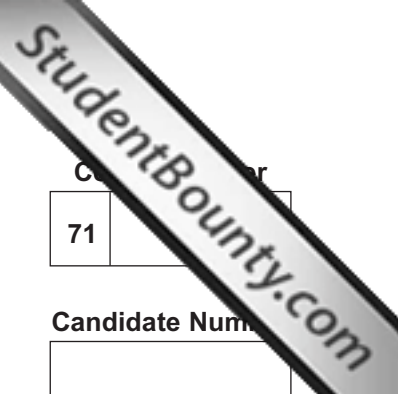




Rewarding Learning

ADVANCED SUBSIDIARY (AS)  
General Certificate of Education  
January 2012



Centre Number  
71

Candidate Number

# 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.

#### 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	
<b>Total Marks</b>	

**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 <sup>2</sup>
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*       $\Sigma d^2 = 50$

- (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.

<p style="text-align: right;"><math>r_s =</math> _____</p> <p>Comment on the statistical significance:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <p style="text-align: right;">[6]</p>	
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(iii) Outline **one geographical** explanation of this statistical result.

<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <p style="text-align: right;">[3]</p>	
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**Resource 1B**

**Spearman's Rank Correlation Equation and Significance Charts**

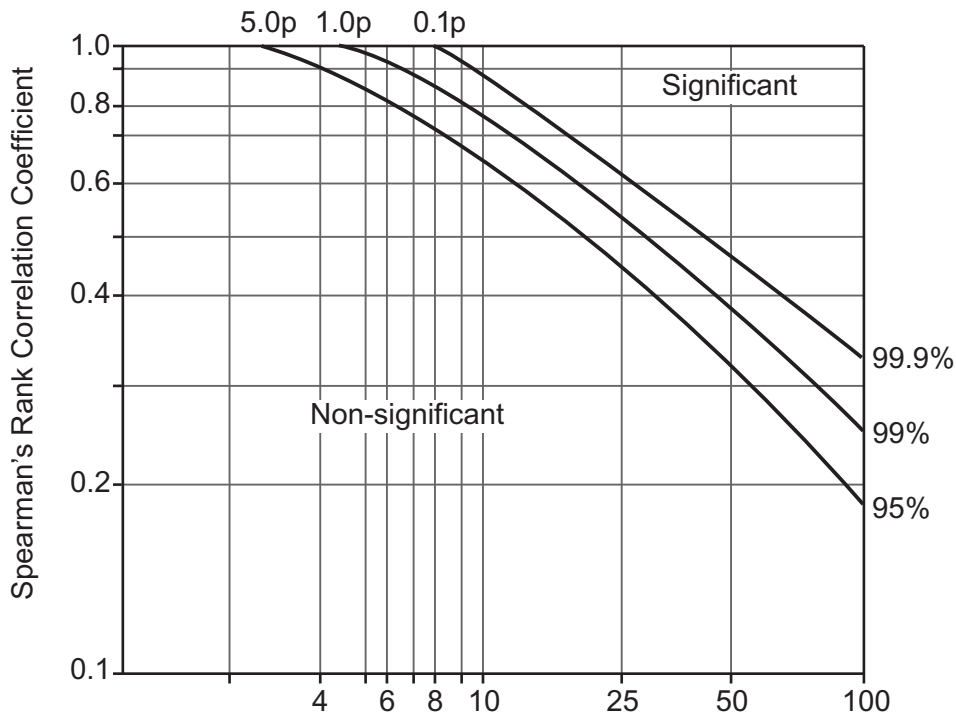
Formula:

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

where  $d$  = the difference in rank of the values of each matched pair  
 $n$  = the number of ranked pairs  
 $\Sigma$  = the sum of

**Spearman's Rank Correlation Significance Graph and Table**

Critical values for  $r_s$



**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.

**Resource 1C**

<b>Region</b>	<b>Population density (people per square km)</b>
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]

