Vrite your name here Surname	Other na	imes
Pearson Edexcel nternational Advanced Level	Centre Number	Candidate Number
Core Math	amatic	c C12
		3 C 1 Z
Advanced Subsidia	ry	
	ry Morning	Paper Reference WMA01/01

Candidates may use any calculator allowed by the regulations of the Joint Council for Qualifications. Calculators must not have the facility for symbolic algebra manipulation, differentiation and integration, or have retrievable mathematical formulae stored in them.

Instructions

- Use **black** ink or ball-point pen.
- If pencil is used for diagrams/sketches/graphs it must be dark (HB or B). Coloured pencils and highlighter pens must not be used.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions and ensure that your answers to parts of questions are clearly labelled.
- Answer the questions in the spaces provided
 there may be more space than you need.
- You should show sufficient working to make your methods clear. Answers without working may not gain full credit.
- When a calculator is used, the answer should be given to an appropriate degree of accuracy.

Information

- The total mark for this paper is 125.
- The marks for each question are shown in brackets
 use this as a quide as to how much time to spend on each question.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶



P51404A
©2018 Pearson Education Ltd.



1. The table below shows corresponding values of x and y for $y = \frac{1}{\sqrt{(x+1)}}$, with the values for y rounded to 3 decimal places where necessary.

х	0	3	6	9	12	15
у	1	0.5	0.378	0.316	0.277	

(a) Complete the table by giving the value of y corresponding to x = 15

(1)

(b) Use the trapezium rule with all the values of y from the completed table to find an approximate value for

$$\int_0^{15} \frac{1}{\sqrt{(x+1)}} \mathrm{d}x$$

giving your answer to 2 decimal places.

(4)	

Leave

ì	ė	۲.
1		ч
1	Ш	ш
3	_	5
1	▢	E
1	7	Ξ
ì	e	r
		7
'n	r i	m.
1	u	1
ì	÷	
3	4	-
ì	4	÷
ì	Ľ	_
ł	г	_
ì	÷	÷
	d	~
4	-	ᆕ
4	-	_
ì	ΡĖ	٠ú
ļ	ш	4
	Ŀ	÷
ł	Γ.	
7	_	=
1	▢	⊆
ũ	_	Ξ
î	2	7
ï	3	⋑
ũ		
1	H	_
3	×	ĸ.
J	С	3)
	7	_
3	2	~
1	6	-
	۷	٠.
Ì	۳	5
٦	Ŀ	ø
1	p	ď
1	Ŀ	4

/ . / .
/ . / . / .
- (:/:/:/
./-/-/.
(0)
100
- X
 Z (S)(1)(1)(1)(2)
X/14/
(1) = X 1)
X - X - X
- 7.7.7.
- XXXX
X
- C->
·×-×-
Z.N Z.N.
(·)
CONNYX.
- \\/ / \/
(1/2000/2012
- X - 💳 - X X
<. X/X/)
- / X / X
- X/2
XX.
XXXXXXX
- VV - V2
- (XXXXXX
XX (2) X/
CXX
XX ,/ .X

XXX	
$\otimes \otimes DD$	
	Γ.
$\times \times \times \times$	
< X 26 Xm2	
XX SA	×
	۲.
AAXX	х
	↶
XXX	
	r
8800	K
XX	X
	X
¥	
N N	
W.R.	
TWR	
ST W/R	
OT WE	
OT WR	
OTWR	
OT WR	
NOT WR	
NOT WR	
NOT WR	
NOTWR	
NOT WR	
NOTWE	
S MOT WR	
O NOT WR	
O NOT WR	
O NOT WR	
DO NOT WR	
DO NOT WR	
(XXXX)	
DO NOT WR	

Question 1 continued	blank
	Q1
(Total 5 marks)	



(2)

(4)

2.	$f(x) = ax^3 + 2x^2 + bx - 3$
where a and b are constants.	

When f(x) is divided by (2x - 1) the remainder is 1

(a) Show that

$$a+4b=28$$

When f(x) is divided by (x + 1) the remainder is -17

(b)	Find	the	value	of a	and	the	value	of b.

