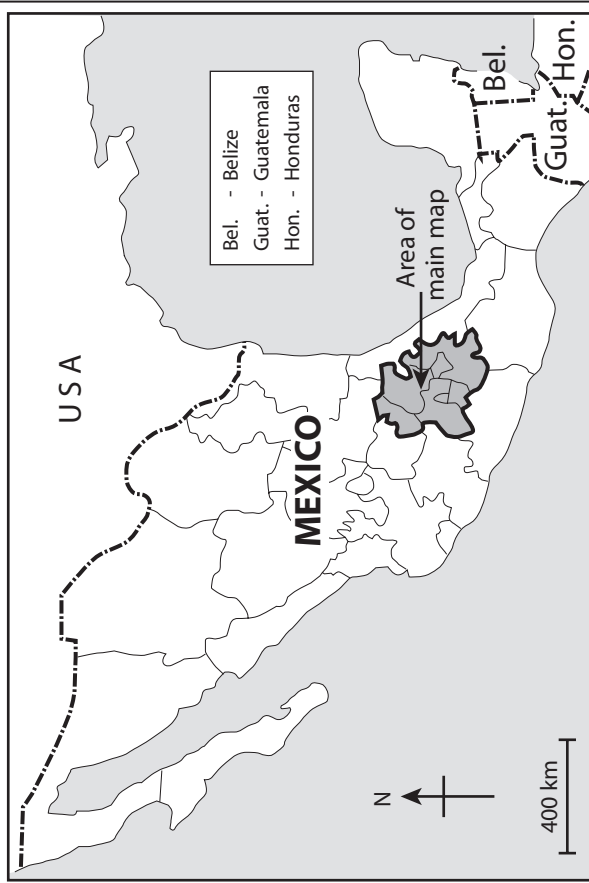
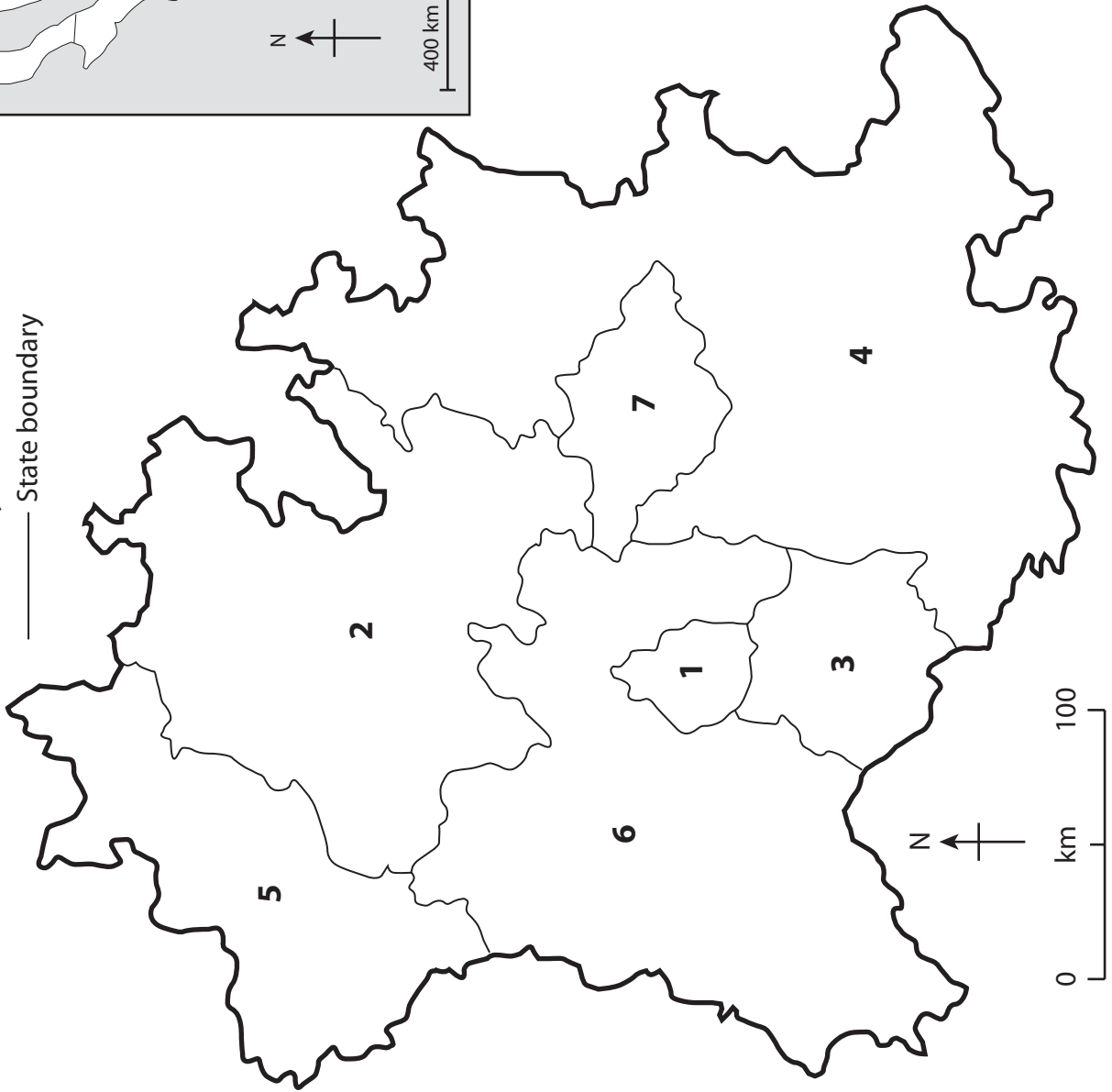
Figures rounded to nearest 250,000

