



Rewarding Learning

ADVANCED SUBSIDIARY (AS)
General Certificate of Education
January 2012

Centre Number

71	
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Candidate Number

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Geography

Assessment Unit AS 2

assessing

Human Geography

[AG121]



MONDAY 30 JANUARY, 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.

Section C: answer **any two** questions from this section.

You should write your answers in the spaces provided in this question paper.

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 relates to the initial stages of a Spearman's Rank statistical test used to investigate the relationship between Gross Domestic Product (GDP) per capita and life expectancy in 2009 for a sample of 14 countries.

Resource 1A

Country	X GDP per Capita (\$)	Rank X	Y Life expectancy (years)	Rank Y	d	d^2
Albania	3750	7	77	5	2	4
Australia	42279	3	81	2	1	1
Bangladesh	551	12	66	9	3	9
Belgium	43430	2	80	3	-1	1
Brazil	8114	5	72	7	-2	
Chad	596	11	49	13	-2	4
Denmark	55992	1	79	4	-3	9
Egypt	2269	8	70	8	0	0
Haiti	667	10	61	10	0	0
Italy	35084	4	82	1	3	
Kenya	759	9	54	11	-2	4
Mozambique	428	13	48	14	-1	1
Niger	352	14	51	12	2	4
Romania	7500	6	73	6	0	0

Source: World Bank data

 $\sum d^2 = 50$

(i) Complete **Resource 1A** by filling in the missing values.

[2]

Examiner Only	
Marks	Remark

(ii) In the space below complete the Spearman's Rank calculation and comment on the statistical significance of the outcome. Formulae and significance charts are presented in **Resource 1B** on page 4.

Examiner Only	
Marks	Remark

$$r_s = \underline{\hspace{2cm}}$$

Comment on the statistical significance:

[6]

(iii) Outline **one geographical** explanation of this statistical result.

[3]

Resource 1B

Spearman's Rank Correlation Equation and Significance Charts

Formula:

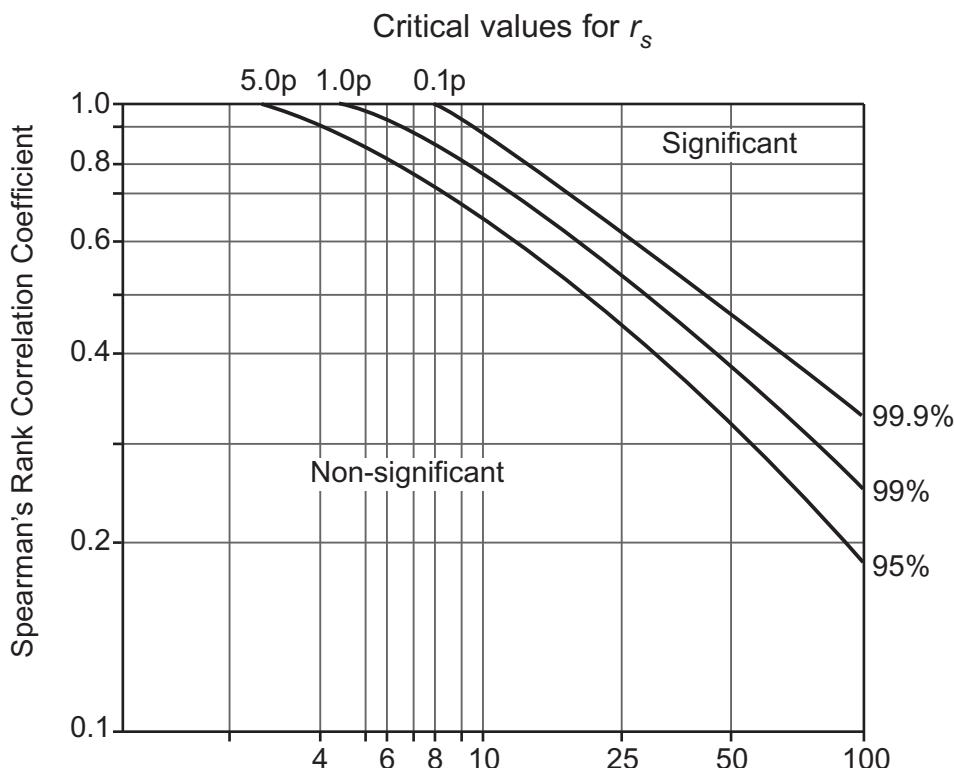
$$r_s = 1 - \left(\frac{6 \sum d^2}{n^3 - n} \right)$$

where d = the difference in rank of the values of each matched pair

n = the number of ranked pairs

Σ = the sum of

Spearman's Rank Correlation Significance Graph and Table



Degrees of freedom [Number of ranked pairs (n) – 2]

