



Oxford Cambridge and RSA

**Friday 17 June 2022 – Afternoon**

**A Level Further Mathematics B (MEI)**

**Y422/01 Statistics Major**

**Printed Answer Booklet**

**Time allowed: 2 hours 15 minutes**



**You must have:**

- Question Paper Y422/01 (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.

**INFORMATION**

- This document has **24** pages.

**ADVICE**

- Read each question carefully before you start your answer.

**Section A (25 marks)**

<b>1(a)</b>	
<b>1(b)</b>	
<b>1(c)</b>	
<b>1(d)</b>	

**2(a)**


**2(b)**


**2(c)**


**3(a)** $a =$  $b =$ **3(b)** $E(Y) =$  $\text{Var}(Y) =$

4(a)

4(b)

**Section B (95 marks)**

**5(a)**


**5(b)**

Temperature	20	22	24	26	28	30	32	34	36
Residual tyre pressure	-0.003	-0.002	0.004	-0.010		0.011	-0.003	0.001	


**5(c)****5(d)**

25°C =

10°C =

**5(e)**





6(b)


6(c)


6(d)


The mean of the sample =

The size of the sample =

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

7(c)	

**DO NOT WRITE IN THIS SPACE**

<b>8(a)</b>	

<b>8(b)</b>	

<b>8(c)</b>	
(answer space continued on next page)	

8(c) (continued)


8(d)


<b>9(a)</b>	
<b>9(b)</b>	
	$E(X) =$
$\text{Var}(X) =$	
<b>9(c)</b>	

<b>9(d)</b>	

<b>9(e)</b>	

**10(a)**

Expected frequency		Dietary fat intake		
		Low	Medium	High
Cholesterol level	Normal			9.0667
	High			7.9333

**10(b)**

**10(c)**

(answer space continued on next page)



<b>10(c)</b>	<b>(continued)</b>
<b>10(d)</b>	

**11(a)****11(b)****(answer space continued on next page)**

<b>11(b)</b>	<b>(continued)</b>

<b>11(c)</b>	









