Gurukripa's Guideline Answers to Nov 2014 Exam Questions
CA Final – STRATEGIC FINANCIAL MANAGEMENT

Question 1 is compulsory **(4 × 5 = 20 Marks)**
Answer **any five** questions from the **remaining six** questions **(16 × 5 = 80 Marks).** [Answer any 4 out of 5 in Q.7]
Note: Page Number Reference are from **"Padhuka's Students' Referencer on Strategic Financial Management"**

Question 1 (a): **5 Marks**

Edelweiss Bank Ltd sold Hong Kong dollar 2 Crores value Spot to its Customer at ₹8.025 and covered itself in the London Market on the same day, when the Exchange Rates were
US $1 = HK $ 7.5880–7.5920
Local Interbank Market Rates for US $ were
Spot US $ 1 = ₹60.70 – 61.00
Calculate the Cover Rate and ascertain the Profit or Loss on the transaction. Ignore Brokerage.

Solution:

Similar to Page No.17.28, Q.No.6 – N 05, M 13(Mod)

1. Computation of Buy Rate for the Bank

Facts: The Bank has sold HKD to its customer. Therefore, to cover itself, the Bank would have bought HKD from London Market. Therefore, Bid Rate is relevant. Relevant rate for Banks opposite position is Ask Rate.

₹ / HKD Ask Rate = ₹ / US $ [Ask Rate] × US $ / HK $ [Ask Rate]
₹ / HKD Ask Rate = ₹ / US $ [Ask Rate] × 1 ÷ HKD / US $ [Bid]
Therefore, ₹ /HKD = ₹ 61.00 / US $ × 1 ÷ 7.5880
= ₹ 8.0390 per HKD

2. Computation of Gain / Loss to Bank

	Particulars	Value
	Rate at which Bank has sold HKD to the Customer	₹ 8.025
Less:	Rate at which Bank has bought HKD from London Market	(₹ 8.0390)
	Loss per HKD Sold	**₹ 0.9983**
	HKD Sold	**200 Lakhs**
	Total Loss to Bank [HKD 200 Lakhs × ₹ 0.9983 per HKD]	**₹ 199.60 Lakhs**

Question 1 (b): **5 Marks**

Wonderland Limited has excess Cash of ₹ 20 Lakhs, which it wants to invest in Short Term Marketable Securities. Expenses relating to investment will be ₹ 50,000

The Securities invested will have an annual yield of 9%

The Company seeks your advice

(i) As to the period of investment so as to earn a pre–tax Income of 5%

(ii) The maximum period for the Company to break even its investment expenditure over time value of money.

Solution:

	Surplus Cash available	= 20,00,000
Less:	Investment Expenses	= (50,000)
	Amount available for Investment	19,50,000
	Rate of Return	= 9% p.a
	Returns (in ₹) p.a	$= 19,50,000 \times \frac{9}{100} = 1,75,500$

Case 1:

Target Return	= 5% on Investment = 5% on 20,00,000 = 1,00,000
Investment Tenure	$= \frac{1,00,000}{1,75,500 \div 365}$ = 207.07 = 208 Days (7 Months approx.)

Case 2:

Investment Expenditure	= ₹ 50,000
Break Even Investment Tenure	= Time period of Investment where Investment Income equals 50,000
Investment Tenure	$= \frac{50,000}{1,75,500 \div 365}$ = 103.98 = 104 Days (3.5 Months approx.)

Question 1 (c): 5 Marks

Elrond Ltd plans to acquire Doom Ltd The relevant financial details of the two Firms prior to the merger announcement are:

	Elrond Limited	Doom Limited
Market Price per Share	**₹ 50**	**₹ 25**
Number of Outstanding Shares	**20 Lakhs**	**10 Lakhs**

The merger is expected to generate gains, which have a present value of ₹200 lakhs. The exchange ratio agreed to is 0.5. What is the true cost of the merger from the point of view of Elrond Limited?

