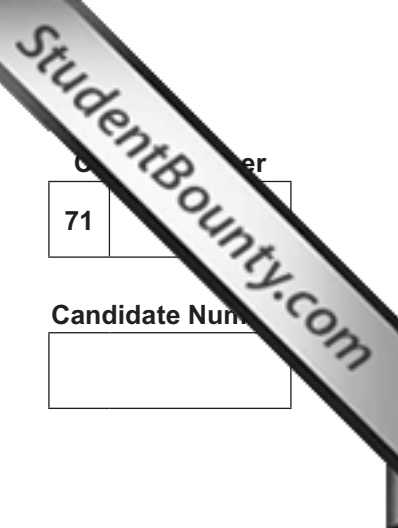**cea**

Rewarding Learning

ADVANCED SUBSIDIARY (AS)
General Certificate of Education
2013

Geography

Assessment Unit AS 2
assessing
Human Geography

[AG121]

FRIDAY 14 JUNE, MORNING

AG121

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	
Total Marks	

8097

Section A

Answer this section.

1 **(a)** Study **Resource 1A** which relates to an investigation into the relationship between GDP per capita and the percentage of rural population in 16 countries.

Resource 1A

Country	GDP per Capita (US dollars) (X)	Rank X	% Rural Population (Y)	Rank Y	Difference in ranks d	d²
Algeria	4 495	10	34	8	2	4
Australia	42 131	4	11	15	−11	121
Bangladesh	673	15	72	4.5	10.5	110.25
Bhutan	2 088	11	63	6		
Burkina Faso	536	16	80	1	15	225
Cambodia	802	12	77	3	9	81
Canada	46 148	1	19	14		
Chad	676	14	72	4.5	9.5	90.25
France	39 460	6	22	12.5	−6.5	42.25
Germany	40 509	5	26	11	−6	36
Ireland	45 497	2	38	7	−5	25
Italy	33 917	8	32	10	−2	4
Japan	43 137	3	33	9	−6	36
Kenya	775	13	78	2	11	121
Mexico	9 166	9	22	12.5	−3.5	12.25
UK	36 100	7	10	16	−9	81

$\Sigma d^2 = 1183$

(i) Complete the table by filling in the four missing values. [2]

(ii) In the box below, calculate the Spearman's Rank correlation value for the data and comment on the statistical significance of the result. The formula and significance charts are found on page 4.

[4]

Comment on the **statistical** significance:

_____

_____

_____

_____

_____ [6]

(iii) What **geographical** reasons could be suggested to explain this statistical result?

