Finance Problems

Mark Scheme 3

Level	IGCSE
Subject	Maths (0580)
Exam Board	Cambridge International Examinations (CIE)
Paper Type	Extended
Topic	Number
Sub-Topic	Finance Problems
Booklet	Mark Scheme 3

Time Allowed: 65   minutes

Score: /54

Percentage: /100

Grade Boundaries:

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

1	(a)	2814 final answer	2	**M1** for 2345 ÷ 5 soi by 469 or ans = 2810
	(b)	257.95 final answer	2	**M1** for 2345 × 0.11 oe or ans = 258
	(c) (i)	280.5[0] final answer	2	**M1** for 330 × (1 – 0.15) oe or ans = 281
	(ii)	375		**M2** for 330 ÷ (1 – 0.12) oe Or **M1** for 330 = (100 – 12)% oe
	(d)	1605.89 or 1605.9[0]	3	**M2** for 1500 × $(1 + 0.023)^3$ oe soi by 1605.898751 or 1500 × 1.07(05…) Or **M1** for 1500 × $(1 + 0.023)^2$ oe
	(e)	23.1 or 23.07 to 23.08	3	**M2** for $\dfrac{325 - 250}{325} \times 100$ oe Or **M1** for $\dfrac{325 - 250}{325}$ soi by 0.2307… 3sf or better or $\dfrac{250}{325} \times 100$ soi by 76.9… oe

2	96	**2**	**M1** for $\dfrac{600 \times 2 \times 8}{100}$ oe If zero **SC1** 696

3	843.75	**3**	**M2** for $\dfrac{750 \times 5 \times 2.5}{100} + 750$ oe **or M1** for $\dfrac{750 \times 5 \times 2.5}{100}$ oe **or SC2** for answer 93.75

4	120	**2**	**M1** for $\dfrac{750 \times 2 \times 8}{100}$ oe seen or **SC1** 870 as final answer

5	**(a)**	1134	**3**	**M2** for $\dfrac{504}{12} \times (12 + 7 + 8)$ soi by answer of 1130 or **B1** for 27 or 42 or 294 or 336 seen
	(b) (i)	468.72	**3**	**M2** for $\dfrac{93}{100} \times 504$ oe soi by 468.7 or 469 or **M1** for $\dfrac{7}{100} \times 504$ (implied by 35.28)
	(ii)	84	**3**	**M2** for $\dfrac{64.68}{77} \times 100$ or **M1** for $(100 - 23)\% = 64.68$
	(c)	262.19 cao	**3**	**M2** for 250×1.016^3 oe implied by answer 262.2 or better or **M1** for 250×1.016^n oe $n > 2$ seen
	(d)	12.5%	**3**	**M2** for $\dfrac{324 - 288}{288} \times 100$ or **M1** for $\dfrac{324}{288} \times 100$ (112.5) or $\dfrac{36}{288}$ (0.125)

6	(a)	(i)	14.62 final answer	3	**M2** for $0.85 \times 20 \times 0.86$ oe soi by 14.6(0) or **M1** for 0.85×20 soi by 17 or 0.85×0.86 soi by 0.731
		(ii)	20 www	3	**M** for $16.40 / 0.82$ oe or **M1** for 16.40 associated with 82%
		(iii)	135 www	2	**M1** for $(108 \times 5)/4$
	(b)		$c + 4d = 27.10$ oe	**B1**	Could use other variables but must be consistent
			$c + 7d = 34.30$ oe	**B1**	
			Elimination of one variable	**M1**	for correct elimination of one variable from their equations – condone 1 arithmetic slip
			$(c =)$ 17.5(0) and $(d =)$ 2.4(0)	**A1**	Correct answers from no working scores **SC1** only
	(c)		36 cao	3	**B1** for 7h 30 min or 7.5 or 450 (mins) seen and **M1** for $270/t$ where $7 \le t \le 9$
	(d)		606.744 or 606.74 or 606.7(0) or 607	2	**M** for $540 \times (1.06)^2$ oe but not $(1 + 6\%)^2$ unless recovers For step by step method, must see 572.4(0) and a correct method for the second year **M0** if any further addition or subtraction