**Resource 1D**



Source: G Alexander / CCEA

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

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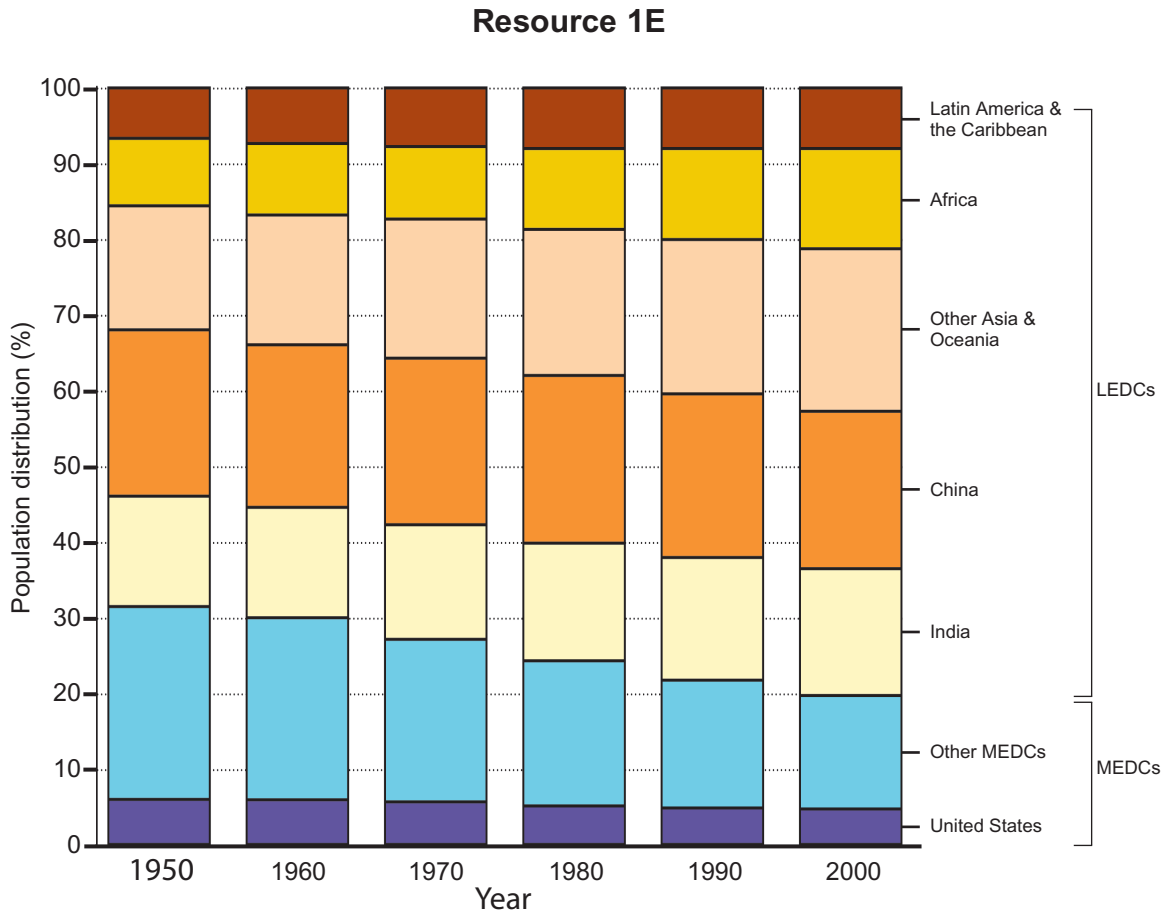
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[2]

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



Source: redrawn from U.S. Census Bureau

(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.

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[3]

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

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[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	<b>A</b>
early seral stage (pioneer plant community)	
slip-off slope	
floodplain	

[3]

Examiner Only	
Marks	Remark

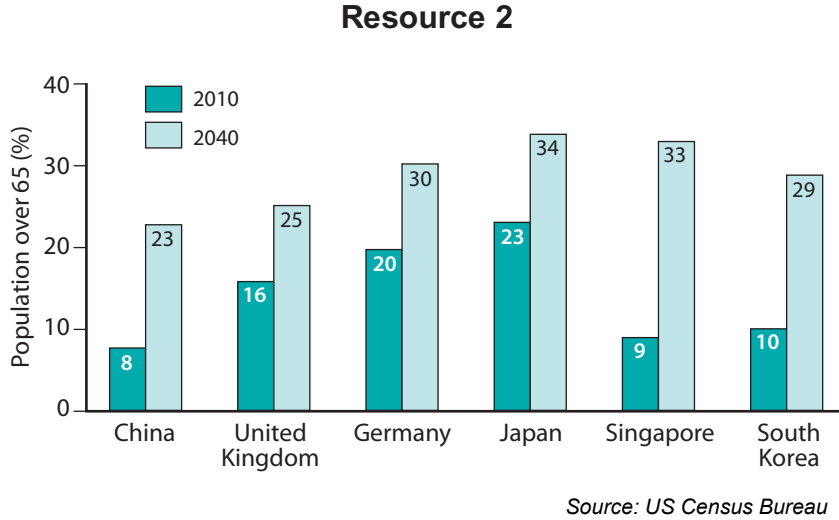
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**(Questions continue overleaf)**

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).