	Leave blank
Question 2 continued	
	Q2
(Total 6 marks)	



3.	3. The line l_1 passes through the points $A(-1, 4)$ and $B(5, -8)$			
	(a) Find the gradient of l_1	(2)		
	The line l_2 is perpendicular to the line l_1 and passes through the point $B(5, -8)$			
	(b) Find an equation for l_2 in the form $ax + by + c = 0$, where a , b and c are integers.	(4)		

	Leave blank
Question 3 continued	
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	Q3
(Total 6 mark	<u>s)</u>



4. Given that

$$y = \frac{64x^6}{25}, \ x > 0$$

express each of the following in the form kx^n where k and n are constants.

(a)
$$y^{-\frac{1}{2}}$$

(3)

(b)
$$(25y)^{\frac{2}{3}}$$

(2)



-
ET.
7.50
_
-
\mathbf{r}
-
7 54
-
~ ~
·Un
1
100
-
-
-
-
=
111
ш
_
100
- Alleria
Sec.
-
40.0
_
10.00
-
-
_
_
-
7
. —
1

Question 4 continued	Leave blank
(Total 5 marks)	Q4



(a) Find the first 4 terms, in ascending powers of x, of the binomial expansion of

$$\left(1+\frac{x}{3}\right)^{18}$$

giving each term in its simplest form.

(4)

(b) Use the answer to part (a) to find an estimated value for $\left(\frac{31}{30}\right)^{18}$, stating the value of x

that you have used and showing your working.	Give your estimate to 4 decimal places. (3)



uestion 5 continued	



estion 5 continued	

Question 5 continued	Leave blank
	Q5
(Total 7 marks)	



	$2\log_5(x+5) - \log_5(2x+2) = 2$	
C:		
Give your answ	ers as simplified surds.	(′
		,

		s	d	d	
1	Ę	ξ			
1	i	ı		ì	
4	Ŀ	d	Ė	ä	
1	è	٩	à	ø	
4	Ė	d	Ė		
ì	à	ø	ė	ø	
ŝ	٩	۰	ě	è	
1	ľ	A	۴	١	
ŝ	3	2	_	4	
i		3	Ξ	3	
	Ī		Г		
Ì		7		į	
ł	þ		ė	4	
	۰				
þ	ė	ŧ	ġ	þ	
4	Ġ		=		
Ĝ	i		i		
ł	Ľ	J			
å	ī		7		
4	ŀ	ę		ą	
å	ì		ė		
4	p	٩	à	ø	
1	Ė	d	Ŀ		
J	b	b	ė		
4	Ę	ξ	S	Ξ	
J	ø	ę	P	7	
1	Ĺ				
4	ľ	7		7	
-4	è	Ģ	٩	b	
J	ķ		à	ı	
9	í	Ē	=		
1	ė	٤	_	ì	
÷		ī	1		
٠,	à	ø	ė	k	
4	Ĺ	٠	Ĺ	J	
	å		S		
1	r		7	١	
J	b			٥	

Question 6 continued	Leave blank
Question o continueu	
	Q6
(Total 7 marks)	



7. A sequence is defined by $u_1 = 3$ $u_{n+1} = u_n - 5, n \ge 1$ Find the values of (a) u_2 , u_3 and u_4 **(2)** (b) u_{100} **(3) (3)**



ì		۲.	
1	7	ij	
1	ш		
Ġ	5	Ξ	
1	9	⊆	
	Ξ	2	
J	ς	L	
		7	
i	Ú	Ri.	
3	ų	·il	
ŝ	7	=	
å	٦	т.	
3	÷	=	
J	×	ė	
ŀ			
þ	÷	ø	
4	۷	_	
Ĝ		Ξ	
4	Ш	1	
å		=	
4	=	=	
å	ì	÷	
4	h	įπ	
J	н		
J	•	'n	
4	ς	⊆	
J	P	-	
1			
4	7	=	
ď	m	٩.	
4	-	J	
9	=	ė	
'n	e	_	
÷		7	
٠,	'n	iκ	
4	Ŀ	2)	
-	Z	Ξ.	
1		2	
ĕ	7	=	

Question 7 continued	Leave
	Q7
(Total 8 marks)	



(a) Show that <i>k</i> satisfies the inequality	
$k^2 - 6k + 4 > 0$	
(b) Find the exact range of possible values for k .	

