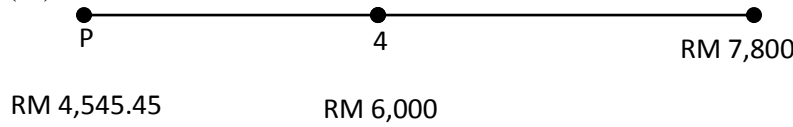


No	Answer	Marks
1	<p>(a) $\log_6 2 = \log_6 \left(\frac{6}{3}\right)$ $= \log_6 6 - \log_6 3$ $= 1 - 0.61315$ $= 0.38685$</p> <p>(b) $\log_4 (x^2 + 3x) - \log_4 (x + 5) = 1$ $\log_4 \frac{x^2 + 3x}{x + 5} = 1$ $\frac{x^2 + 3x}{x + 5} = 4^1$ $x^2 + 3x = 4(x + 5)$ $x^2 + 3x = 4x + 20$ $x^2 + 3x - 4x - 20 = 0$ $x^2 - x - 20 = 0$ $(x - 5)(x + 4) = 0$ $x = 5$ and $x = -4$</p>	<p>M1 M1 M1 A1</p> <p>M1 M1</p> <p>M1</p> <p>A1A1</p>
		9 Marks
2	<p>(a) $P = \text{RM } 4,000$ $I = \text{RM } 300$ $t = 3$ years</p> <p>(i) $I = Prt$ $300 = (4,000) r (3)$ $r = \frac{300}{12000}$ $r = \frac{1}{40} = 0.025 = 2.5\%$</p> <p>(ii) $I = Prt$ $= (15,000)(2.5\%) \left(\frac{8}{12}\right)$ $= (15,000)(0.025)(0.667)$ $= 250$</p>	<p>M1 M1</p> <p>A1</p> <p>M1 M1</p> <p>A1</p>
		6 Marks
2	<p>(b) (i) $S = P + Prt$ $= P(1 + rt)$</p>	<p>M1 M1</p>



	$6000 = P(1 + (0.08)(4))$ $P = \frac{6000}{1 + 0.32}$ $P = \text{RM}4,545,45$ <p>(iii)</p>  $S = P + Prt$ $= P(1 + rt)$ $7,800 = 4,545,45(1 + (0.08)(t))$ $1.716 = 1 + 0.08t$ $t = 8.95 - 4$ $t = 4.95 \text{ years}$	<p>A1</p> <p>M1M1</p> <p>A1</p> <p>M1</p> <p>A1</p>
		8 Marks
3	<p>(a) $P = 25,000$</p> <p>$i_1 = 0.12 \quad a = 2 \quad n = 2$</p> <p>$i_2 = 0.1 \quad a = 4 \quad n = 2 + \frac{9}{12}$</p> $S_1 = P \left(1 + \frac{1}{a} \right)^{nxa}$ $= 25,000 \left(1 + \frac{0.12}{2} \right)^{2 \times 2}$ $= \text{RM}31,561.92$ $S_2 = P \left(1 + \frac{1}{a} \right)^{nxa}$ $= 31,561 \left(1 + \frac{0.1}{4} \right)^{\left(2 + \frac{9}{12} \right) (4)}$ $= \text{RM}41,411.97$	<p>M1</p> <p>A1</p> <p>A1</p> <p>M1</p> <p>M1M1</p> <p>A1</p>
		7 Marks
	<p>(b) $S_{AAA} = 8000 \left(1 + \frac{0.037}{2} \right)^2$</p> $= 8,298.74$	<p>M1</p> <p>A1</p>



	$S_{\text{BBB}} = 8,000 \left(1 + \frac{0.0375}{1} \right)^1$ $= 8,300.00$ <p>Allan should choose Bank BBB because the future value of investment is higher than Bank AAA.</p>	M1 A1 A1 A1
		6 Marks
	<p>(c) $S = Pe^{rt}$</p> $1,500 = 800e^{(0.06)(t)}$ $1,500 = 800e^{0.06t}$ $e^{0.06t} = 1.875$ $\ln e^{0.06t} = \ln 1.875$ $(0.06t) \ln e = \ln 1.875$ $0.06t = \ln 1.875$ $t = 10.4768$	M1 M1 M1 A1
		4 Marks