_____

_____

_____
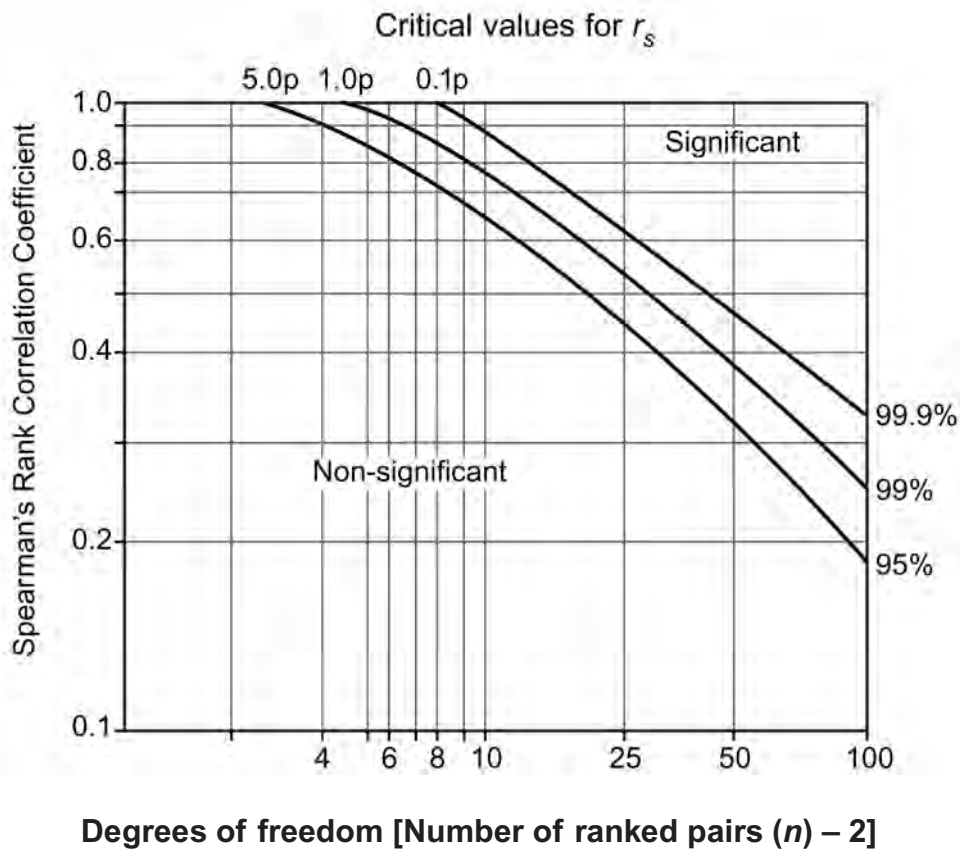
_____

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_____

_____ [4]

Resource 1B

Spearman's Rank Correlation Equation and Significance Charts

Formula:

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

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]

Significance level

degrees of freedom	0.05 (5%)	0.01 (1%)
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
13	0.54	0.69
14	0.52	0.67
15	0.50	0.65
20	0.47	0.59

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(Questions continue overleaf)

(b) A group of geography students carried out a river study, collecting data for bedload size at one randomly selected site along a river.

Resource 1C

Long axis of bedload particles (cm)

4.3	4.3	11.4	19	19.1	24.5

(i) State the **mode** for the data above. _____ [1]

(ii) Explain why this statistic has limitations for summarising the data set.

_____

_____

_____

_____ [2]

(iii) Calculate the mean for this data set and state one advantage of using this statistic to summarise the data.

_____

_____

_____

_____

_____ [3]

(iv) The students in this study investigated bedload size at only **one** site along the river. State and explain an appropriate sampling technique that they could use to select sites to investigate the hypothesis:

"Bedload size varies in a river as you move from its source to its mouth".

_____

_____

_____

_____

_____

_____ [3]

(c) Study **Resource 1D**, a partially completed table illustrating the percentage contribution of clay, silt and sand to the different soil types shown. **Resource 1E** is a triangular graph to illustrate this data. Both the table and triangular graph include data for the loam soil (A).