© Prof. R V Kemper http://faculty.smu.edu/rkemper/INEGI/INEGI_Mexico_Population_by_states_by_gender_1910-2000.htm

- (i) Using a **dot distribution** mapping technique, complete the key and map to show the population density of the Central Mexican states on **Resource 1B**. The key must illustrate the precise dot value. [7]

Resource 1B

Note:
Mexico City is located within area 1
—— State boundary



Key:

(ii) Explain **one** disadvantage of a **dot distribution** technique for the mapping of population data.

[2]

(b) Study **Resource 1C** which is a satellite image of Mexico City and its surrounding environment.

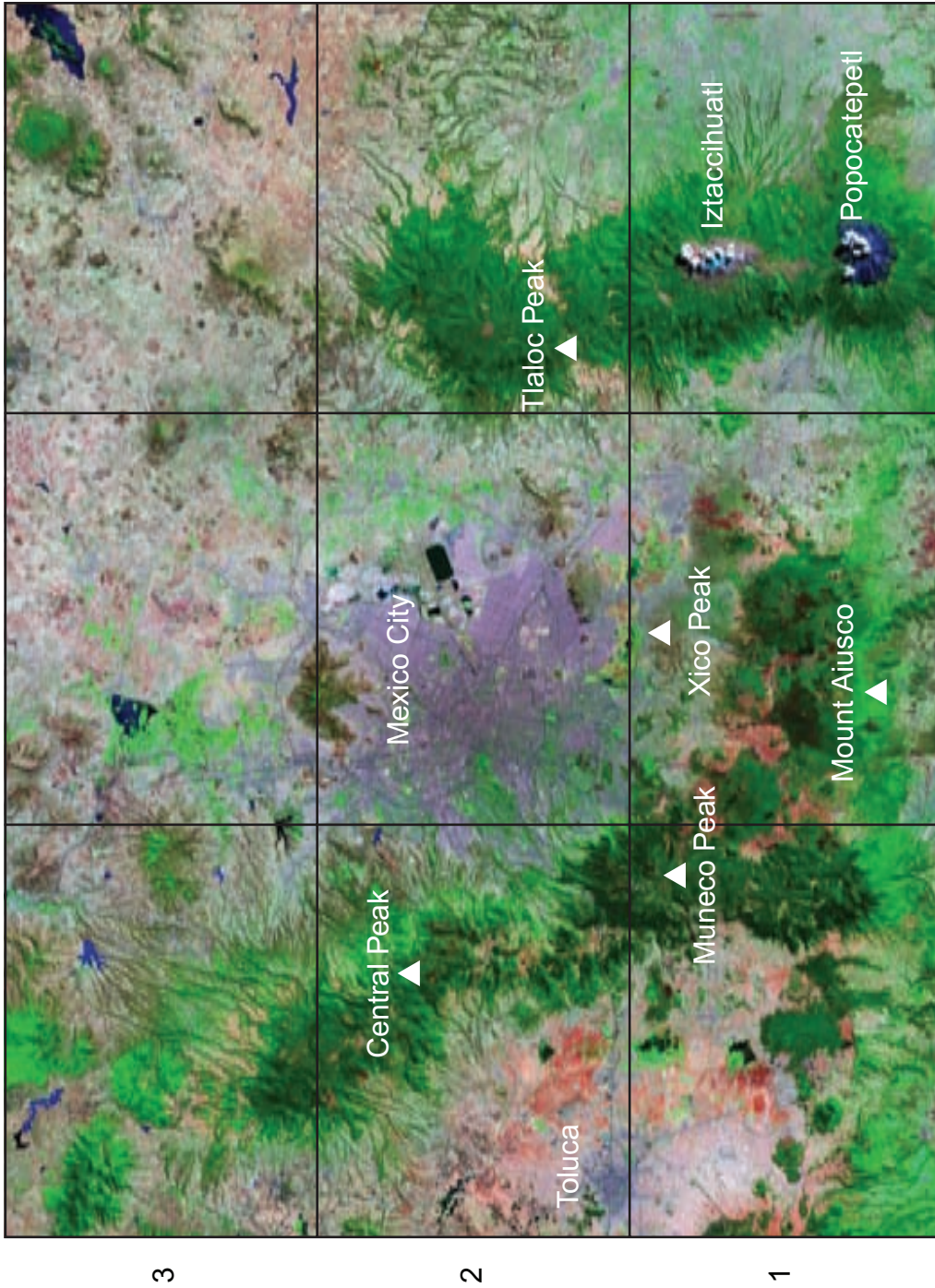
(i) Describe how the dominant landuse in grid square **B2** differs from **C2**.