Solution:

Similar to Page No.18.57, Q.No.36 – RTP

Market Price per Share of Merged Entity

	Particulars	Value
	Market Capital of Elrond Ltd = (₹ 50 × 20 Lakhs)	₹ 1,000 Lakhs
	Market Capital of Doom Ltd = (₹ 25 × 10 Lakhs)	₹ 250 Lakhs
Add:	Synergy	₹ 200 Lakhs
	Total market Capital of Merged Entity	**₹ 1,450 Lakhs**
	No. of Shares in Merged entity	
	(a) Existing = ₹ 20 Lakhs	
	(b) Issued = ₹ 10 Lakhs × 0.5 = ₹ 5 Lakhs	**₹ 25 Lakhs**
	MPS of Merged Entity	₹ 58
	Existing MPS of Elrond Ltd	₹ 50
	Increase in MPS (%) = $\frac{8}{50}$ =	16%

Question 1 (d): 5 Marks

Goldilocks Ltd. was started a year back with Equity Capital of ₹ 40 Lakhs. The other details are as under:

Earnings of the Company	**₹ 4,00,000**	**Price Earnings Ratio**	**12.5**
Dividend paid	**₹ 3,20,000**	**Number of Shares**	**40,000**

Find the Current Market Price of the Share. Use Walter's Model.

Find whether the Company's D/P ratio is optimal, use Walter's Formula

Solution:

Similar to Page No.10.23, Q.No.22 – M 07

- According to Walter's Model when the R (Return on investment) > K_e (Cost of Equity), the price per share increases as the dividend pay–out ratio decreases.
- Rules for deciding on the Optimal Dividend Policy –

Relationship	Optimal Dividend Policy
R > Ke	Zero Payout
R < Ke	100% Payout

1. Evaluation of Company's Present Dividend Policy

(a) Present Return on Investment = $\frac{\text{Earnings}}{\text{Equity Capital}} = \frac{4,00,000}{(40,000 \text{ Shares} \times 100)} = 10\%$

(b) Present $K_e = \frac{1}{\text{PE Ratio}} = \frac{1}{12.5} = 8\%$

(c) Since R > K_e, Company is a Growth Firm, and Optimal Dividend Payout is "zero".

(d) Since Co. has 80% Dividend Payout $\frac{3,20,000}{4,00,000}$, it is not following the Optimal Policy.

2. Evaluation of Company's Present Dividend Policy

(a) Value Per Share = $\frac{DPS}{K_e} + \frac{(EPS - DPS) \times \frac{R}{K_e}}{K_e}$

(b) **Computation of Factors:**

Earnings Per Share (EPS)	₹ 4,00,000 ÷ 40,000 = ₹ 10	Cost of Equity (Ke)	8%
Dividend Per Share (DPS)	EPS ₹ 10 × Payout 80% = ₹ 8	Return on Investment (R)	10%

(c) **Value per Share =** $\frac{₹ 8}{0.08} + \frac{(₹ 10 - ₹ 8) \times \frac{0.10}{0.08}}{0.08}$ **= ₹ 100 + ₹ 31.25 = ₹ 131.25**

Question 2 (a): 6 Marks

The valuation of Hansel Limited has been done by an Investment Analyst. Based on an expected Free Cash Flow of ₹ 54 Lakhs for the following year and an expected growth rate of 9%, the Analyst has estimated the value of Hansel Limited to be ₹ 1800 Lakhs. However, he committed a mistake of using the Book Values of Debt and Equity.

The Book Value weights employed by the Analyst are not known, but you know that Hansel Limited has Cost of Equity of 20% and Post–tax Cost of Debt of 10%. The Market Value of Equity is thrice its Book Value, whereas the Market Value of its Debt is nine–tenths of its Book Value. What is the correct value of Hansel Ltd?

Solution:

Similar to Page No.18.25, Q.No.6 – RTP, N 10

Note: Value ₹ 500 Lakhs is taken as based on Overall Free Cash Flow for the Firm = FCFF.

1. **Computation of Discount Rate Used:** Value of the Firm = $\frac{FCFF_1}{K_o - g}$, So, ₹ 1,800 Lakhs = $\frac{54}{K_o - 9\%}$

   Hence, K_o – 0.09 = ₹ 54 Lakhs ÷ ₹ 1,800 Lakhs

   So, K_o – 0.09 = 3% or 0.03 Therefore, K_o = 0.03 + 0.09 = 0.12 or **12%**

2. **Computation of Weights of Debt and Equity on Book Value Basis:**

   Let Weight of Equity = x, Weight of Debt = 1 – x. Cost of Equity 20%, Cost of Debt 10%.

   So, Weighted Average Cost 12% = [x × 20%] + [(1 – x) × 10%]

   → 12 = 20x + 10 – 10x

   → 2 = 10x

   → x = 0.2. Therefore, Weight of Equity is 0.2 or 20%. Weight of Debt is 0.8 (1 – 0.20) or 80%.

3. **Computation of Weights of Debt and Equity on Market Value Basis:**

Equity = Book Value Weight 0.20 × Market Value Multiple 3 = 0.60

Debt = Book Value Weight 0.80 × Market Value Multiple $\frac{9}{10}$ = 0.72

Therefore, Market Value weights are 0.60 for Equity and 0.72 for Debt.

