

## Wednesday 22 June 2022 – Afternoon AS Level Further Mathematics B (MEI)

### Y415/01 Mechanics b

## Printed Answer Booklet

### Time allowed: 1 hour 15 minutes



# You must have:

- Question Paper Y415/01 (inside this document)
- the Formulae Booklet for Further Mathematics B
- (MEI)
- · a scientific or graphical calculator



Please write clea	arly in	black	ink. I	Do no	ot writ	e 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 guestion 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  $gms^{-2}$ . When a numerical value is needed use q = 9.8 unless a different value is specified in the question.

### **INFORMATION**

• This document has **12** pages.

### **ADVICE**

· Read each question carefully before you start your answer.

1(a)	
1(b)	
1(c)(i)	
1(-)(*)	
1(c)(ii)	

2(a)	
<b>2</b> (b)	
2(b)	
	<i>x</i> =
	$\omega =$

<b>3(a)</b>	
<b>3(b)</b>	
( )	
	(answer space continued on next page)

3(b)	(continued)
2(a)	
3(c)	

4(a)	
4(b)(i)	
	(answer space continued on next page)

4(b)(i)	(continued)
	т · т/
4(b)(ii)	Increasing V
	Increasing $\phi$

(a)	
-	
(b)	
-	
-	
-	
-	
-	
-	
-	
-	
-	
	Speed =
	Coefficient of restitution =

5(c)	
	Speed =
	Coefficient of restitution =
5(d)	

6(a)	
-	
-	
-	
-	
-	
6(b)	
0(0)	
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	(answer space continued on next pag

6(b)	(continued)

ADDITIONAL ANSWER SPACE
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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).



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