Resource 1D

	A: LOAM	B: SANDY CLAY	C: LOAMY SAND	D: CLAY
% SAND	40			10
% SILT	40			10
% CLAY	20			80

(i) Using the triangular graph, complete the table, **Resource 1D**, showing the percentage contribution of sand, silt and clay to the soils labelled **B** and **C** on the triangular graph. [4]
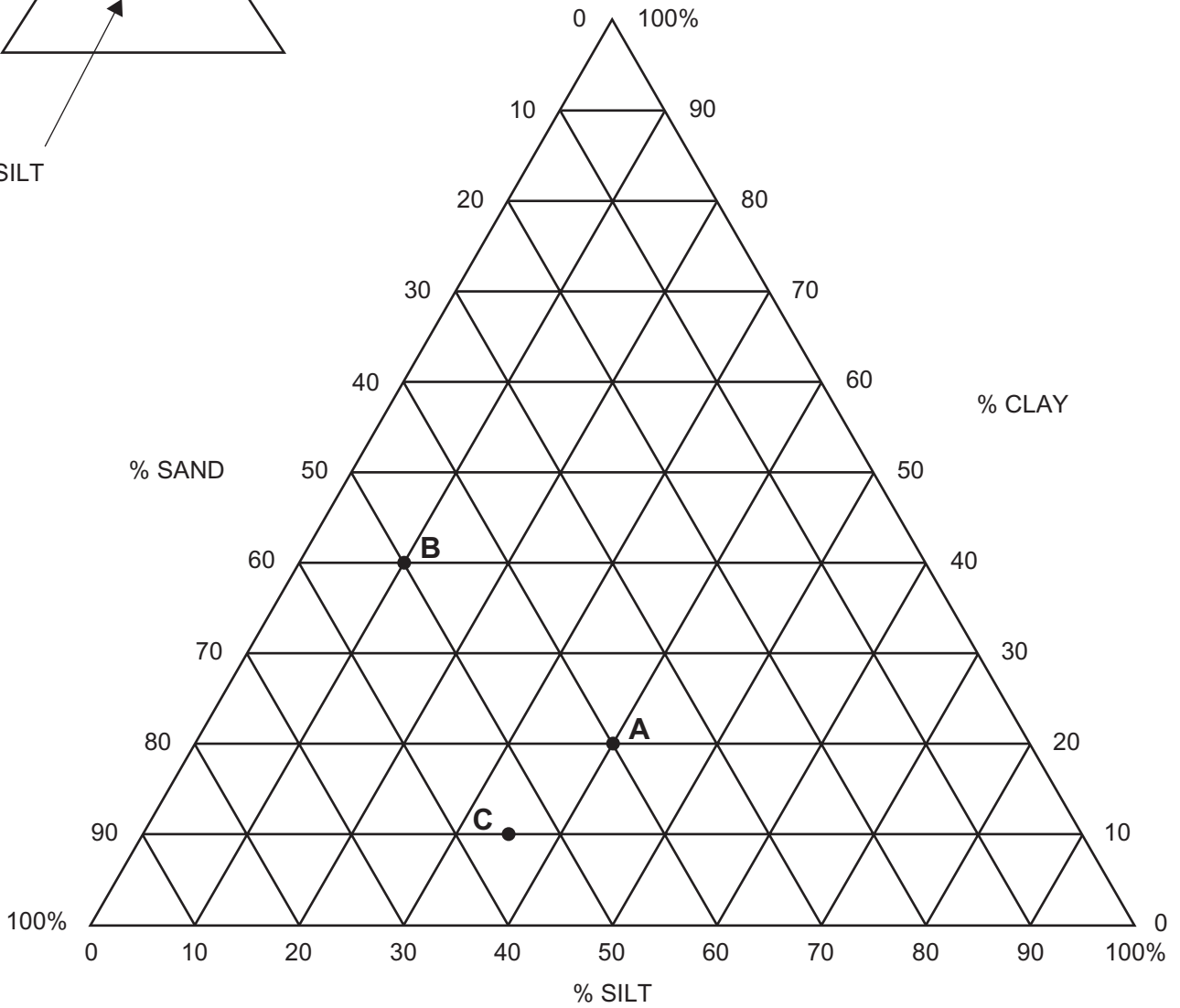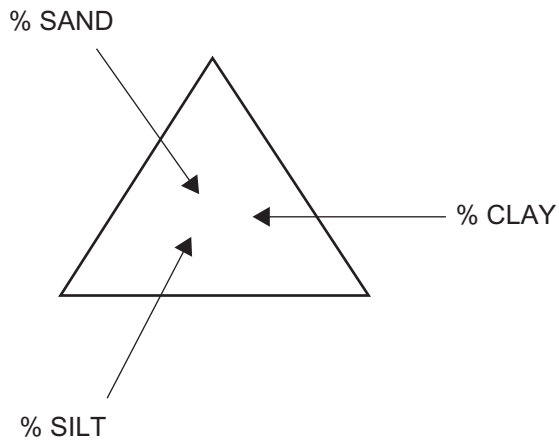
(ii) On the triangular graph, **Resource 1E**, plot accurately and label soil **D** (clay) using data from **Resource 1D**. [3]

(iii) Describe the circumstances in which triangular graphs are appropriate for presenting geographical data.