4. **Computation of Discount Rate using (Market Value Weights):**

Details	Ratio	%	Product
Equity	0.60	20	12.00
Debts	0.72	10	7.20
	1.32		**19.20**
		WACC = $\frac{19.20}{1.32}$ =	**14.55%**

5. **Value of the Firm** = $\frac{FCFF_1}{K_O - g} = \frac{₹\ 54\ Lakhs}{(14.55 - 9)\%}$ = **₹ 972.97 Lakhs.**

Question 2 (b): 10 Marks

Gretel Limited is setting up a project for manufacture of boats at a cost of ₹ 300 lakhs. It has to decide whether to locate the plant in next to the Sea Shore (Area A) or in a Inland Area with no access to any Waterway (Area B). If the Project is located in Area B then Gretel Limited receives a Cash Subsidy of ₹ 20 Lakhs from the Central Government. Besides the Taxable Profits to the extent of 20% is exempt for 10 years in Area B. The Project envisages a borrowing of ₹ 200 lakhs in either case. The rate of interest per annum is 12% in Area A and 10% in Area B.

The borrowing of principal has to be repaid in 4 equal installments beginning from the end of the 4th year.

With the help of the following information, you are required to suggest the proper location for the project to the CEO of Gretel Limited. Assume straight line depreciation with no residual value, Income Tax 50% and required rate of return 15%.

Year	Earnings before Depreciation, Interest and Tax (EBDIT) (₹ In Lakhs)	
	Area A	Area B
1	(6)	(50)
2	34	(50)
3	54	10
4	74	20
5	108	45
6	142	100
7	156	155
8	230	190
9	330	230
10	430	330

The PVIF @ 15% for 10 years are as below:

Year	1	2	3	4	5	6	7	8	9	10
PVIF	0.87	0.76	0.66	0.57	0.50	0.43	0.38	0.33	0.28	0.25

Solution: 1.Computation of Interest

Detail	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
(For Area A) Opening Principal	200	200	200	200	150	100	50
Less: Repayment	(0)	(0)	(0)	(50)	(50)	(50)	(50)
Closing Principal	200	200	200	150	100	50	0
Interest @ 12% (on Opening Balance)	24	24	24	24	18	12	6
(For Area B) Interest @ 10%	**20**	**20**	**20**	**20**	**15**	**10**	**5**

2. Computation of Future Cash Flow & NPV

Nature		Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
(For Area A) EBDIT		(6)	34	54	74	108	142	156	230	330	430
Less:	Depreciation = $\frac{300}{10}$	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)
	EBIT	(36)	4	24	44	78	112	126	200	300	400
Less:	Interest (WN1)	(24)	(24)	(24)	(24)	(18)	(12)	(6)	0	0	0
	EBT	(60)	(20)	0	20	60	100	120	200	300	400
Less:	Tax @ 50%	(30)	(10)	0	10	30	50	60	100	150	200
	EAT	(30)	(10)	0	10	30	50	60	100	150	200
Add:	Depreciation	30	30	30	30	30	30	30	30	30	30
	CFAT	**0**	**20**	**30**	**40**	**60**	**80**	**90**	**130**	**180**	**230**
	DF @ 15% as given	0.87	0.76	0.66	0.57	0.5	0.43	0.38	0.33	0.28	0.25
	DCF	0	15.2	19.8	22.8	30	34.4	34.2	42.9	50.4	57.5
	Total DCF										307.2
Less:	Initial Investment										300.0
	NPV										**7.2**
(For Area B) EBDIT		(50)	(50)	10	20	45	100	155	190	230	330
Less:	Depreciation $\frac{300}{10}$	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)	(30)
	EBIT	(80)	(80)	(20)	(10)	15	70	125	160	200	300
Less:	Interest (WN1)	(20)	(20)	(20)	(20)	(15)	(10)	(5)	0	0	0
	EBT	(100)	(100)	(40)	(30)	0	60	120	160	200	300
Less:	Tax @ 30%	(30)	(30)	(12)	(9)	0	18	36	48	60	90
	EAT	(70)	(70)	(28)	(21)	0	42	84	112	140	210
Add:	Depreciation	30	30	30	30	30	30	30	30	30	30
Add:	**Subsidy**	20									
	CFAT	**(20)**	**(40)**	**2**	**9**	**30**	**72**	**114**	**142**	**170**	**240**
	DF @ 15% as given	0.87	0.76	0.66	0.57	0.5	0.43	0.38	0.33	0.28	0.25
	DCF	(17.4)	(30.4)	1.32	5.13	15	30.96	43.32	46.86	47.6	60
	Total DCF										202.39
Less:	Initial Investment										300.0
	NPV										**97.61**

Since, NPV of Area A is greater than NPV of Area B the CEO shall locate the Project in Area A which is more beneficial.