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

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[3]

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

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[3]

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

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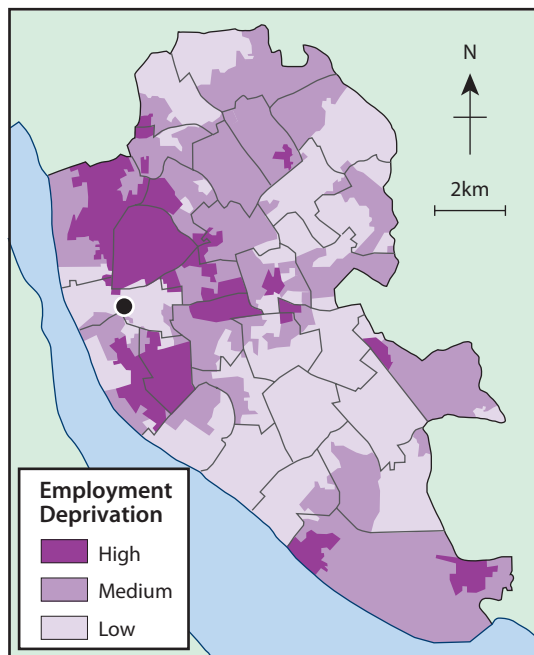
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[6]

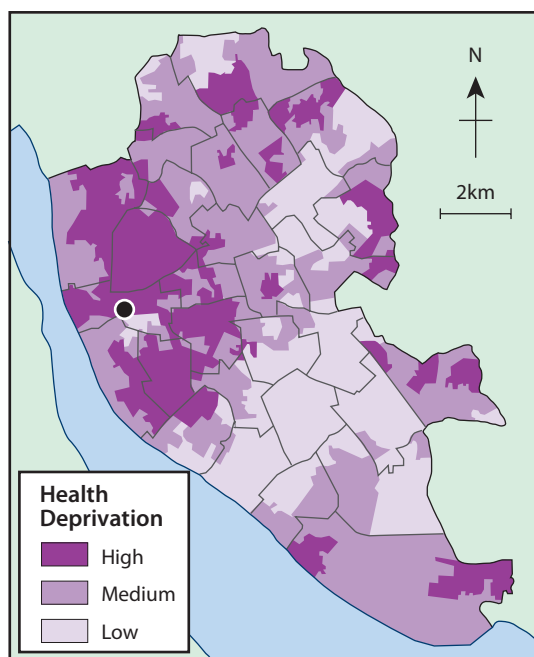
- 3 (a) Study **Resource 3A** showing levels of employment deprivation, **Resource 3B** showing levels of health deprivation and **Resource 3C** which is a map of the wards within Liverpool.

**Resource 3A**



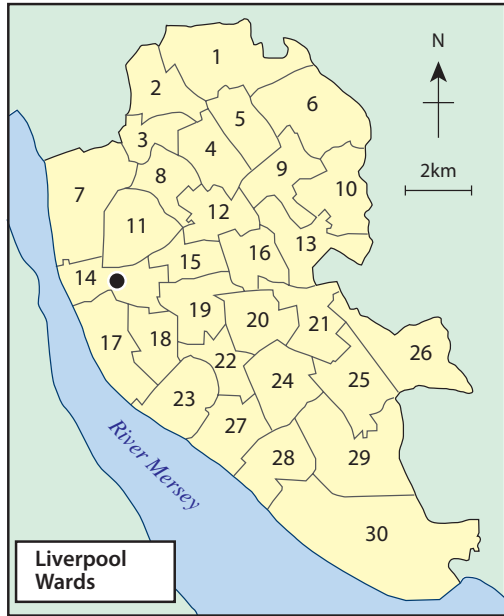
Source: G Alexander / CCEA

**Resource 3B**



Source: G Alexander / CCEA

Resource 3C



Source: G Alexander / CCEA

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 & Stonecroft  | 27 Mossley Hill           |
| 13 Knotty Ash             | 28 Cressington            |
| 14 Central                | 29 Allerton & Hunts Cross |
| 15 Kensington & Fairfield | 30 Speke Garston          |