_____

_____

_____

_____ [2]

Resource 1E

Key

% SAND

% CLAY

% SILT

% SAND

% CLAY

% CLAY

0   100%

10   90

20   80

30   70

40   60

50   50

60   40

70   30

80   20

90   10

100%   0

0   10   20   30   40   50   60   70   80   90   100%

% SILT

9

[Turn over

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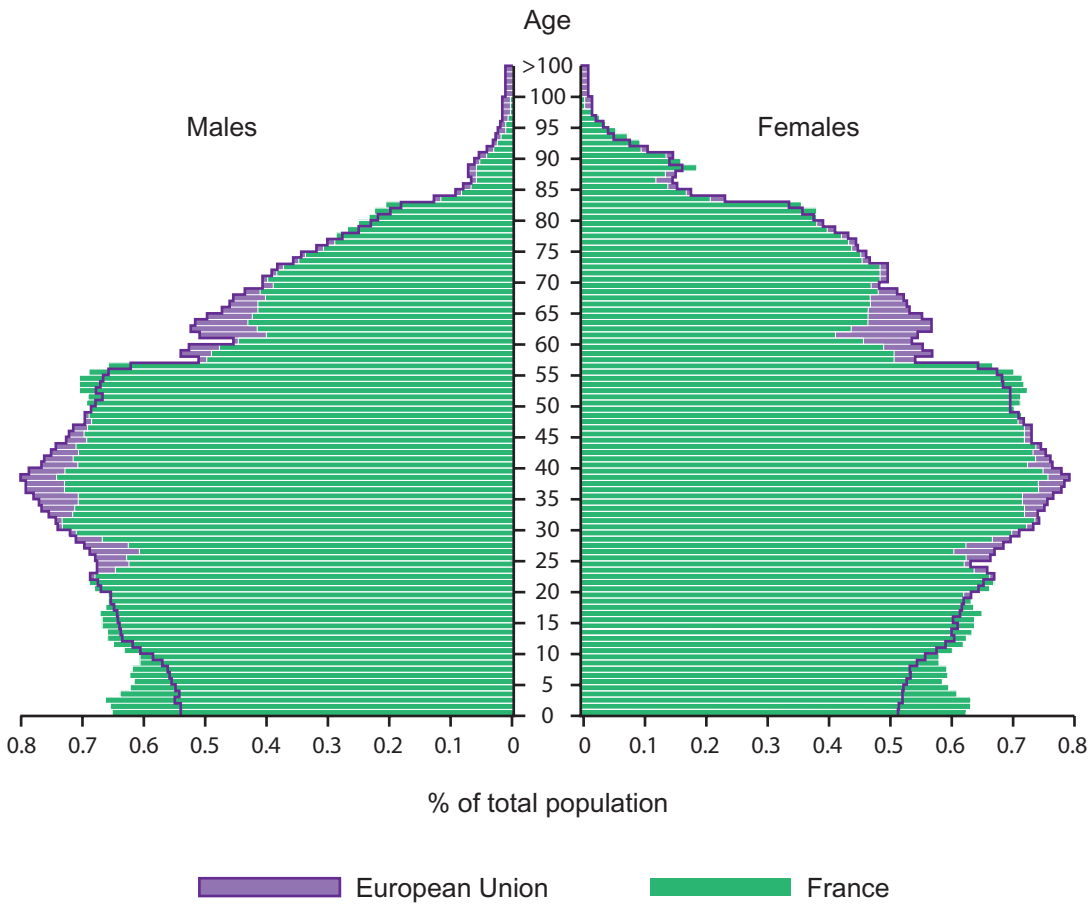
Answer **all three** questions in this section.

