Finance Problems

Mark Scheme 5

Level	IGCSE
Subject	Maths (0580)
Exam Board	Cambridge International Examinations (CIE)
Paper Type	Extended
Topic	Number
Sub-Topic	Finance Problems
Booklet	Mark Scheme 5

Time Allowed: **53 minutes**

Score: **/44**

Percentage: **/100**

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	60%	45%	35%	25%	<25%

1	**(a) (i)**	12 45 [pm]	**2**	**B1** for 20 45 seen or 8 45 pm seen or [0]1 35 seen
	(ii)	788 or 787.8 to 788.1	**2**	**M1** for 8800 ÷ 11h 10 mins oe
	(b) (i)	4230[.00]	**2**	**M1** for 2350 ÷ 5 oe
	(ii)	22.2 or 22.2…	**1**	
	(c) (i)	3808 final answer	**2**	**M1** for $2240 \times \frac{100+70}{100}$ oe
	(ii)	800	**3**	**M2** for $2240 \div \frac{100+180}{100}$ oe or **M1** for 2240 associated with 280%
	(d) (i)	1130	**4**	**M3** for (826.5[0] – 12 × (28 + 6.5[0])) ÷ 1.25 seen or **M2** for 826.5[0] – 12 × (28 + 6.5[0]) seen or **M1** for 12 × (28 + 6.5[0]) seen
	(ii)	$146.9[0] final answer	**2FT**	*their*(d)(i) × 0.13 correctly evaluated If answer not exact to at least 3 sf or better **M1** for *their* (d)(i) ÷ 10 × 1.3

2	**(a) (i)**	36 600	**3**	**M2** for 6100 ÷ 2 × (2 + 7 + 3) oe or **M1** for 6100 ÷ 2 soi
	(ii)	$16\frac{2}{3}$ or 16.7 [16.66 to 16.67]	**1**	
	(b)	1 231 708 final answer nfww	**5**	**M4** for 5964 × 15 + 28400 × 35 + 8236 × 18 or **M3** for 5964 × 15 **and** 28 400 × 35 or for 5964 × 15 + 42 600 × *their* decimal $\frac{2}{3}$ × 35 + (42 600 – 5964 – 42 600 × *their* decimal $\frac{2}{3}$) × 18 or **M2** for 5964 × 15 **or** 28 400 × 35 or for 42 600 × *their* decimal $\frac{2}{3}$ × 35 or **M1** for 0.14 × 42 600 or 42 600 ÷ 3 × 2
	(c)	27.2[0] nfww	**5**	**M** for 23.80 ÷ 0.7 oe or **M1** for 23.80 associated with 70% oe and **M2** for *their* (23.80 ÷ 0.7) × 0.8 or **M1** for *their* (23.80 ÷ 0.7) × 0.2

3	**(a) (i)**	$x \geqslant 100$ final answer	**1**	
	(ii)	$y \geqslant 120$ final answer	**1**	
	(iii)	$x + y \leqslant 300$ final answer	**1**	
	(iv)	$40x + 80y \geqslant 16000$ or $0.4x + 0.8y \geqslant 160$	**M1**	with no errors seen but isw substitution of values after correct inequality
	(b)	$x = 100$ ruled	**B1**	
		$y = 120$ ruled	**B1**	
		$x + y = 300$ ruled	**B1**	
		$x + 2y = 400$ ruled	**B2**	Allow **B1** for line with negative gradient passing through (400, 0) or (0, 200) when extended
		Correct shading	**B1**	Dep on all previous marks earned Condone any clear indication of the required region
	(c)	200	**2**	**M** for $x = 100$ and $y = 200$ selected or for $x \times 0.4 + y \times 0.8$ oe evaluated where (x, y) is an integer point in *their* [unshaded] region