● Liverpool city centre

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

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[5]

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

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[3]

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

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[4]

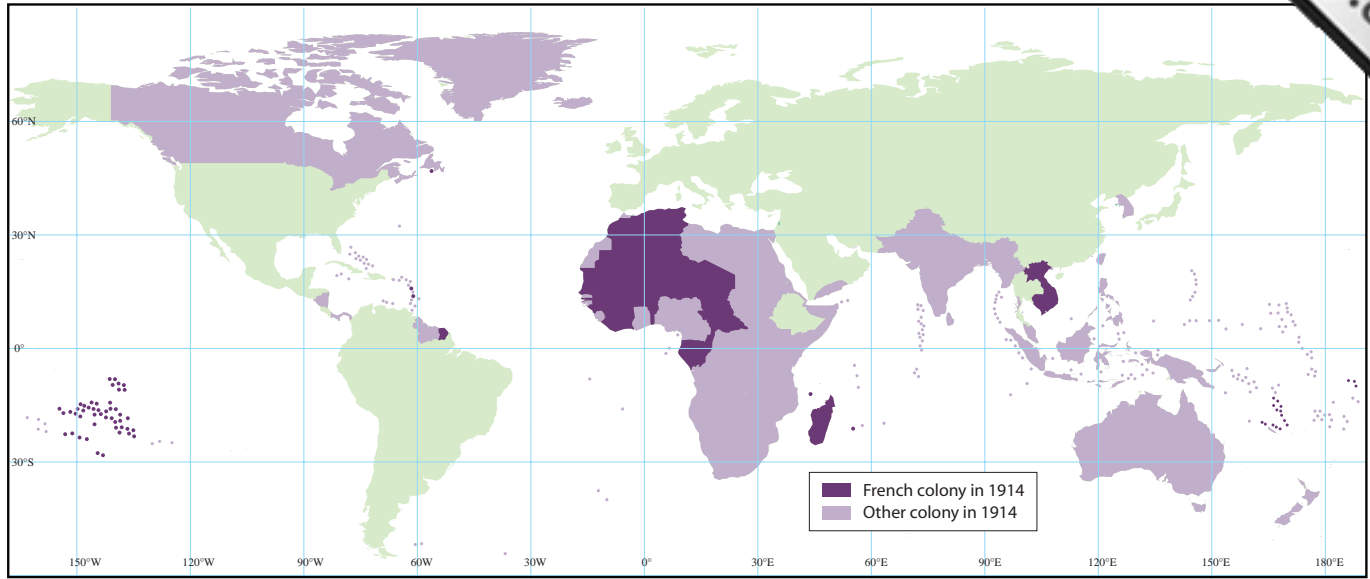


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**(Questions continue overleaf)**

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.

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[2]

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

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[4]

Examiner Only	
Marks	Remark

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

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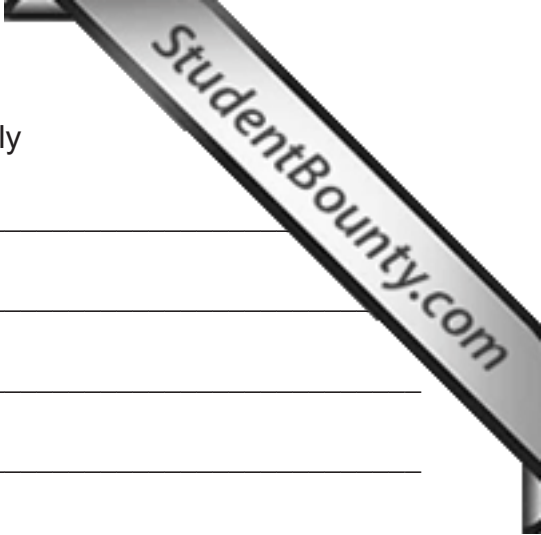
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### Section C

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

- 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]





Number your answers clearly

Question  
Number

A series of horizontal lines provided for writing answers.



Number your answers clearly

Question  
Number









Number your answers clearly

Question Number

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Number your answers clearly

StudentBounty.com

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**THIS IS THE END OF THE QUESTION PAPER**

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