



Oxford Cambridge and RSA

**Tuesday 7 June 2022 – Afternoon**

**A Level Mathematics B (MEI)**

**H640/01 Pure Mathematics and Mechanics**

**Printed Answer Booklet**

**Time allowed: 2 hours**



**You must have:**

- Question Paper H640/01 (inside this document)
- 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)

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Last name

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**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.

**Section A (24 marks)**

<b>1(a)</b>	
<b>1(b)</b>	
<b>2</b>	





**5(a)****5(b)**

Tension in the string =

Value of  $F$  =

**Section B (76 marks)**

<b>6(a)</b>	
<b>6(b)</b>	



<b>7(a)</b>	
<b>7(b)</b>	



<b>8(a)</b>	

<b>8(b)</b>	

<b>8(c)</b>	
<b>8(d)</b>	

<b>9(a)</b>	

<b>9(b)</b>	

9(c)


10


(answer space continued on next page)







<b>13(a)</b>	
<b>13(b)</b>	



<b>13(c)</b>	

<b>13(d)</b>	

<b>14(a)</b>	
<b>14(b)</b>	
<b>14(c)</b>	

<b>14(d)</b>	
<b>14(e)</b>	
	Time =
	Temperature =

**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).


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