

Candidate Candidate   forename surname	
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Centre number		Candidate number			
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## INSTRUCTIONS TO CANDIDATES

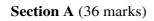
These instructions are the same on the printed answer book and the question paper.

- The question paper will be found in the centre of the printed answer book.
- Write your name, centre number and candidate number in the spaces provided on the printed answer book. Please write clearly and in capital letters.
- Write your answer to each question in the space provided in the printed answer book. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- You are permitted to use a scientific or graphical calculator in this paper.
- Final answers should be given to a degree of accuracy appropriate to the context.

## **INFORMATION FOR CANDIDATES**

This information is the same on the printed answer book and the question paper.

- The number of marks is given in brackets [] at the end of each question or part question on the question paper.
- You are advised that an answer may receive **no marks** unless you show sufficient detail of the working to indicate that a correct method is being used.
- The total number of marks for this paper is **72**.
- The printed answer book consists of **12** pages. The question paper consists of **4** pages. Any blank pages are indicated.



2

1 (i)	
1 (ii)	
1 (;;;)	
1 (iii)	
2 (i)	
2 (ii)	

<b>3</b> (i)	
<b>3</b> (ii)	

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4 (i)														
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	+				+								$\left  - \right $	
<b>4(ii)</b> (A)														
<b>4(ii)</b> ( <i>B</i> )														
4(II)( <i>D</i> )			 											
4 (iii)	 						 			 	 	 	 	
<b>¬</b> (III)														

5 (i)	
5 (ii)	
5 (iii)	

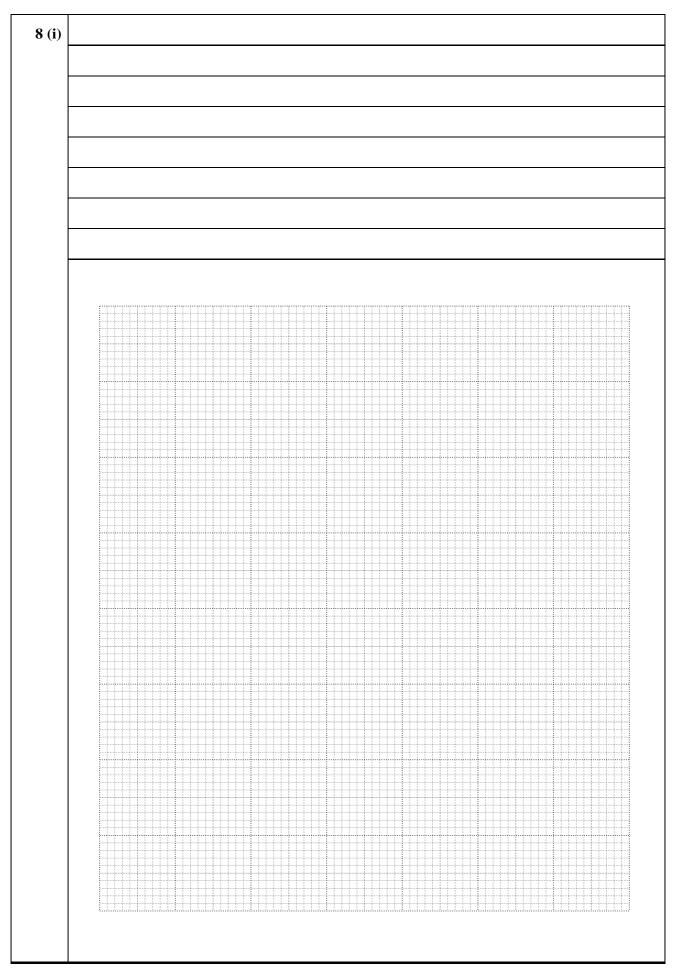
6 (i)	
6 (ii)	

## Section B (36 marks)

<b>7(i)</b> (A)	
<b>7(i)</b> ( <i>B</i> )	

7 (ii)	
7 (iii)	
, ()	

7 (iv)	
7 (v)	



<b>8</b> (ii)	
8 (iii)	

<b>8(iv)</b> (A)	
<b>8(iv)</b> ( <i>B</i> )	
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