Notes:

1. **Nature of Subsidy:**
   (a) It is assumed that the Subsidy is a one–time subsidy, received at Time 0. It is in the nature of "Promoters Contribution"
   (b) Since, it is in the nature of capital grant the same shall not be subject to tax as it is a capital receipt. Alternatively It can also be assumed that cash subsidy is a revenue grant (received every year) in which case, every year there is an additional taxable income of ₹ 20 Lakhs.

2. For the Initial Years, since there is no profit, the **actual** taxes payable will be Nil. Since the losses are entitled for tax savings in future years, the –ve tax is considered as an inflow. However the timing difference (time value) on realization of such tax savings is ignored in the calculation.

Question 3 (a): 8 Marks

Gibralter Limited has imported 5000 bottles of Shampoo at Landed Cost in Mumbai, of US $ 20 each. The Company has the choice for paying for the goods immediately or in 3 months time. It has a Clean Overdraft limit where 14% p.a. Rate of Interest is charged. Calculate which of the following method would be cheaper to Gibralter Limited.

(i) Pay in 3 Months time with interest @ 10% and cover risk forward for 3 months.

(ii) Settle now at a Current Spot Rate and pay interest of the overdraft for 3 months.

The Rates are as follows: Mumbai ₹/$ Spot: 60.25–60.55 3 Months Swap: 35/25

Solution:

Similar to Page No.17.36, Q.No.20 – RTP, N 12(Mod)

Cash Outflows under the two options are –

	Particulars	Alternative 1	Alternative 2
(a)	Supplier's Credit	90 Days 10% Interest	NA
(b)	Bank Loan	NA	90 Days 14% Interest
(c)	Amount in USD	1,02,500 [1,00,000 + 2,500]	1,00,000
(d)	Applicable forward rate	60.30 [60.55 – 0.25]	60.55
(e)	Amount in ₹ [(c)×(d)]	61,80,750	60,55,000
(f)	Interest in ₹	2,500 [1,00,000×10%×3/12]	2,11,925 [60,55,000×14%×3/12]
(g)	Total Cash Outflow [(e)+(f)]	₹ 61,80,750	₹ 62,66,925

Conclusion: Alternative 1 is better because of lower Cash Outflow.

Note: As swap points are descending, they have to be subtracted from spot price to arrive at Forward Prices.

Question 3 (b) 8 Marks

The Risk Free Rate of Return R_F is 9%. The Expected Rate of return on the Market Portfolio R_m is 13%. The Expected Rate of growth for the Dividend of Platinum Ltd is 7%. The last dividend paid on the Equity Stock of Firm A was ₹ 2.00, the Beta of Platinum Ltd Equity Stock is 1.2.

(I) What is the Equilibrium Price of the Equity Stock of Platinum Ltd?

(II) How would the Equilibrium Price change when

- **The Inflation Premium increases by 2%?**
- **The Expected growth rate increases by 3%?**
- **The Beta of Platinum Ltd equity rises to 1.3?**

Solution:

Similar to Page No.7.55, Q.No.41 & 42 – RTP, M 97, N 08(Mod), M 03

1. Required Rate of Return on Shares of Platinum Ltd (Based on Capital Asset Pricing Model)

Expected Return $= R_f + \beta (R_m - R_f) = 9\% + 1.20(13\% - 9\%) =$ **13.80%**

2. Expected Market Price of Shares of Platinum Ltd (Based on Dividend Growth Model)

$(P_0) = \frac{D_0 (1+g)}{K_e - g} = \frac{2 \times (1+7\%)}{(13.80\% - 7\%)} =$ **₹ 31.47 = Equilibrium Price.**

Case (ii): Revised Equilibrium Price

(a) Existing Risk Premium$(R_m - R_f)$ = 13–9=4%

(b) Increased R_p (by 2%) = 6%

(c) CAPM rate$(K_e) = R_f + \beta (R_m - R_f) = 9 + 1.3 (6) = 16.8\%$

(d) g = 3%,

(e) β = 1.3

(f) Equillibrium Price $= \frac{D_0 (1+g)}{K_e - g} = \frac{2 (1+3\%)}{(16.8 - 3)} = 14.93\%$

Question 4 (a) **12 Marks**

Beanstalk Ltd manages its accounts receivable internally by its Sales and Credit Department. The cost of Sales Ledger administration stands at ₹ 10 Crores annually. The Company has a credit policy of 2/10, net 30. Past experience of the Company has been that on average 40% of the customers avail of the discount by paying within 10 days while the balance of the receivables are collected on average 90 days after the invoice date. Bad Debts of the Company are currently 1.5% of Total Sales. The Projected Sales for the next year are ₹ 1,000 Crores.