ì	ė	۲.
1		ч
1	Ц	ш
3	_	5
1	▢	E
1	7	Ξ
ì	e	r
		7
'n	r i	m.
1	u	1
ì	÷	
3	4	-
ì	4	÷
ì	Ľ	_
ł	г	_
ì	÷	÷
	d	~
4	-	ᆕ
4	-	_
ì	ΡĖ	٠ú
ļ	ш	4
	Ŀ	÷
ł	Γ.	
7	_	=
1	▢	⊆
ũ	_	Ξ
î	2	7
ï	3	⋑
ũ		
1	H	_
3	×	ĸ.
J	С	3)
	7	_
3	2	~
1	6	-
	۷	٠.
Ì	۳	5
٦	Ŀ	ø
1	p	ď
1	Ŀ	4

Question 8 continued	Leave blank
	Q8
(Total 7 marks)	



9.	A cyclist aims to travel a total of 1200km over a number of days. He cycles 12km on day 1 He increases the distance that he cycles each day by 6% of the distance cycled on previous day, until he reaches the total of 1200km.	the
	(a) Show that on day 8 he cycles approximately 18km.	(3)
	He reaches his total of $1200 \mathrm{km}$ on day N , where N is a positive integer.	
	(b) Find the value of N .	(4)
	The cyclist stops when he reaches 1200km.	
	(c) Find the distance that he cycles on day <i>N</i> . Give your answer to the nearest km.	(2)

	blank
Question 9 continued	Olalik
Question 9 continued	



estion 9 continued	

	ì	فح	۴
	7	7	G,
	1	Ш	Ы
	ď	Ξ	Ξ
	1	▢	⊏
	1	7	Ξ
	ì	c	г
۰			7
	ì	ri	m.
۰	1	υ	· JJ
	þ		
۰	3	٩	_
	ì	4	H
	ì	ш	_
	1	г	
٠	b	_	÷
	í	è	_
	c	-	Ξ
	c	7	=
۰	ì	Ιì	٠Ú
	3	н	щ
۰	1	H	_
	3	<u>. </u>	
	Ĝ	_	=
	1		⊑
	þ	6	_
	1	E	=
	J	õ	₹.
	á	í.	
	J	۳	=
	å	'n	٩.
	J	L	از
	4	~	=
	ú	d	_
	ļ	7	7
	٠,	ä	Ė.
	4	į.	3
		Z	₹.
	4	r	٦
	J	=	4
			٠.

Question 9 continued	Leave
	Q9
(Total 9 marks)	



10.

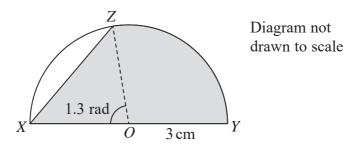


Figure 1

Figure 1 shows a semicircle with centre O and radius 3 cm. XY is the diameter of this semicircle. The point Z is on the circumference such that angle XOZ = 1.3 radians. The shaded region enclosed by the chord XZ, the arc ZY and the diameter XY is a template for a badge.

Find, giving each answer to 3 significant figures,

(a) the length of the chord XZ,

(2)

(b) the perimeter of the template XZYX,

(4)

(c) the area of the template.

(4)



	Leave
	blank
Question 10 continued	
4	



estion 10 continued	

Leave

Question 10 continued	blank
	Q10
(Total 10 marks)	
(Total To marks)	



11. The curve C has equation y = f(x), x > 0, where

$$f'(x) = \frac{5x^2 + 4}{2\sqrt{x}} - 5$$

It is given that the point P(4, 14) lies on C.

(a) Find f(x), writing each term in a simplified form.

(6)

(b) Find the equation of the tangent to C at the point P, giving your answer in the form y = mx + c, where m and c are constants.