[2]







(ii) Using evidence from **Resource 1C**, outline and explain one factor which may have influenced the urban expansion of Mexico City.

[3]

Resource 1C



KEY

<p>URBAN AREAS</p> <p>Urban areas appear as purple or shades of pale blue. The image displays Toluca to the East of Mexico City.</p> 	<p>RIVERS AND LAKES</p> <p>These can appear as black or rich blue depending on depth, sediment load and surface turbidity. Lago de Texcoco is evident to the East of the City.</p> 
<p>FORESTS</p> <p>Forests typically appear as a lush green.</p> 	<p>MOUNTAINS</p> <p>Mountains can be identified by their irregular topography and shaded relief. Mountains can vary in colour depending on vegetation cover.</p> 
<p>FARMLAND</p> <p>A red, pink and green pattern can signify farmland. Green represents vegetation and red/pink indicates bare soil.</p> 	<p>VOLCANOES</p> <p>The blue signifies ice whereas the pink tones mainly illustrate</p> 

© Satellite image of Mexico City by Geology.com, composed with Landsat GeoCover from NASA

- (c) A geographer studying tourist service distribution in Florence, Italy maps the distribution of museums in the centre of the city as illustrated in **Resource 1D** on page 7. **Resource 1D** below, is a partially completed Nearest Neighbour Analysis of their distribution.

Resource 1D

Museum	Nearest Neighbour	Distance (km)
1	2	0.064
2	1	0.064
3	4	0.057
4	3	0.057
5	2	0.186
6	7	0.186
7	6	0.186
8		0.134
9	10	0.143
10	9	0.143
11	12	0.143
12		0.043
13	12	0.043
14	18	0.378
15	16	0.136
16	17	0.121

Museum	Nearest Neighbour	Distance (km)
17	16	0.121
18	19	0.157
19	20	0.086
20	19	0.086
21	20	0.200
22	20	0.179
23	24	0.107
24	23	0.107
25	27	0.071
26	10	0.179
27	25	0.071
28	29	0.236
29	28	0.236
30	22	0.278
31		0.321