Beanstalk Ltd finances its Investment in debtors through a mix of Bank Credit and own Long Term Funds in the ratio of 70:30. The current cost of Bank Credit and Long Term Funds are 13% respectively.

With escalating cost associated with the in house management of debtors coupled with the need to unburden the management with the task so as to focus on sales promotion, the Company is examining the possibility of outsourcing its Factoring Service for managing its receivable and has two proposals on hand with a guaranteed payment within 30 days.

The Main Elements of the Proposal I from Finebank Factors Ltd. are:

- **Advance, 88% for the recourse and non recourse arrangements.**
- **Discount charge in advance, 21% for with recourse and 22% without recourse.**
- **Commission, 4.5% without recourse and 2.5% with recourse.**

The Main Elements of the Proposal II from Roughbank Factors Ltd. are:

- **Advance, 84% with recourse and 80% without recourse respectively.**
- **Discount charge upfront without recourse 21% and with recourse 20%.**
- **Commission upfront, without recourse 3.6% and with recourse 1.8%.**

The opinion of the Chief Marketing Manager is that in the context of the factoring arrangement, his staff would exclusively focus on sales promotion which would result in Additional Sales 10% of Projected Sales. Kindly advice as a Finance Consultant on the alternative proposals. What advice would you give? Why?

Solution:

Similar to Page No.4.12, Q.No.9 – RTP, N 08 (Mod)

1. Proposal I – Factoring from Finebank Factors Ltd

Details	With Recourse	Without Recourse
1. Benefits (a) Reduction in Bad Debts	0 [with recourse]	15.00 [1000 × 1.5%]
(b) Admin Costs saved **(Note 1)**	13.60	13.60
Total	**13.60**	**28.60**
2. Net Interest Cost on factoring **(Note 2)**	38.79	18.79
Total	**38.79**	**18.79**
3. Net Cost of Factoring	**(25.19)**	**9.81**
	(Cost)	(Benefit)

Note 1: Admin Costs saved

(a) Due to factoring the management can concentrate on increasing the Sales.

(b) This results in Increased Sales of 10% of Projected Sales (on 10 Crores) ₹1 Crore.

(c) Increased margin thereon = ₹ 1 Crore × WACC (13.6%) = ₹13.60 Lakhs.

Note 2: Calculation of Net Interest Cost on factoring

Details	With Recourse	Without Recourse
(a) Internal costs at present **(Note 3)**	21.61	21.61
(b) Discount Cost to Factor (calculated on amount lent)	15.40 $(1000 \times 88\% \times 21\% \times \frac{1}{12})$	15.40 $(1000 \times 84\% \times 22\% \times \frac{1}{12})$
(c) Commission (calculated on amount factored)	45.00 (1000 × 4.5%)	25.00 (1000 × 2.5%)
(d) Net Extra Cost incurred [a – (b+c)]	**38.79**	**18.79**

Note 3: Interest paid now = Average Debtors due (Note 4) × WACC (Note 5)
= 158.91 × 13.60% = ₹21.61 Crores

Note 4: Calculation of Average Debtors

	Total Credit Sales = 1000 Crores	
TYPE	**I:** 40% repaying within 10 Days i.e. ₹400 Crores	**II:** 40% repaying within 90 Days i.e. ₹600 Crores
Average O/s	$\frac{400}{365}$ × 10 days = ₹10.96 Crores	$\frac{600}{365}$ × 90 days = ₹147.95 Crores
Total Debtors O/s	10.96 + 147.95 = **₹ 158.91 Crores**	

Note 5: WACC for Debtors funding

Details	**Ratio**	**%**	**Product**
Equity	0.30	15	4.50
LT Funds	0.70	13	9.10
			13.60

2. Proposal II – Factoring from Roughbank Factors Ltd

Details	**With Recourse**	**Without Recourse**
1. Benefits (a) Reduction in Bad Debts	0 [with recourse]	15.00 [1000 × 1.5%]
(b) Admin Costs saved (already computed)	13.60	13.60
Total	**13.60**	**28.60**
2. Net Interest Cost on Factoring **(Note 6)**	29.09	9.72
Total	**29.09**	**9.72**
3. Net Cost of Factoring	**(15.49)**	**18.88**
	(Cost)	(Benefit)