Critical values of Spearman's Rank Correlation Coefficient, r_s

Significance level

degrees of freedom	0.05 (5%)	0.01 (1%)
4	0.88	1.00
5	0.83	0.96
6	0.80	0.91
7	0.77	0.87
8	0.72	0.84
9	0.68	0.80
10	0.64	0.77
11	0.60	0.74
12	0.57	0.71
15	0.50	0.65

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(Questions continue overleaf)

(b) **Resource 1C** below is a table showing population density (people per square kilometre) for countries in South America.

Examiner Only	
Marks	Remark

Resource 1C

Region	Population density (people per square km)
Ecuador	47
Colombia	37
Venezuela	27
Brazil	21
Peru	21
Chile	21
Uruguay	19
Paraguay	15
Argentina	14
Bolivia	8
Guyana	3
Suriname	2
French Guiana	2
Falkland Islands	0.24

(i) Select an appropriate mapping technique to show how population density varies throughout South America.

Chosen technique _____ [1]

(ii) Complete the map and key on **Resource 1D** using your chosen technique. [5]

Examiner Only	
Marks	Remark

Resource 1D



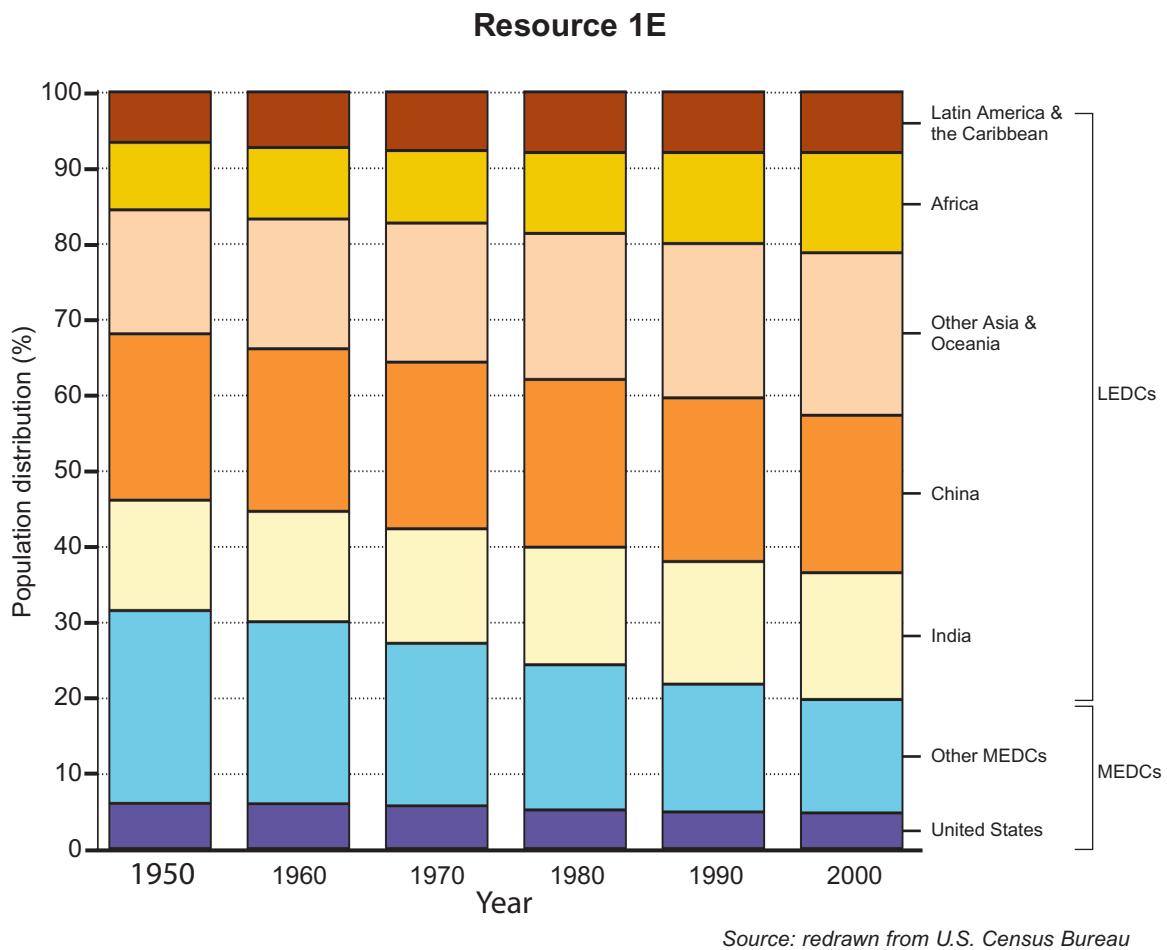
Source: G Alexander / CCEA

(iii) Describe **one** limitation of your chosen technique for mapping this data.