(4)

28

] 1
uestion 11 continued	



	Leave
Question 11 continued	blank
Question 11 continued	

ì		۴	
7	7	Ni.	
1	ш	Ы	
Ġ	5	Ξ	
1	▢	⊆	
1	-	=	
I	c	E	
		7	
ì		Ri.	
J	u,	·	
9	-	=	
ŀ	٦	=	
Ì	4	÷	
J	H	÷	
ŀ	١.		
ź	۰,	90	
4	2	_	
Ĝ	-	Ξ	
1	ì	1	
ä		=	
J	×	=	
å	È	÷	
4	n	įπ	
J		Ė	
ļ	-	'n	
4	⋖	⊆	
J	ø	-	
1			
4	F	=	
ď	je	٩.	
4	Ŀ	J	
9	=	ė	
'n	2	_	
÷		7	
٠,	'n	iκ	
4	Ŀ	2)	
-		Ξ.	
1	ŗ.	2	
J	-	=	

/ J	۰,	٨.	
1		7	9
- 21	и	и	Г
/ J		ш	ı
1	4	⋍	í.
- 21	п	0	7
/ 3	-	-	ļ
٧.	/_	ы	ı
-24		TD	ζ
	7	9	ı
×.	/	×	
-x		-	
2 J	М	n	١
1	~	V	,
-24			í
/ 4	-	6	i
1	Z	↸	
- 24	-	н	í
/ 4			
ХΙ	~	_	
- 21	г		ζ
/ -	Ż	۲.	
1	ź	=	ı
- X	-4	9	5
Ġ	6	ú	ı
Α.	_	_	ı
- 25	_	7	5
/ ·	\sim	٥.	
×I	и	N	l
- 21			Į
4 4			
×I	_	×	۱
- 74	٠.	1	5
/ ii	-	-	ŀ
×	A	2	I,
- 21	ш	\mathbb{C}^2	
(ž	- 7		5
×J		×	
- 74	ø	÷	ĸ,
03	7		ŕ
×J	e	$\overline{}$	
\sim	ď.		
CИ	Ľ	_	4
ΧI	_	木	5
_	4	×	
~ 1	n	3	ľ
ΧI	ĸ	м	ŧ.
·/``	₹"	7	
C)#	7		ì
×	ы	К	į
√/I	ę	7	Þ
	×		
×	íα	ĸ.	J
<u>√/</u> ا	Κ.	7	ì
O.	×	ы	P
X	=	Z.	

				. 7	
2	V	V	Ŋ	٦,	2
>	\circ	♡	K.	Χ	\geq
1				×.	
ς	Λ	×	×	2	ς
	×	×		\rightarrow	
2	V	V	×,	Χ	2
\rightarrow			ĸ.	×	≥
1	A	a	е	r	
		×	$\overline{}$	9	ĸ
<	×	M	Ŋπ	ĤΙ	ľ
2	\bigcirc	S	ы	ы	P
\rangle		Q	ĸ	ú	ò
1	$^{\sim}$	4	2	2	
<	×	×	Ä	7	
	×	M	ы	Б	
2	\bigcirc	C	-0	٩,	₽
\rightarrow			ĸ.	×	>
5	X	ă	Vă	Ri	
	×	×	w	я	ĸ
2	\vee	S	Σ.	×	2
>		<:	=	K	⊳
S		~	ΧI	×	5
≺	×	X	ď		ĸ
1	×	M		2	
2	V	SI	N	7	
>	$^{\circ}$	C.	KO	×	>
Κ	Х	×	×	-	ĸ
		X	2	7	
7	×	M	Ž	9	ν
2	\circ	S	4	Š	Ķ
>	\circ		ă	×	
ς	Α	21	и	Ы	Ь.
		K			ĸ
2	0	Si	K	S	
ζ	8	a	K	Ě	6
ξ	8	Į	X	Š	5
Ş	8		X	Š	5
3	× × ×			Š	
3	8	8			
3				X 2 2	
3					
			② 区 マ マ マ マ マ マ マ マ マ マ マ マ マ マ マ マ マ マ		

Question 11 continued	Leave
Question 11 continued	
	Q11
(Total 10 marks)	
· · · · · · · · · · · · · · · · · · ·	



12. [In this question solutions based entirely on graphical or numerical methods are not acceptable.]

(i) Solve for $0 \le x < 360^\circ$,

$$5\sin(x+65^\circ)+2=0$$

giving your answers in degrees to one decimal place.

(4)

(ii) Find, for $0 \le \theta < 2\pi$, all the solutions of

$$12\sin^2\theta + \cos\theta = 6$$

giving your answers in radians to 3 significant figures.