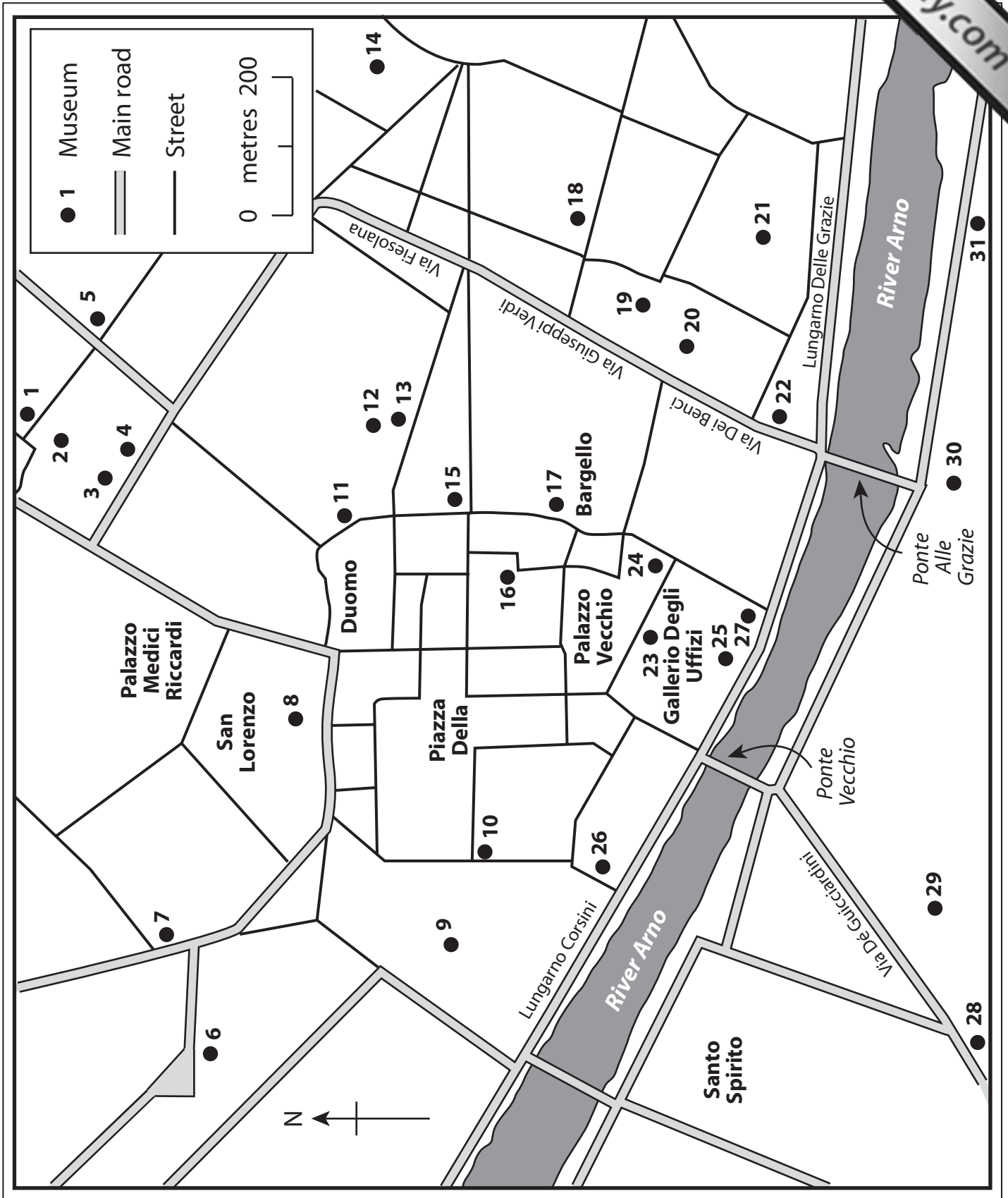
Sum = 4.519

Area = 2.534 km²

- (i) Using **Resource 1E** on page 7, complete **Resource 1D** by filling in the missing values. [3]

Examiner Only	
Marks	Remark

Resource 1E



(ii) In the space below, complete the Nearest Neighbour Analysis (Rn calculation) and state the type of distribution shown in **Resource 1E**. The Nearest Neighbour Index Equation and significance graph are presented in **Resource 1F** (on page 9).

Show all calculations clearly

Area = 2.534km²

Calculated Rn value _____

Type of Distribution _____

[5]

(iii) Outline and explain **one** factor which influences the Rn value calculated and thus the geographical distribution pattern classified.

[3]

Resource 1F

Nearest Neighbour Index Equation and Significance Graph

Formula:

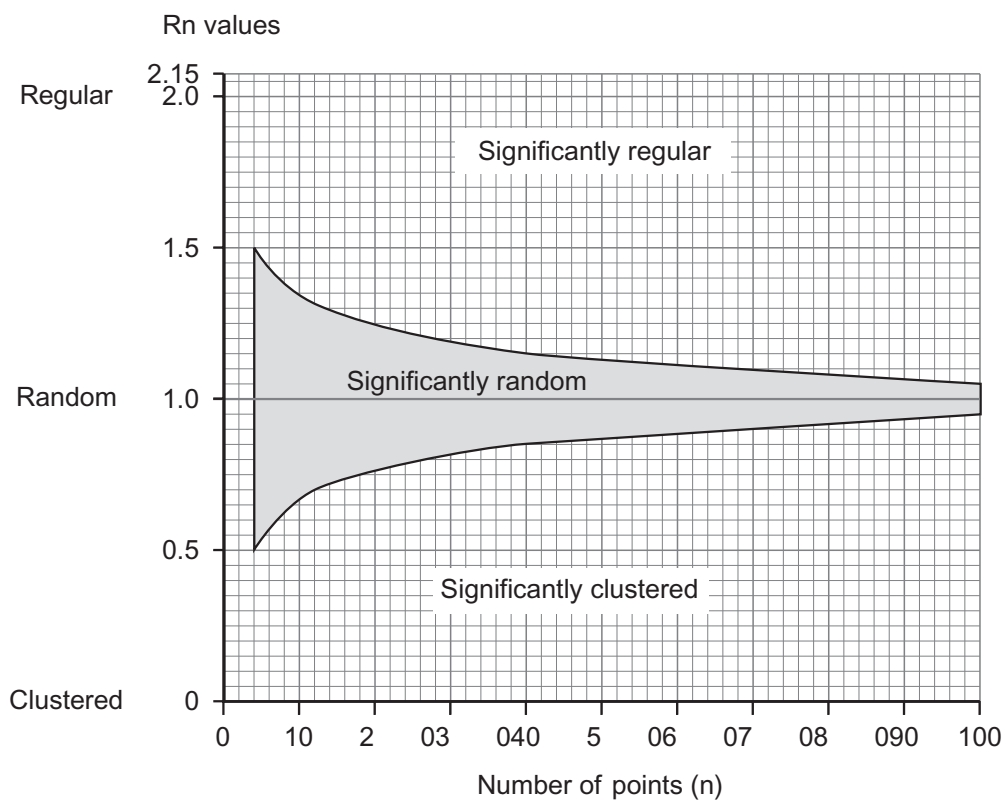
$$R_n = 2\bar{d}\sqrt{\frac{n}{A}}$$

where \bar{d} = the mean distance between nearest neighbours

n = number of points

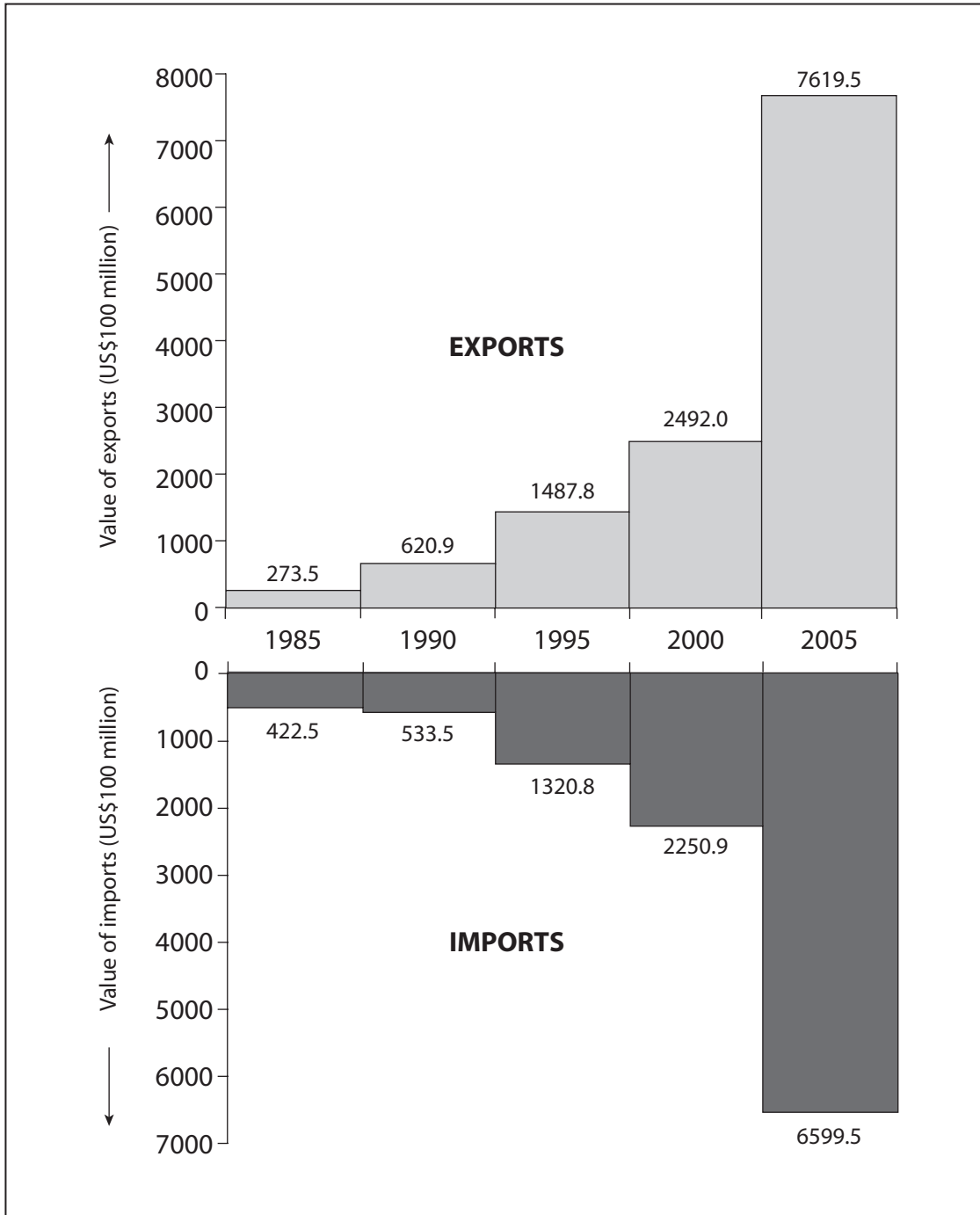
A = area in question

Significance Graph



(d) Study **Resource 1G** which shows trade patterns for China for selected years.

