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Note: **All questions are compulsory.**

Question 1 (6 Marks)

In order to find out the NAV, the cash balance at the end of the year is calculated as follows-

Particulars	`
Cash balance in the beginning	
(` 100 lakhs – ` 98 lakhs)	2,00,000
Dividend Received	12,00,000
Interest on 7% Govt. Securities	56,000
Interest on 9% Debentures	45,000
Interest on 10% Debentures	50,000
	15,51,000
(-) Operating expenses	5,00,000
Net cash balance at the end **(2 marks)**	10,51,000
Calculation of NAV	`
Cash Balance	10,51,000
7% Govt. Securities (at par)	8,00,000
50,000 equity shares @ ` 175 each	87,50,000
9% Debentures (Unlisted) at cost	5,00,000
10% Debentures @90%	4,50,000
Total Assets	1,15,51000
No. of Units	10,00,000
NAV per Unit**(2 marks)**	` 11.55

Calculation of NAV, if dividend of ` 0.80 is paid – **(2 marks)**	
Net Assets (` 1,15,51,000 – ` 8,00,000)	` 1,07,51,000
No. of Units	10,00,000
NAV per unit	` 10.75

Question 2(8 Marks)

(a) Swap Ratio **(3 marks)**

	Abhiman Ltd.	Abhishek Ltd.
Share Capital	200Lakh	100 Lakh
Free Reserves	800Lakh	500 Lakh
Total	1000Lakh	600Lakh
No. of Shares	2 Lakh	10 Lakh
Book Value per share	Rs. 500	Rs. 60
Promoter's holding	50%	60%
Non promotor's holding	50%	40%
Free Float Market Cap .i.e. relating	400 Lakh	128 Lakh

To Public ' holding			
Hence Total market Cap		800Lakh	320 Lakh
No. of Shares		2 Lakh	10 Lakh
Market Price		Rs.400	Rs. 32
P/E Ratio		10	4
EPS		40	8
Profit (Rs. x 40 lakh)		Rs. 80 lakh	-
(Rs. 8 x 10 lakh)		-	Rs. 80 lakh

Calculation of Swap Ratio

Book Value	1:0.12 i.e	0.12 x 25%	0.03
EPS	1:0.2	0.20 x 50%	0.10
Market Price	1:0.08	0.08 x 25%	0.02
		Total	0.015

Swap ratio is for every one share of Abhishek Ltd., to issue 0.15 shares of Abhiman Ltd. Hence total no. of shares to be issued.

10 Lakh x 0.15 =1.50 lakh shares

(b) Book Value, EPS & Market Price **(2 marks)**

Total No. of Shares   2Lakh +1.5 Lakh =3.5 Lakh

Total Capital   Rs. 200 lakh +Rs.150 lakh   =Rs.350 Lakh

Reserves   Rs. 800 lakh +Rs.450 lakh   =Rs.1,250 Lakh

Book Value   Rs. 350 lakh +Rs.1,250 lakh   =Rs.457.14 per share

$$\frac{}{3}$$
3.5 Lakh

$$\text{EPS} \frac{\text{Total Profit}}{\text{No. of Share}} = \frac{\text{Rs. 80Lakh Rs. 80Lakh}}{3.5 \text{ Lakh}} = \frac{\text{Rs. 160 Lakh}}{3.5} = \text{Rs. 45.71}$$

Expected Market Price   EPS (Rs.45.71) x P/E Ratio(10)   = Rs. 457.10

(c) (3 marks)

 (i) Promotor's holding

Promoter's Revised   Abhiman 50%i.e.   1.00Lakh shares

Holding   abhishek 60%i.e.   0.90 Lakh shares

        Total   1.90Lakh shares

Promoter's % =1.90/3.50 x100=54.29%

(ii) Free Float Market Capitalisation

Free Float Market   =(3.5 Lakh -1.9 Lakh) x Rs. 457.10

Capitalization   =Rs.731.36 Lakh

(iii) (i) & (ii)

Revised Capital	Rs.350 Lakh + Rs. 175 Lakh = Rs. 525 Lakh
No. of shares before Split (F.V Rs. 100)	5.25 Lakh
No. of shares after Split (F.V Rs. 5)	5.25 x 20 = 105Lakh
EPS	160 Lakh /105 Lakh =1.523
Book Value	Cap.Rs.525 Lakh + Rs. 1075 Lakh

No. of Sahres =105 Lakh

=Rs. 15.238 per share

Question 3(6 Marks)

(a) (i) Swap Points for 2 months and 15 days **(2 marks)**

	Bid	Ask
Swap Points for 2 months (a)	70	90
Swap Points for 3 months (b)	160	186
Swap Points for 30 days (c) = (b) – (a)	90	96
Swap Points for 15 days (d) = (c)/2	45	48
Swap Points for 2 months & 15 days (e) = (a) + (d)	115	138

(ii) Foreign Exchange Rates for 20th June 2016**(2 marks)**

	Bid	Ask
Spot Rate (a)	66.2525	67.5945
Swap Points for 2 months & 15 days (b)	0.0115	0.0138
	66.2640	67.6083

(iii) Annual Rate of Premium**(2 marks)**

	Bid	Ask
Spot Rate (a)	66.2525	67.5945
Foreign Exchange Rates for 20th June 2016 (b)	66.2640	67.6083
Premium (c)	0.0115	0.0138
Total (d) = (a) + (b)	132.5165	135.2028
Average (d) / 2	66.2583	67.6014
Premium	$\dfrac{0.0115}{66.2583} \times \dfrac{12}{2.5} \times 100$ = 0.0833%	$\dfrac{0.0138}{67.6014} \times \dfrac{12}{2.5} \times 100$ = 0.0980%

Question 4(8 Marks)