Note 6: Calculation of Net Interest Cost on factoring

Details	**With Recourse**	**Without Recourse**
(a) Internal costs at present (already computed)	21.61	21.61
(b) Disc cost to Factor (calculated on amount lent)	14.70 $(1000 \times 84\% \times 21\% \times \frac{1}{12})$	13.33 $(1000 \times 80\% \times 20\% \times \frac{1}{12})$
(c) Commission (calculated on amount factored)	36.00 (1000 × 3.6%)	18.00 (1000 × 1.8%)
(d) Net extra cost incurred [a – (b+c)]	**29.09**	**9.72**

Conclusion: It is suggested to avail Factoring Services from Rough Bank Factors Ltd –Without Recourse since it results in higher benefits.

Question 4 (b) **4 Marks**

Cindrella Mutual fund has the following assets in Scheme Rudolf at the close of business on 31st March, 2014.

Company	**No. of Shares**	**Market Price Per Share**
Nairobi Ltd	**25000**	**₹ 20**
Daskar Ltd	**35000**	**₹ 300**
Senegal Ltd	**29000**	**₹ 380**
Cairo Ltd	**40000**	**₹ 500**

The Total Numbers of units of Scheme Rudolf are 10 Lakhs. The Scheme Rudolf has accrued expenses of ₹ 2,50,000 and other Liabilities of ₹ 2,00,000. Calculate the NAV per unit of the Scheme Rudolf.

Solution:

Similar to Pg No.8.13, Q.No.4 & Pg No.8.12, Q.No.1 – M 12, RTP

Computation of NAV

Shares	No. of Shares	31st March (MPS) (₹)	Amount (₹) = No. of Sh. × MPS
Nairobi Ltd	25,000	20.00	5,00,000
Dakar Ltd	35,000	300.00	1,05,00,000
Senegal Ltd	29,000	380.00	1,10,20,000
Cairo Ltd	40,000	500.00	2,00,00,000
Total Assets [A]			**4,20,20,000**
Accrued Expenses			2,50,000
Other Liabilities			2,00,000
Total Liabilities [B]			**4,50,000**
Net Asset Value [A – B]			**4,15,70,000**
Number of Units O/s [n]			10,00,000
Value per unit = $\frac{[A-B]}{n} = \frac{\text{Net Assets of the Scheme}}{\text{Number of Units outstanding}}$ **= ₹ 41.57**			

Question 5 (a) **8 Marks**

Buenos Aires Limited has 10 Lakhs Equity Shares Outstanding at the beginning of the year 2013. The Current Market Price per Share is ₹ 150. The Company is contemplating a dividend of ₹ 9 per Share. The rate capitalization, appropriate to its risk class, is 10%.

(I) Based on MM Approach, calculate the Market Price of the Share of the Company when:
- **(1) Dividend is declared**
- **(2) Dividend is not declared**

(II) How many new shares are to issued by the Company, under both the above options, if the Company is planning to invest ₹ 500 Lakhs assuming a Net Income of ₹ 200 Lakhs by the end of the year?

Solution:

Similar to Page No.10.28, Q.No.28 – RTP, M 03(Mod), N 06(Mod), M 08(Mod), N 08, M 13(Mod)

1. Computation of Price if Dividend is declared / not declared

Market Price per Share at the beginning of the year / period i.e. at Time–0 (now)	P_0	150
Market Price per Share at the end of the year / period	P_1	To Be Ascertained
Dividend per Share at the end of the year / period	D_1	₹ 0 / 9
Cost of Equity	K_e	10%

Value of the Share under Modigliani and Miller Approach = $P_0 = \frac{(D_1 + P_1)}{1 + K_e}$

Particulars	Dividend Not Declared	Dividend Declared
P_0	150	150
Future Value of $P_0 = P_0 \times 1.10$	165	165
D_1	0	9
P_1 = Future Value of $P_0 - D_1$	**165**	**156**

2. Computation of New Shares to be issued

Factor	Notation	Value
Number of Shares Outstanding at the beginning of the period	n	10 Lakhs
Number of Shares issued at the end of the year at P_1	m	to be ascertained
Market Price per Share at the beginning of the year / period i.e. at Time–0 (now)	P_0	150

