



Oxford Cambridge and RSA

Friday 6 June 2025 – 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

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Candidate number

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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 **20** pages.

ADVICE

- Read each question carefully before you start your answer.

2

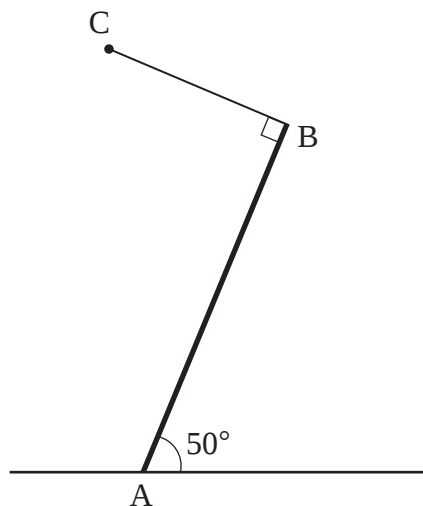
Section A (33 marks)

1	
2(a)	
2(b)	

3(a)	
3(b)	

4

4(a)



4(b)

4(c)

5(a)	
5(b)	
5(c)	
5(d)	
5(e)	

6(a)	
6(b)	
	$m_1 =$
	$m_2 =$

7

Section B (87 marks)

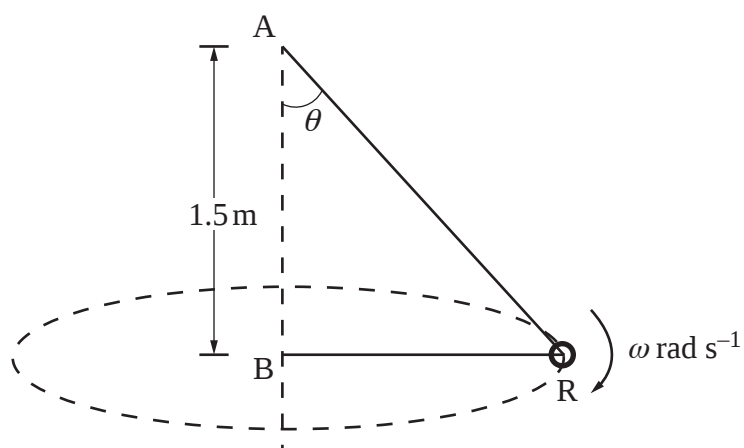
7(a)	
7(b)	
7(c)	
7(d)	

8(a)		
8(b)		
	8(c)	

9(a)	
	9(b)
9(c)	

10

10(a)



10(b)

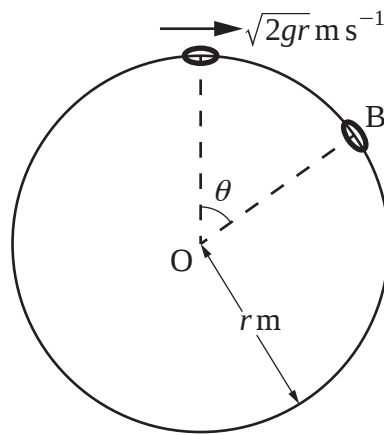
11(a)	
11(b)	

12(a)	
12(b)	
12(c)	

12(d)	
12(e)	
13(a)	

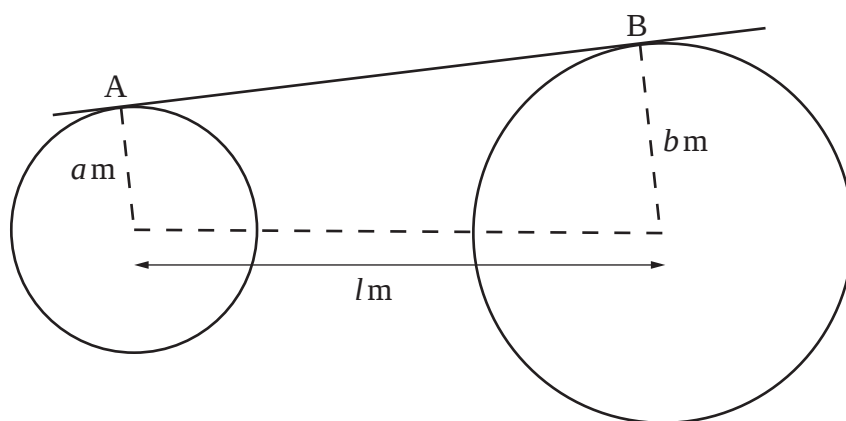
[illegible]

14(a)



14(b)

15



EXTRA ANSWER SPACE

If you need extra space use these lined pages. You must write the question numbers clearly in the margin.



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