Receipts using a forward contract (6,00,000/0.01458)**(1 mark)**	= `4,11,52,263
Receipts using currency futures(4 marks)	
The number of contracts needed is (6,00,000/0.01449)/30,00,000 = 13.80 say 14 contracts	
Initial margin payable is 14 x ` 16,000 = ` 2,24,000	
On September 1 Close at 0.01462	
Receipts = US$6,00,000/0.01461	= 4,10,67,762

Variation Margin = [(0.01462 – 0.01449) x 14 x 30,00,000/-]/0.01461	
OR (0.00013x14x3000000)/.01461 = 5,460/0.01461	3,73,717
	4,14,41,479
Less: Interest Cost – 2,24,000 x 0.085 x 3/12	`4,760
Net Receipts	`4,14,36,719
Receipts under different methods of hedging	
Forward contract	`4,11,52,263
Futures	`4,14,36,719
No hedge	
US$ 6,00,000/0.01461**(1 mark)**	`4,10,67,762
The most advantageous option would have been to hedge with futures.(2 marks)	

Question 5 (6 Marks)

(a) **3 Months Interest rate is 4.50% & 6 Months Interest rate is 5% p.a. (2 marks)**

Future Value 6 Months from now is a product of Future Value 3 Months now & 3 Months

Future Value from after 3 Months. $(1+0.05*6/12)$

$=(1+0.045*3/12)$ x $(1+i_{3,6} *3/12)$ $i_{3,6} = [(1+0.05* 6/12) /(1+0.045$

$*3/12) – 1] *12/3$ i.e. 5.44% p.a.

(b) **6 Months Interest rate is 5% p.a. & 12 Month interest rate is**

6.5% p.a. (2 marks)

Future value 12 month from now is a product of Future value 6 Months from now and 6

Months Future value from after 6 Months$(1+0.065)$ =

$(1+0.05*6/12)$ x $(1+i_{6,6} *6/12)$ $i_{6,6} = [(1+0.065/1.025) – 1]$

$*12/6$

6 Months forward 6 month rate is 7.80% p.a.

The Bank is quoting 6/12 USD FRA at 6.50 – 6.75%

Therefore there is an arbitrage Opportunity of earning interest @ 7.80% p.a. & Paying @ 6.75%

(c) **Borrow for 6 months, buy an FRA & invest for 12 months(2 marks)**

To get $ 1.065 at the end of 12 months for $ 1 invested today

To pay $ 1.060[#] at the end of 12 months for every $ 1 Borrowed today

Net gain $ 0.005 i.e. risk less profit for every $ borrowed

   # $(1+0.05/2) (1+.0675/2) = (1.05959)$ say 1.060

Question 6 (8 Marks)

	`*lakhs*
Net Assets Method(2 marks)	
Assets: Land & Buildings	96
Plant & Machinery	100
Investments	10
Stocks	20

Debtors		15
Cash & Bank		5
Total Assets		246
Less: Long Term Debts		30
Net Assets		216

Value per share

(a) Number of shares $\dfrac{1,00,00,000}{10}$ =10,00,000

(b) Net Assets ` 2,16,00,000

$$\dfrac{2,16,00,000}{10,00,000} = `21.6$$

Profit-earning Capacity Method(4 marks)		`*lakhs*
Profit before tax		64.00
Less: Extraordinary income	4.00	
Investment income (not likely to recur)	1.00	5.00
		59.00
Less: Additional expenses in forthcoming years		
Advertisement	5.00	
Depreciation	6.00	11.00
Expected earnings before taxes		48.00
Less: Income-tax @ 30%		14.40
Future maintainable profits (after taxes)		33.60

Value of business

Capitalisation factor	$\dfrac{33.60}{0.15}$ =	224
Less: Long Term Debts		30
		194
Value per share	$\dfrac{1,94,00,000}{10,00,000}$	`19.40

Fair Price of share (2 marks)		`
Value as per Net Assets Method		21.60
Value as per Profit earning capacity (Capitalisation) method		19.40
Fair Price= $\dfrac{21.60+19.40}{2}$		
= $\dfrac{41.00}{2}$ =		`20.50

Question 7 (8 marks)

Projected Balance Sheet				
	Year 1	Year 2	Year 3	Year 4
Fixed Assets (40% of Sales)	9,600	11,520	13,824	13,824
Current Assets (20% of Sales)	4,800	5,760	6,912	6,912
Total Assets	14,400	17,280	20,736	20,736

Equity	14,400	17,280	20,736	20,736

(2 marks)

Projected Cash Flows:

	Year 1	Year 2	Year 3	Year 4
Sales	24,000	28,800	34,560	34,560
PBT (10%) of sale	2,400	2,880	3,456	3,456
PAT (70%)	1,680	2,016	2,419.20	2,419.20
Depreciation	800	960	1152	1,382
Addition to Fixed Assets	2400	2880	3456	1382
Increase in Current Assets	800	960	1,152	-
Operating cash flow	(720)	(864)	(1036.80)	(2419.20)

(2 marks)

Projected Cash Flows:

Present value of Projected Cash Flows

Cash Flows	PVF at 15%	PV
-720	0.870	-626.40
-864	0.756	-653.18
-1,036.80	0.658	-682.21
		-1,961.79

(2 marks)

Residual Value   - $2419.20/0.15 = 16,128$

Present value of Residual value   = $16128/(1.15)^3$

         = $16128/1.521 = 10603.55$

Total shareholders' value   = $10,603.55 – 1,961.79 =$ 8,641.76

Pre strategy value   = $1,400 / 0.15 = 9,333.33$

∴ Value of strategy   = $8,641.76 – 9,333.33 =$ - 691.57

(2 marks)

Conclusion: The strategy is not financially viable

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