OCR
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

9451516972

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

Y421010

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 $g\,\mathrm{m\,s^{-2}}$. 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)	
1(b)(ii)	

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(a)

9(b)

10(a)

10(b)

10(c)

11(a)

11(b)

12(a)

12(b)

12(c)

13(a)

13(b)

13(c)

13(d)

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).