PART A

QUESTION	SOLUTION	MARKS
1	20-29 Feb 9 1-31 March 31 1-30 Apr 30 1-31 Mei 31 1-15 Jun 15 116 days ✓✓ $S = P(1+rt)$ ✓ $= 6{,}000\left[1+(0.08)\left(\frac{116}{360}\right)\right]$ ✓✓✓✓✓✓ $= RM6{,}154.67$ ✓✓	5
2	$H = S(1-dt)$ ✓✓ $3{,}500 = S\left[1-(0.085)\left(\frac{200}{360}\right)\right]$ ✓✓✓✓✓✓ $S = RM3{,}673.47$ ✓✓	5
3	$S = 64555.53$; $P = 40000$; $m = 4$; $k = 0.055$; $S = P(1+i)^n$ ✓ $64555.53 = 40000\left(1+\frac{0.055}{4}\right)^{4t}$ ✓✓✓✓✓✓ $\frac{64555.53}{40000} = (1.01375)^{4t}$ $\log\left(\frac{64555.53}{40000}\right) = \log(1.01375)^{4t}$ ✓✓ $t = 8.8$ years or 8.76 years ✓✓	5

4	R = 677; m = 12; k = 0.066; t = 8 Balance to be settled is (8 x 12) – 66 = 30 months ✓✓ $A_{30} = R\left[\frac{1-(1+i)^{-n}}{i}\right]$ ✓ $A_{30} = 677\left[\frac{1-\left(1+\frac{0.066}{12}\right)^{-(30)}}{\frac{0.066}{12}}\right]$ ✓✓✓✓✓ $= RM18675.71$ ✓✓	**5**
5	DP = 10% x 350000 = 35000 ✓✓ B = RM350,000 – 35,000 = RM315,000 ✓✓ I = Brt ✓✓ I = (315,000)(0.045)(9) ✓✓ = RM127,575 ✓✓	**5**
6	NP = L – D = 850 – 244.35 = RM605.65 ✓✓ $NP = L(1-d_1)(1-d_2)$ ✓✓ 605.65 = 850(1 – 0.25)(1 – x) ✓✓✓✓ x = 5% ✓✓	**5**

7	$S = C + M$ ✓ $S = 3000 + 0.45S$ ✓✓✓✓✓ $S - 0.45S = 3000$ ✓✓ $0.55S = 3000$ ✓ $S = \frac{3000}{0.55}$ ✓ RM X = S = RM5454.55 ✓✓	5
8	C=RM120,000 S=RM50,000 , n=8 $r = 1 - \sqrt[n]{\frac{S}{C}}$ $r = 1 - \sqrt[8]{\frac{50000}{120000}}$ ✓✓✓ $r = 1 - 0.89634$ ✓ $r = 0.103658$ ✓ $BV_4 = C(1-r)^n$ $BV_4 = 120000(1-0.10366)^4$ ✓✓✓ $BV_4 = \text{RM}77459.08$ ✓✓	5
TOTAL MARKS (PART A) = 40 MARKS		

PART B		
QUESTION	**SOLUTION**	**MARKS**
1a)		
	i) Single discount equivalent to trade discount given PLO 1 $d = [1-(1-d_1)(1-d_2)]$ ✓✓ $d = [1-(1-0.12)(1-0.08)]$ ✓✓ $= 19.04\%$ ✓✓	**3**
	ii) Last day to receive 5% cash discount PLO 1 Invoice date +15 days✓✓ 12/11/2019 + 15 days = 27/11/2019✓✓	**2**
	iii) Amount to be paid on 25 November 2019 PLO 1 Payment on 25/11/2019 entitle to get 5% cash discount✓✓ NetPayment = LP(1 - d1)(1 - d2) ✓ NetPayment = [150 * 75](1 - 0.1904)(1 - 0.05) ✓✓✓ NetPayment = RM8652.60 ✓✓	**4**
1b)		
	i) SP for a pen = $\frac{150}{20}$ = RM7.50 ✓✓ PLO 1 SP = C + OE + NP ✓✓ 7.5 = C + 2.3 + 0.3C ✓✓✓✓✓✓ 1.3C = 5.2 C = RM4 ✓✓	**6**
	ii) BEP = C + OE ✓✓ = 4 + 2.3 ✓ PLO 3 = RM6.30 per pen ✓ BEP for a box = 6.3 x 20 = RM126 ✓✓ Therefore, NP = New SP – BEP = 120 – 126 ✓✓ = – RM6 (loss) ✓✓	**5**
TOTAL MARKS (Q1) = 20 MARKS		