Resource 1G



Drawn using data obtained from www.stats.gov.cn/tjsj/ndsj/2007/indexeh/htm

(i) Calculate the **trade balance** for China (export earnings minus import costs) in:

- 1985 _____ [1]
- 2005 _____ [1]

(ii) For **either** 1985 **or** 2005, explain how such a trade balance could influence development.

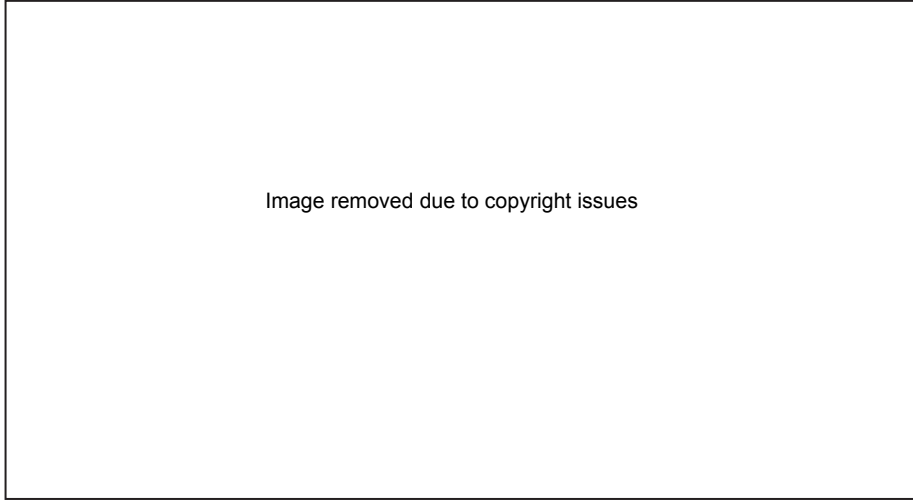
[3]

3 (a) Study **Resources 3A–3C** which show a map and a photograph of the Lake District National Park and monthly traffic flow at Waterhead, Ambleside.

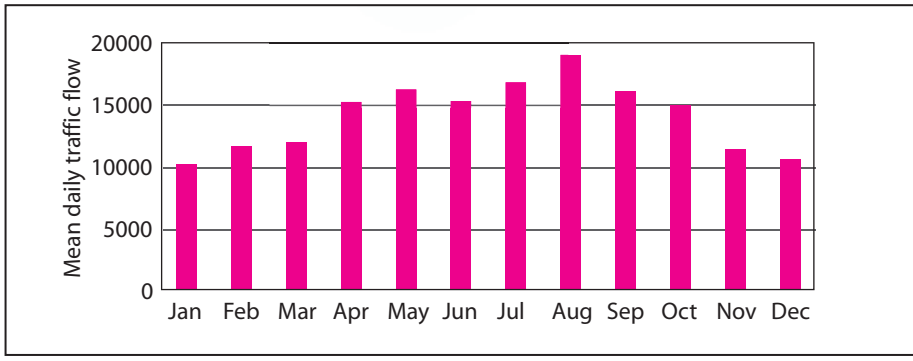
Resource 3A



Resource 3B



Resource 3C: Monthly traffic flow, Waterhead, Ambleside A591



© Lake District National Park Authority

(ii) Describe the problems Sub-Saharan Africa may have in the future due to its reliance on bilateral aid.

[3]

(b) Describe and evaluate **one economic** measure of development.

[4]

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(Questions continue overleaf)