Factor			Notation	Value
Market Price per Share at the end of the year / period			P_1	to be ascertained
Dividend per Share at the end of the year / period			D_1	9
Investment at the end of the year / period			I_1	500 Lakhs
Net Earnings after Tax for the year / period			X_1	200 Lakhs
Cost of Equity			K_e	10%
(a) When Dividend is declared				
	Dividend Paid [D_1]		**₹ 9**	
	Equity Earnings [X_1]		200 Lakhs	
Less:	Dividend Outgo [nD_1]		90 Lakhs [10 Lakhs × ₹ 9]	
	Retained Earnings	**[A]**	₹ 110 Lakhs	
	Investment	**[I_1]**	₹ 500 Lakhs	
	Further Equity Raised **[mP_1]**	**[$I_1 – A$]**	₹ 390 Lakhs	
	Price at Year End [$P_0 \times (1 + K_e) – D_1$]	**[P_1] (Refer workings above)**	₹ 156	
	Number of Shares Issued	**[m]** [$mP_1 \div P_1$]	**2.50 Lakh Shares**	
(b) When Dividend is not declared				
	Investment	**[I_1]**	500 Lakhs	
	Retained Earnings	**[A]**	₹ 200 Lakhs	
	Further Equity Raised **[mP_1]**	**[$I_1 – A$]**	₹ 300 Lakhs	
	Price at Year End [$P_0 \times (1 + K_e) – D_1$]	**[P_1] (Refer workings above)**	₹ 165	
	Number of Shares Issued	**[m]** [$mP_1 \div P_1$]	**1.82 Lakh Shares**	

Question 5 (b) **8 Marks**

Odessa Ltd has proposed to expand its operations for which it requires funds of $ 15 Million, net of issue expenses which amount to 2% of the Issue Size. It proposed to raise the funds though a GDR Issue. It considers the following factors in pricing the issue:

(I) The expected domestic Market Price of the share is ₹300

(II) 3 Shares underly each GDR

(III) Underlying shares are priced at b10% discount to the market price

(IV) Expected Exchange Rate is ₹ 60 / $

You are required to compute the number of GDR's to be issued and Cost of GDR to Odessa Limited, if 20% dividend is expected to be paid with growth rate of 20%.

Solution:

1. Basics

(a) Fund Requirement	= 15m USD
(b) Issue Cost	= 2% of Issue size
(c) Issue Size	$= \frac{15m}{(100 - 2\%)}$ = 15.31m USD

2. Case 1: No. of GDR to Issue

(a) MPS of 1 Share	= ₹ 300
(b) Issue Price of 1 Share	= 300–10% discount = 270
(c) Issue Price of 1 GDR	= 3 Shares
(d) Hence, Issue Price of 1 GDR (in INR)	= 3 × 270 **= 810**
(e) **Issue Price of 1 GDR (in USD)**	**=** $\frac{810}{60}$ = 13.5 USD

3. Case 2: Cost of GDR [Cost of Capital with reference to Issue Price]

(a) Issue Price = $\frac{D_1}{K_e - g}$	(b) $270 = \frac{300 \times 20\%}{K_e - 20\%} = \frac{60}{K_e - 0.2}$ On Solving **K_e = 42.22%**

Question 6 (a) **10 Marks**

Cauliflower Limited is contemplating acquisition of Cabbage Limited. Cauliflower Limited has 5 Lakhs Shares having Market Value of ₹ 40 per Share while Cabbage Limited has 3 Lakhs Shares having Market Value of ₹ 25 per Share. The EPS for Cabbage Limited and Cauliflower Limited are ₹ 3 per Share and ₹ 5 per Share respectively. The managements of both the Companies are discussing two alternatives for exchange of Shares as follows:

(I) In proportion to relative earnings per Share of the two Companies.

(II) 1 Share of Cauliflower Limited for 2 Shares of Cabbage Limited.

Required:

(I) Calculate the EPS after merger under both the alternatives.

(II) Show the impact on EPS for the Shareholders of the two Companies under both the alternatives.