2 **(a)** Describe how birth rate, death rate and natural increase/decrease are related.

_____

_____

_____

_____ [2]

(b) Study **Resource 2**, comparing the population structure of France and the rest of the European Union in 2003.

Resource 2

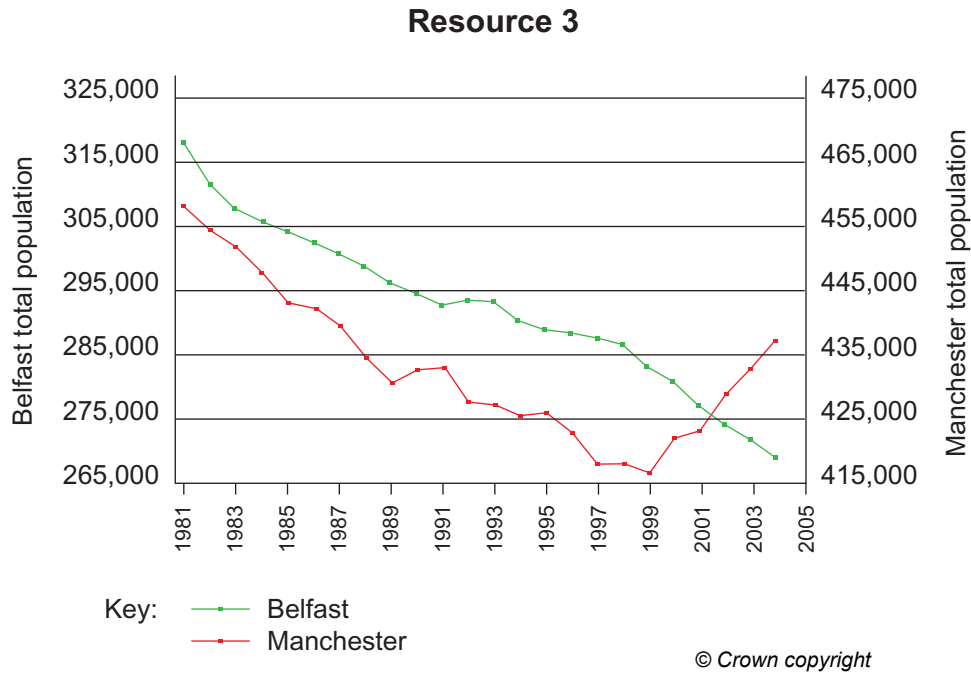© _Institut Nationale d'études Démographiques_

(i) Describe **two** differences between the population structure of France and that of the rest of the European Union in 2003.

_____

_____

_____

_____

_____

_____

_____ [4]

(ii) Many European countries are increasingly experiencing an ageing population structure. Discuss **two** problems associated with this trend.

_____

_____

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_____

_____ [6]

3 **(a)** Study **Resource 3** below, showing population changes in Manchester and Belfast from 1981 to 2004.

Resource 3

Key: ——■—— Belfast
——■—— Manchester

© Crown copyright

(i) Name the urban process experienced in Manchester from 1999 to 2004.

_____ [1]

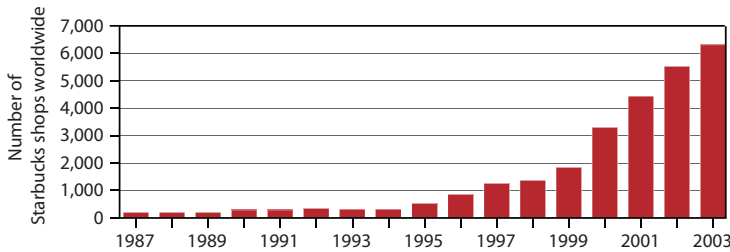**(ii)** Name the urban process experienced in Belfast from 1981 to 2004.

_____ [1]

(iii) Outline **two** effects this process would have had on the **rural** area around Belfast during this time.