[2]

(c) Study **Resource 1E** showing the distribution of the world's population from 1950 to 2000.

Examiner Only	
Marks	Remark



(i) Identify the percentage of the world's population living in Africa in 1950.

_____ [1]

(ii) Identify the percentage of the world's population living in Africa in 2000.

_____ [1]

(iii) Compare the trend shown for LEDCs with that shown for MEDCs from 1950 to 2000.

[3]

Examiner Only	
Marks	Remark

(iv) Suggest **one** possible cause for **one** of the trends identified.

[3]

(d) Study **Resource 1F** below which shows a European river landscape.

Resource 1F

Complete the table below using appropriate letters from the photograph.

Feature

Letter

agricultural buildings	A
early seral stage (pioneer plant community)	
slip-off slope	
floodplain	

[3]

Examiner Only	
Marks	Remark

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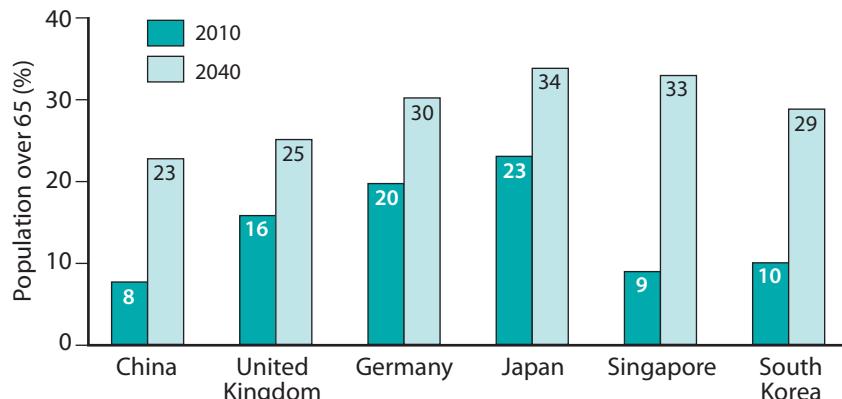
(Questions continue overleaf)

Section B

Answer **all three** questions in this section.

2 (a) Study **Resource 2** which shows the percentage of the population above the age of 65 in selected countries in 2010 and 2040 (projected).

Resource 2



Source: US Census Bureau

(i) Using examples from **Resource 2**, compare the rates of change in the percentage of the population aged over 65.

[3]

Examiner Only	
Marks	Remark

(ii) Describe **one economic** implication of the trend shown in **Resource 2**.

[3]

(b) Distinguish between vital registration and national census taking and discuss why population data collection is more effective in some countries than others.

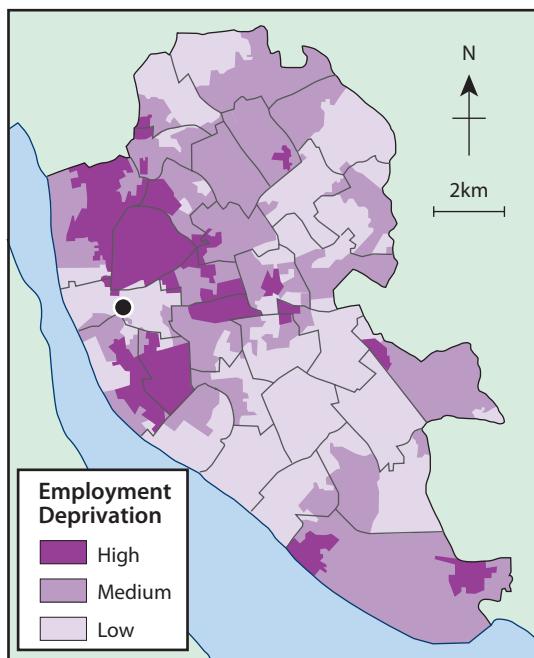
[6]

Examiner Only	
Marks	Remark

3 (a) Study **Resource 3A** showing levels of employment deprivation, **Resource 3B** showing levels of health deprivation and **Resource 3C** which is a map of the wards within Liverpool.