Section C

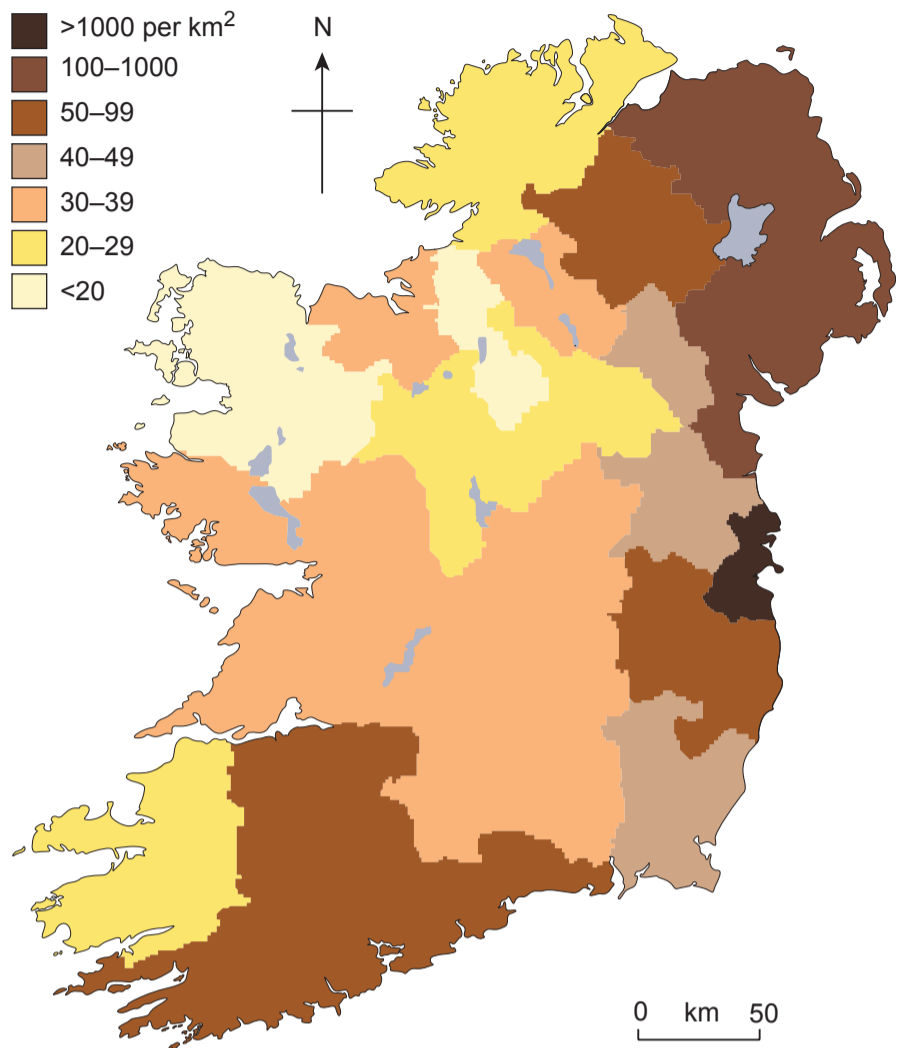
Answer any **two** questions from this section.

- 5 With reference to a national case study, describe and explain how population structure, as shown by population pyramids, has changed over time. [12]
- 6 With reference to a MEDC city you have studied, discuss the issues of its inner city. [12]
- 7 Discuss the contribution of those issues from the following list which are relevant to the development of your national LEDC case study. [12]
- Globalisation
 - Aid
 - Trade
 - Debt