_____

_____

_____

_____

_____

_____

_____

_____ [4]

(b) With reference to your case study material, discuss **one** issue of rapid urbanisation in LEDCs.

_____

_____

_____

_____

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_____

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_____

_____

_____

_____ [6]

13

[Turn over

4 **(a)** Study **Resource 4**, showing information about a multinational company.

Resource 4

● Country with Starbucks shops

Coffee bean source

Sugar source

Paper source for cups

© 2003 INA (http://www.princeton.edu/~ina)
© Joe Raedle / Getty Images / Thinkstock

(i) Using **Resource 4**, describe the distribution of the countries involved in producing the coffee beans, paper and sugar for a cup of Starbucks coffee.

_____

_____

_____

_____

_____

_____

_____

_____ [4]

(ii) Name the development process shown in your answer to **(i)**.

_____ [1]

(iii) With reference to **Resource 4**, discuss **one** effect of this process on the Starbucks company and suggest **one** effect for the countries into which Starbucks has expanded.
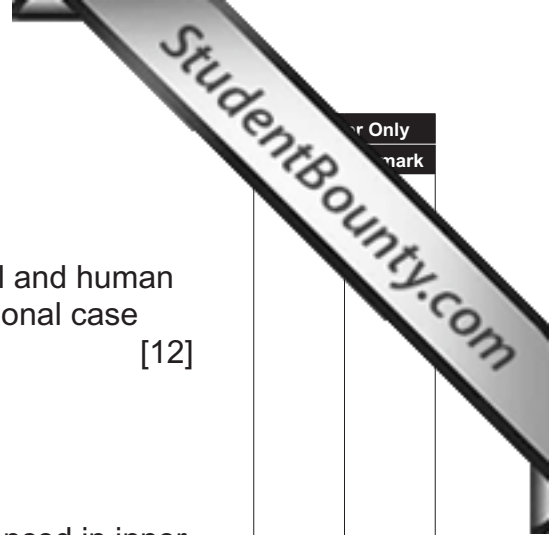
_____

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_____

_____

_____

_____ [4]

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

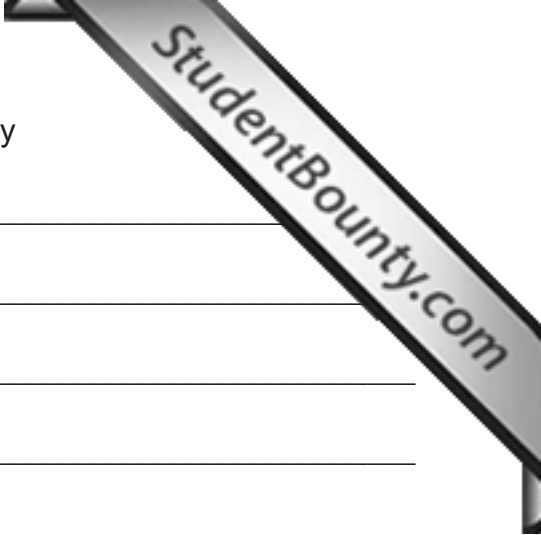_____

_____

_____

_____

_____ [3]

Section C

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

5 "Population distribution is related to the availability of physical and human resources." Discuss this statement with reference to your national case study. [12]

6 With reference to your case study, discuss the issues experienced in inner cities in MEDCs. [12]

7 Define colonialism and neo-colonialism and discuss how these processes can affect development. [12]

Number your answers clearly

Question Number

17

[Turn over

Question Number	

Question Number	Number your answers clearly

19

[Turn over

Question Number	

Question Number	Number your answers clearly

21

Number your answers clearly

Number your answers clearly

Number your answers clearly

Question Number	

Number your answers clearly

Question Number	Number your answers clearly

27

[Turn over

Question Number	Number your answers clearly

THIS IS THE END OF THE QUESTION PAPER

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