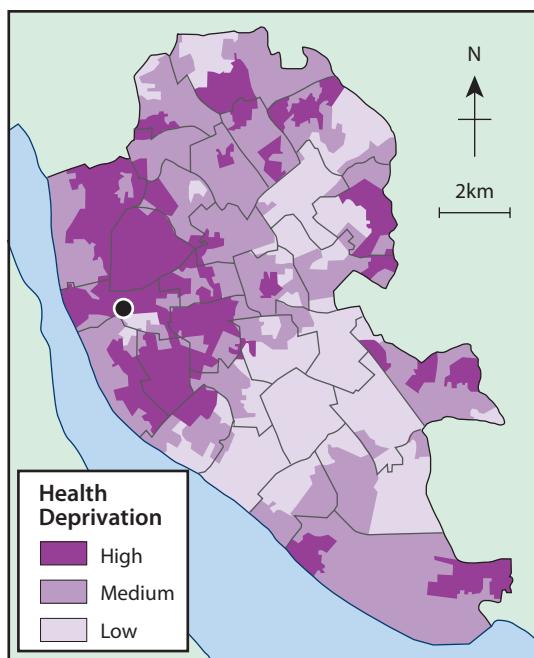
Examiner Only	
Marks	Remark

Resource 3A



Source: G Alexander / CCEA

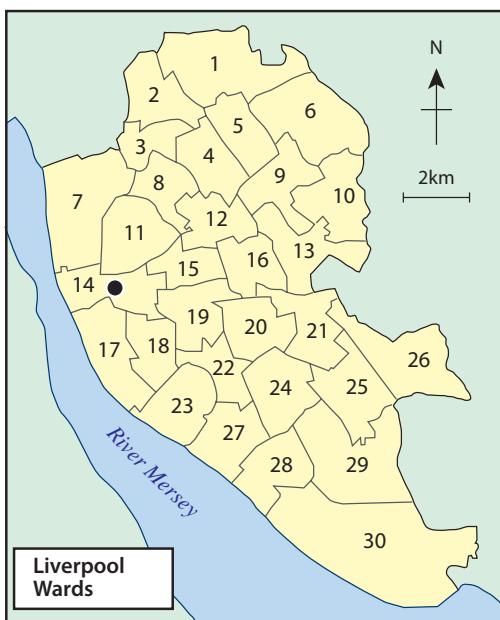
Resource 3B



Source: G Alexander / CCEA

Resource 3C

Examiner Only	
Marks	Remark



LIVERPOOL WARDS

1 Fazakerley	16 Old Swan
2 Warbreck	17 Riverside
3 County	18 Princes Park
4 Clubmoor	19 Picton
5 Norris Green	20 Wavertree
6 Croxteth	21 Childwall
7 Kirkdale	22 Greenbank
8 Anfield	23 St Michaels
9 West Derby	24 Church
10 Everton	25 Woolton
11 Yew Tree	26 Belle Vale
12 Tuebrook & Stoneycroft	27 Mossley Hill
13 Knotty Ash	28 Cressington
14 Central	29 Allerton & Hunts Cross
15 Kensington & Fairfield	30 Speke Garston

● Liverpool city centre

Source: G Alexander / CCEA

(i) Using Resources 3A–C, describe the pattern of social and economic deprivation in Liverpool.

[5]

(ii) Identify and describe **one** other indicator of deprivation in **your** chosen MEDC urban case study (which may also be Liverpool).

[3]

(b) Using your LEDC case study material describe **one** issue resulting from rapid urbanisation.

[4]

Examiner Only	
Marks	Remark

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(Questions continue overleaf)

4 (a) Study **Resource 4** showing the distribution of colonial Empires in 1914 and answer the questions that follow.

Resource 4



Source: G Alexander / CCEA

(i) Describe the distribution of French colonies in 1914.

[2]

(ii) Discuss **one negative** effect of colonialism for the colonies, and **one positive** effect of colonialism for the ruling countries.

[4]

Examiner Only	
Marks	Remark

(b) With reference to your national scale case study, **describe** the pattern of regional variations in development.

Examiner Only	
Marks	Remark

Section C

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

Examiner Only	
Marks	Remark

5 With reference to a national case study, describe and explain how population structure, as shown by pyramids, can change over **time**. [12]

6 With reference to place for illustration, discuss **three** issues faced in the rural–urban fringe. [12]

7 Debt is an issue affecting many LEDCs. Outline some of the causes, problems and possible solutions to such debt. [12]

Question
Number

Number your answers clearly

Question Number

Number your answers clearly

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THIS IS THE END OF THE QUESTION PAPER

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