2a) PLO 3	3 Jun 2018 – 30 Jun 2018 = 27 ✓ Jul = 31 Aug = 31 1 Sept 2018 – 11 Sept 2018 = 11✓ 100 ✓ Discounted term = 100 – 55 = 45 days ✓ $Pr = S(1-dt)$ ✓✓ $7500 = S\left(1-0.07\times\frac{45}{360}\right)$ ✓✓✓✓✓✓ $S = RM7566.20$ ✓✓	6
2b) PLO 3	Next 4.5 years $S = P(1+i)^n$ ✓✓ $5949.60 = P\left(1+\frac{0.0415}{4}\right)^{(4.5\times4)}$ ✓✓✓✓✓✓ $P = RM4940.84$ ✓✓ First 2.5 years $S = P(1+i)^n$ ✓✓ $4940.84 = X\left(1+\frac{0.0375}{6}\right)^{(2.5\times6)}$ ✓✓✓✓✓✓ $X = RM4500$ ✓✓	8

2c) PLO1	$BV_5 = C - AD_5$ ✓✓ $90{,}000 = 150{,}000 - 5\left(\frac{150{,}000-S}{10}\right)$ ✓✓✓✓✓✓ $90{,}000 = 150{,}000 - 75{,}000 + \frac{S}{2}$ ✓✓ $\frac{S}{2} = 15000$ ✓ S = RM30,000 ✓ Or $AD = \frac{150{,}000 - 90{,}000}{5} = RM12{,}000$ ✓✓✓✓ $S = BV_{10} = C - AD_{10} = 150{,}000 - (10 \times 12{,}000)$ ✓✓✓✓✓✓ = RM30,000 ✓✓	6
TOTAL MARKS (Q2) = 20 MARKS		
3a)	i) PLO1 $B = 30000 - 1500 = RM28500$ ✓✓ $I = Brt$ ✓✓ $I = 28500(0.06)(2)$ ✓✓ $I = RM3420$ ✓✓	4
	PLO1 ii) $R = \frac{B+1}{n}$ ✓ $R = \frac{28500+3420}{24}$ ✓✓✓ $R = RM1330$ ✓✓	3

	iii) PLO 1 $k = 24 - 15 = 9$ ✓✓ $OPB = (k \times R) - I\left(\frac{k(k+1)}{n(n+1)}\right)$ ✓✓ $OPB = (9 \times 1330) - 3420\left(\frac{9(9+1)}{24(24+1)}\right)$ ✓✓✓✓ $OPB = RM11457$ ✓✓	5
3b)	i) PLO 1 Info given: Cash price of house (CP) = RM 320,000 n=240 months 20% down payment (DP) = RM 64,000 k=4.55% Balance (A) = CP –DP = RM 256,000 ✓✓ m=12 **R= monthly payment** $A = R\left[\frac{1-(1+i)^{-n}}{i}\right]$ $256000 = R\left[\frac{1-\left(1+\frac{0.0455}{12}\right)^{-240}}{\frac{0.0455}{12}}\right]$ ✓✓✓✓ R = RM1,626.50 ✓✓	4
	PLO 3 ii) $S_{11} = R\left[\frac{(1+i)^n - 1}{i}\right]$ ✓ $S_{11} = 1{,}626.50\left[\frac{\left(1+\frac{0.0455}{12}\right)^{11} - 1}{\frac{0.0455}{12}}\right]$ ✓✓✓✓✓ = RM18,234.58 ✓✓	4

TOTAL MARKS (Q3) = 20 MARKS

TOTAL MARKS (PART B) = 60 MARKS