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Resource 2A

Population Density in Ireland, 1992–1996



Resource 2B

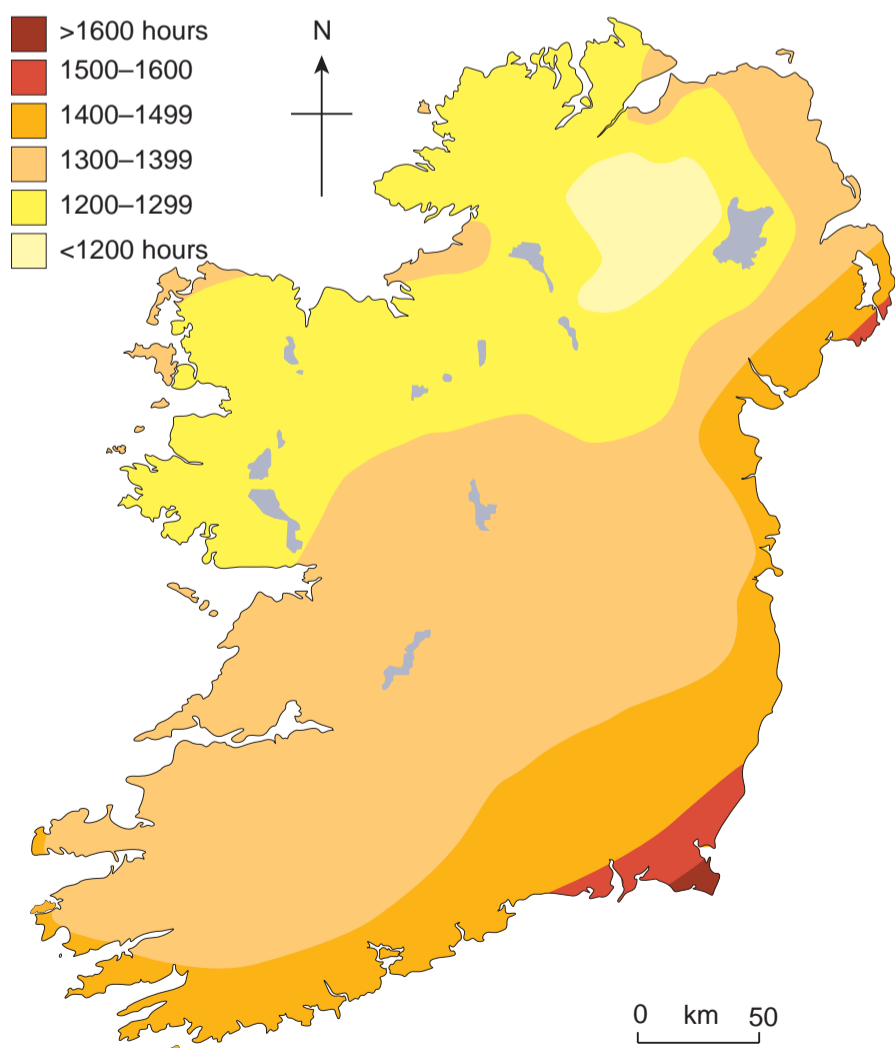


Do not write your answers on this insert



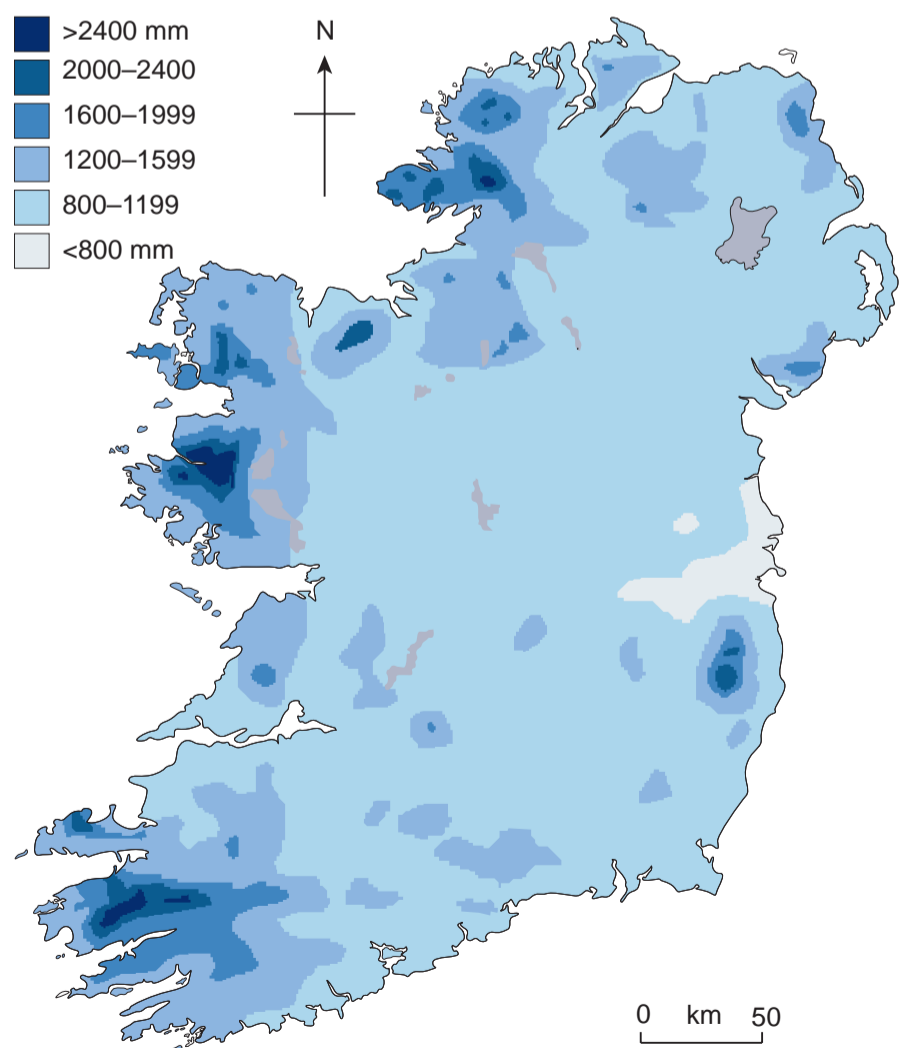
Resource 2C

Average Annual Hours of Sunshine in Ireland



Resource 2D

Average Annual Rainfall in Ireland



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