Solution:

Similar to Page No.18.42, Q.No.23 – N 02

1. Computation of Shares Issued for Merger

	Based on EPS	Based on 1:2
(a) Exch. Ratio = $\frac{\text{EPS of Selling Co.}}{\text{EPS of Buying Co.}}$	$\frac{3}{5}$ = 0.6 Shares of Cauliflower Ltd for 1 Share of Cabbage Ltd.	1 Share of Cauliflower Ltd for 2 Shares of Cabbage Ltd
(b) No. of Shares issued	= 0.6 × 3,00,000 Shares of Cauliflower Ltd = 1,80,000 Shares of Cauliflower Ltd	= 3,00,000 × $\frac{1}{2}$ = 1,50,000 Shares of Cauliflower Ltd

2. Computation of Post Merger EPS

	Exchange at	EPS Based	1:2
	Earnings After Tax of Cauliflower Ltd before Merger [5 Lakhs Shares × ₹ 5]	₹ 25,00,000	₹ 25,00,000
Add:	Earnings After Tax of Cabbage Ltd before Merger [3 Lakhs Shares × ₹ 3]	₹ 9,00,000	₹ 9,00,000
	Total Earnings of Cauliflower Ltd after Merger [EAT]	**₹ 34,00,000**	**₹ 34,00,000**
	No. of Shares Outstanding Before Merger	5,00,000	5,00,000
Add:	Shares issued to Cabbage Ltd for Merger	1,80,000	1,50,000
	Total No. of Shares Outstanding After Merger [Shares]	**6,80,000**	**6,50,000**
	Expected EPS [EAT ÷ Shares]	**₹ 5**	**₹ 5.231**

3. Impact on EPS

Exchange at		EPS Based	1:2
For Shareholders of Cauliflower Ltd:	EPS After Merger	₹ 5.00	₹ 5.231
Less:	EPS of Cauliflower Ltd before Merger	(₹ 5.00)	(₹ 5.000)
	Change in EPS	**—**	**₹ 0.231**
	Effect for Shareholder of Cauliflower Ltd	**No Change**	**Increase**
For Shareholders of Cabbage Ltd:			
	EPS After Merger	₹ 5.00	₹ 5.231
	Exchange Ratio	0.6	0.5
	Equivalent EPS Post Merger [Post Merger EPS × Exchange Ratio]	₹ 3	₹ 2.6155
Less:	EPS of Cabbage Ltd before Merger	(₹ 3)	(₹ 3)
	Change in EPS	**—**	**(₹ 0.3845)**
	Effect for Shareholder of Cabbage Ltd	**No Change**	**Decrease**

Question 6 (b) **6 Marks**

An investor is holding 5000 Shares of X Ltd. Current year dividend rate is ₹3/share. Market Price of the Share is ₹ 40 each. The investor is concerned about several factors which are likely to change during the next Financial Year as indicated below:

	Current year	Next year
Dividend paid / anticipated per Share (₹)	3	2.5
Risk Free Rate	12%	10%
Market Risk Premium	5%	4%
Beta Value	1.3	1.4
Expected growth	9%	7%

In view of the above, advise whether the investor should Buy, Hold or Sell the Shares.

Solution:

Similar to Page No.7.55, Q.No.42 – M 03

Particulars	Current Year	Next Year
(a) Rate of Return = $R_f + \beta(R_m - R_f)$	= 12% +1.30(5) = **18.50%**	=10% + 1.40(4) =**15.60%**
(b) Price of Share P_0 = $\frac{D_0(1+g)}{K_e - g}$	$\frac{3\times(1.09)}{(0.185 - 0.09)}$ = **₹ 34.42**	= $\frac{2.5\times(1.07)}{(0.156 - 0.07)}$ = **₹ 29.07**
(c) Current Market Price	₹ 40.00	₹ 40.00
(d) Inference	Over–Priced	Over–Priced
(e) **Decision**	**Sell**	**Sell**

Question 7 **4 x 4 = 16 Marks**

Write Short Notes on any four of the following:

Solution:

Questions	Reference
(a) What are the signals that indicate that is time for an investor to exit a Mutual Fund Scheme?	**Similar to Page No. 8.9 Q.No.19**
(b) What is cross border leasing? State its objectives.	**Similar to Page No. 3.4 Q.No.7 [N 08]**
(c) Explain Takeover by reverse bid.	**Similar to Page No. 18.2 Q.No.3 [N 02, M 06, N 10, M 11]**
(d) What are risks to which foreign exchange transactions are exposed?	**Similar to Page No. 17.8 Q.No.16 [RTP, N 07]**
(e) Explain the term "Insider Trading" and why Insider Trading is punishable?	1. **Meaning:** Buying or selling securities by someone who has access to material non public information of the Company 2. **Parties:** Insiders, e.g. Key Employees or Executives who have access to the strategic information about the Company, use the same for trading in the Company's Stocks or Securities. 3. **Impact:** (a) The role of Management being fiduciary in nature is broken because of Insider Trading. This prevents the potential small scale investors to enter the Stock Market. (b) Insider Trading of high magnitude has far reaching consequences and can cause major damage to the Securities Market and economic growth (c) Price of the security is subject to unpredictable volatilities.