(6)

Question 12 continued	Leave blank



estion 12 continued	

Leave

	ĵ	e	ė	۴	7
۰	Ī	3	7	9	9
	1	Ŀ		ŀ	ı
۰	Ĵ	à	5	ä	ā
	J	Ŀ	a	E	
	į,	٤	á	à	ø
	ŀ	5	Ę	Ļ	
	1	Ľ	A	Р	١
	í	3	3	-	ĭ
	ń	Ξ	3	Ξ	ä
	i	_			Ξ
	ń	ī	7		7
	1	P		•	•
	ì	_	•		_
	ď	Ξ	2	7	,
	4	Ŧ		Ŧ	=
	4				•
۰	ì	r	i	۰	i
	1	þ	d	H	ı
۰	1	ŀ	ė		ė
	1	4		ė	i
	d	å	6	à	ø
]	Ŀ	d	E	
	J	4	•	ė	
	1	Ę	ξ	Ξ	Ξ
	J	ø	ę	•	7
	1	Ĺ			-
	4	r	7	7	7
	1	ŕ	q	٦	١
	-3	9	e	ø	P
	1	ŧ	3	3	P
	1	É	S	Ė	á
					٠
	j	f	p	9	Ñ
	7	٩	ė	ø	r
	ŭ	ø	۹	۹	Ň
	1	b	į		į

	3	9		ь	
1	ú	۲.		ī	2
1		и	В.	А	
	я	=	,		в.
	î	4	Δ	ú	ı,
		г	r	2	
Λ.	J				
1		1	∠	ä	
	d	Ю		n	
×	9	۰,		ĸ.	
		2		7	٩.
	2	٠.		1	
×	ĺ	к.			
	4		y.	1	
×	Ź	_			
1	9	•	-	۳	٥,
٠.	ä	è	ú		
×			г		
	Ý	-	ь	a	ĸ
Ζ.	S		7		
Υ.		и	_	_	
		_	-	7	
×	۰	٩	1		7
√.	į	_	\sim	_	
	z	_			ν
×	ì	2	5	Z	
	4	7	₹	-	۰
^	å				ν
		1	٠,		
		٠,	۷	'n	
х		ľΙ	Р	ч	ν
2	9	,	=	,	В,
c.					
×					
	٩	,		2	
1	ì				r
Υ.	ı	4	Δ	ú	٤,
		ď	۲	7	
/	١				
	'n	~			
		7			
	1				
	j	2			r
Λ	J		7		7
1	3	ď	١.		
		╚	∠	_	
х		_	7	₹	
1	3	ш	-	2	
	4	r	7		ν
	٩	K	2		
		9		7	
1.	ä	_	×	-	ŕ
V	7	Z		P	٠.
	d		c	4	ć
	đ	₹	7	۰	
v		2	2		
$^{\wedge}$	d		н	ь	/
		K		4	
	ą	ŭ	6	d	۲
×		s		S	1
1	Ί	۳	7		
		\Box		3	ľ
	я	ø	=	ø	

(XXXX)	
$\triangle \triangle \triangle \triangle$	2
$\times \times \times$	>
$\times \times $	>
$\sim\sim$	ς
$\langle \times \times \rangle$	
∞	
XXXX	2
\times	
$\times \times \times \times$	⊳
	۲
	K
CODIN	ľ
XX	
11	ò
VV 22	
∞	
	ν
$\times \times \times$	>
<u> </u>	Ø
	К,
0000	C
223	ď
XXXIX	>
	Ŋ
	Ś
	7
222	P
	v
$\times \times \sim$	ò
ÖÖÖÖ	2
XXXX	ŀ
XX	ξ
VRITE	
WRITE	
WRITE	
NVRITE	
TWRITE	
TWRITE	
OT WRITE	
OTWRITE	
NOTWRITE	
NOT WRITE	
NOTWRITE	
MOTWRITE	
3 NOT WRITE	
O NOT WRITE	
O NOT WRITE	
DO NOT WRITE	
VR THE	

Question 12 continued	blank
Question 12 continued	
	Q12
(Total 10 manula)	
(Total 10 marks)	



