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**COMMERCIAL STUDIES****7101/22**

Paper 2 Arithmetic

**October/November 2017**

MARK SCHEME

Maximum Mark: 100

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**Published**

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## Section A

Question	Answer	Marks	Guidance
1(a)	929.5	2	<b>M1</b> $650 \times 143 / 100$
1(b)	-36	2	<b>M1</b> 42 seen
1(c)	$2 \frac{44}{59}$	3	<b>M2</b> $\frac{162}{59}$ or <b>M1</b> $2\frac{1}{4}$ or $\frac{9}{4}$ <b>M1</b> $\frac{59}{72}$

Question	Answer	Marks	Guidance
2(a)	985.8(0)	7	<b>M1</b> $0.2 / 100$ <b>M1</b> $\times 285\,000$ (= 570) <b>M1</b> $14 / 1000$ <b>M1</b> $\times 35\,000$ (= 490) <b>M1</b> '570' + '490' (= 1060) <b>M1</b> '1060' $\times 0.93$
2(b)	275	3	<b>M1</b> 200 235 260 275 280 290 310 <b>M1</b> $(7 + 1) / 2$ th value

Question	Answer	Marks	Guidance
3	A by 8.48	9	<b>M1</b> $800 \times 0.78$ <b>M1</b> '624' $\times 0.93$ <b>A1</b> 580.32 <b>M1</b> $800 \times 0.8$ <b>M1</b> '640' $\times 0.92$ <b>A1</b> 588.8(0) <b>M1</b> '588.80' – '580.32' <b>A1ft</b> for wholesaler <b>A1</b> 8.48

Question	Answer	Marks	Guidance
4	14374.5(0)	4	<b>M1</b> $21\,000 \times 0.8$ (= 16 800) <b>M1</b> '16 800' $\times 0.925$ (= 15 540) <b>M1</b> '15 540' $\times 0.925$

Question	Answer	Marks	Guidance
5(a)	70	4	<b>M1</b> $8 + 5 + 2$ (= 15) <b>M1</b> $210 / '15'$ (= 14) <b>M1</b> $5 \times '14'$
5(b)	5	6	<b>B1</b> 7.5 oe seen <b>M1</b> $6 \times '7.5'$ (= 45) <b>B1</b> 2.25 oe seen <b>M1</b> '2.25' $\div '45'$ <b>M1</b> $\times 100$
5(c)	41.85	3	<b>M1</b> $12.4 \times 1\frac{1}{2}$ (= 18.6) <b>M1</b> '18.6' $\times '2.25'$
5(d)	880	3	<b>M1</b> $920 \div 184$ <b>M1</b> $\times 176$ or <b>M1</b> $176 / 184$ <b>M1</b> $\times 920$

Question	Answer	Marks	Guidance
6(a)	correct bar chart	5	<b>M3</b> 5 correct heights –1 eeo <b>M1</b> bars equal width <b>M1</b> correct labels in correct place
6(b)	20	3	<b>B1</b> 30 000 <b>M1</b> (6000 / '30 000') × 100

Question	Answer	Marks	Guidance
7(a)	18:20	4	<b>M1</b> 16:10 + 8:10 <b>A1</b> 24:20 or 00:20 <b>M1</b> 24:20 – 6(:00)
7(b)	3836	2	<b>M1</b> 2800 × 1.37
7(c)	922.5(0)	3	<b>M1</b> 1260 ÷ 1.344 (= 937.5) <b>M1</b> '937.5' × 0.984

Question	Answer	Marks	Guidance
8(a)	15	5	<b>M1</b> 8200 × 0.14 (= 1148) <b>M1</b> '1148' – 975.80 (= 172.20) <b>M1</b> '172.20' ÷ '1148' <b>M1</b> × 100
8(b)	3690	3	<b>M1</b> 8200 ÷ 100 <b>M1</b> × 45
8(c)	3.3(0)	5	<b>M1</b> 8200 × 1.25 (= 10 250) <b>M1</b> '10 250' × 118.8 / 100 <b>A1</b> 12 177) <b>M1</b> '12 177' ÷ <b>8(b)</b>

## Section B

Question	Answer	Marks	Guidance
9(a)	10h 46m	5	<b>M1</b> $861 \div 80 (= 10.7625)$ <b>M1</b> '10.7625' – 10 <b>M1</b> $0.7625 \times 60$ <b>A1</b> 45.75 <b>B1</b> correct rounding to nearest minute
9(b)	17	7	<b>M1</b> $342 \times 100 (= 34\,200)$ <b>M1</b> $173.25 \times 8 (= 1386)$
			<b>M1</b> $41\,400 - '1386' (= 40\,014)$ <b>M1</b> '40 014' $\div 342$ <b>A1</b> 117 <b>M1</b> '117' – 100
			<b>M1</b> $41\,400 - 34\,200$ <b>M1</b> $7200 - 1386$ <b>A1</b> 5814 <b>M1</b> '5814' $\div 342$

Question	Answer	Marks	Guidance
10(a)(i)	40	1	
10(a)(ii)	20	1	
10(a)(iii)	4	1	
10(a)(iv)	20	1	
10(b)	20160	8	<b>M1</b> $1575 \times 19 (- 29\,925)$ <b>M1</b> '29 925' – 8200 (= 21 725) <b>M1</b> '21 725' – 11 400 (= 10 325) <b>M1</b> – 5000 (= 5325) <b>M1</b> '5325' $\times 0.8 (= 4260)$ <b>M1</b> $5000 \times 0.9 (= 4500)$ <b>M1</b> $11\,400 + '4500' + '4260'$

Question	Answer	Marks	Guidance
11(a)	200 000	4	<b>M1</b> $68\,000 - 31\,500 (= 36\,500)$ <b>M1</b> $12\,775 \div '36\,500' (= 0.35)$ <b>M1</b> $70\,000 \div '0.35'$
11(b)	14 600	5	<b>M1</b> $36\,500 - 12\,775 (= 23\,725)$ <b>M1</b> $8 + 5 (= 13)$ <b>M1</b> $23\,725 \div 13 (= 1825)$ <b>M1</b> '1825' $\times 8$
11(c)	340 000	3	<b>M1</b> $27\,200 \div 8$ <b>M1</b> $\times 100$

Question	Answer	Marks	Guidance
12(a)	20 746.15	7	<b>M1</b> $22\,500 \times 105 (= 2\,362\,500)$ <b>M1</b> $90 \times 18\,700$ <b>M1</b> '2 362 500' + '1 683 000' (= 4 045 500) <b>M1</b> $105 + 90$ <b>M1</b> '4 045 500' $\div '195'$ <b>A1</b> 20 746.153(85..) <b>B1</b> correct rounding to nearest cent
12(b)(i)	Red	1	
12(b)(ii)	50	4	<b>M1</b> $\Sigma f (= 2520)$ <b>M1</b> $350 \div '2520'$ <b>M1</b> $\times 360$