



Oxford Cambridge and RSA

Wednesday 15 June 2022 – Afternoon

A Level Further Mathematics B (MEI)

Y421/01 Mechanics Major

Printed Answer Booklet

Time allowed: 2 hours 15 minutes



You must have:

- Question Paper Y421/01 (inside this document)
- the Formulae Booklet for Further Mathematics B (MEI)
- a scientific or graphical calculator



Please write clearly in black ink. **Do not write in the barcodes.**

Centre number

--	--	--	--	--

Candidate number

--	--	--	--

First name(s)

Last name

INSTRUCTIONS

- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the space provided in the **Printed Answer Booklet**. If you need extra space use the lined pages at the end of the Printed Answer Booklet. The question numbers must be clearly shown.
- Answer **all** the questions.
- Where appropriate, your answer should be supported with working. Marks might be given for using a correct method, even if your answer is wrong.
- Give your final answers to a degree of accuracy that is appropriate to the context.
- The acceleration due to gravity is denoted by $g \text{ m s}^{-2}$. When a numerical value is needed use $g = 9.8$ unless a different value is specified in the question.

INFORMATION

- This document has **24** pages.

ADVICE

- Read each question carefully before you start your answer.

Section A (29 marks)

1(a)	
1(b)(i)	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
1(b)(ii)	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

2

 $\alpha =$ $\beta =$

3(a)	

3(b)	

4(a)	
4(b)	
4(c)	

5(a)	
5(b)	

Section B (91 marks)

6(a)	
6(b)	

7(a)	
7(b)(i)	

7(b)(ii)	

7(b)(iii)	

8(a)	
8(b)	

8(c)	

8(d)	

9(b)	

10(a)	

10(b)	
10(c)	
11(a)	

11(b)	

12(b)	
12(c)	

13(a)	

13(b)	

13(c)	

13(d)	