13. The point $A(9, -13)$ lies on a circle C with centre the origin and radius r .	
(a) Find the exact value of r .	(2)
	(2)
(b) Find an equation of the circle <i>C</i> .	(1)
A straight line through point A has equation $2y + 3x = k$, where k is a constant.	` ,
(c) Find the value of k .	(1)
This straight line cuts the circle again at the point <i>B</i> .	
(d) Find the exact coordinates of point B.	
(d) This the exact coordinates of point B.	(6)



estion 13 continued	· 12 · · 1	
	nestion 13 continued	
I I		



estion 13 continued	

Question 13 continued	blank
	Q13
	Q15
(Total 10 marks)	



Leave blank

14.

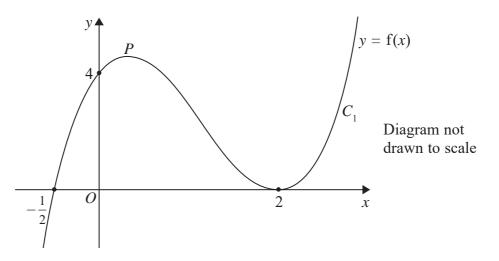


Figure 2

Figure 2 shows a sketch of the curve C_1 with equation y = f(x) where

$$f(x) = (x-2)^2(2x+1), x \in \mathbb{R}$$

The curve crosses the *x*-axis at $\left(-\frac{1}{2}, 0\right)$, touches it at (2, 0) and crosses the *y*-axis at (0, 4). There is a maximum turning point at the point marked *P*.

(a) Use f'(x) to find the exact coordinates of the turning point P.

(7)

A second curve C_2 has equation y = f(x + 1).

(b) Write down an equation of the curve C_2 You may leave your equation in a factorised form.

(1)

(c) Use your answer to part (b) to find the coordinates of the point where the curve C_2 meets the y-axis.

(2)

(d) Write down the coordinates of the two turning points on the curve C_2

(2)

(e) Sketch the curve C_2 , with equation y = f(x + 1), giving the coordinates of the points where the curve crosses or touches the x-axis.

(3)



	Leave
	blank
Question 14 continued	
Question 14 Continued	



estion 14 continued	

Leave blank Question 14 continued Q14 (Total 15 marks)



Leave blank

15.

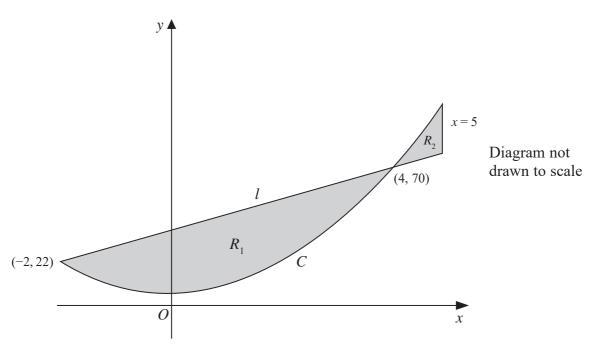


Figure 3

A design for a logo consists of two finite regions R_1 and R_2 , shown shaded in Figure 3.

The region R_1 is bounded by the straight line l and the curve C.

The region R_2 is bounded by the straight line l, the curve C and the line with equation x = 5

The line *l* has equation y = 8x + 38

The curve C has equation $y = 4x^2 + 6$

Given that the line l meets the curve C at the points (-2, 22) and (4, 70), use integration to find

(a) the area of the larger lower region, labelled R_1

(6)

(b) the exact value of the total area of the two shaded regions.

(3)

Given that

$$\frac{\text{Area of } R_1}{\text{Area of } R_2} = k$$

(c) find the value of k.

(1)

estion 15 continued	



estion 15 continued	

	blank
O	Dialik
Question 15 continued	



Q15 (Total 10 marks) TOTAL FOR PAPER: 125 MARKS END	Question 15 continued	Leave blank
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS	Question 15 continued	
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
(Total 10 marks) TOTAL FOR PAPER: 125 MARKS		
TOTAL FOR PAPER: 125 MARKS		Q15
TOTAL FOR PAPER: 125 MARKS	(Total 1	10 marks)