

PAPER- 2 : MANAGEMENT ACCOUNTING AND FINANCIAL ANALYSIS

QUESTIONS

Capital Budgeting with Risk

- Neale Tech Plc proposes to launch a new product. The company appointed Kachy Consultants to conduct market study. The consultants suggested that the price of product can be set £36 or £38 or £40 per unit. The company intends to hire a machinery to manufacture the product at £400 000 per annum. However, if annual production exceeds 60 000 units, additional cost of £160 000 per annum will be incurred for hire of machinery. The following data is related to the estimated sale and possible selling prices.

Table I

Selling Price	£36		£38		£40	
	Units					
Pessimistic	70 000	0.3	60 000	0.1	30 000	0.4
Most likely	80 000	0.5	70 000	0.7	60 000	0.5
Optimistic	90 000	0.2	90 000	0.2	70 000	0.1

Table - II

Variable Cost	Prob.
£10	0.6
£12	0.4
	1.00

The company has committed publicity expenditure of £80 000 per annum.

You are required to analyse and advise which selling price shall lead to maximization of profit.

Break Even Lease Rental

- There is a proposal before Hyper Leasing (P) Ltd. The facts of the proposal are as follows:

The cost of machinery to be leased out is Rs.30 lakhs on which there is 10% of CST would be levied. At the end of the lease term after 5 years, the salvage value is estimated to be Rs.3,30,000. The other initial cost (Revenue item) associated with the proposal payable in the end of the year amounted to Rs.80,000. The cost of capital for Hyper Leasing (P) Ltd. is 14% and tax rate is 35%.

What is Break Even Lease Rental (BELR) assuming that depreciation rate is 25% on WDV basis and ignore tax gain/loss S.T.C.Gain/Loss.

Lease viability

3. ABC Ltd., presently leasing computers on a yearly basis rental amounting Rs.10,00,000 per year. These computers can also be purchased by the company for Rs.50,00,000. This purchase can be financed by 16% loan repayable in 4 equal annual instalments.

The economic life of the computer is that of 4 years. It is estimated that the computers would be sold for Rs.20,00,000 at the end of 4 years. The company uses the straight line method of depreciation. Corporate tax rate is 50%.

- Whether computer should be acquired or leased?
- Analyse the financial viability from the point of view of lessor, assuming 14% cost of capital.
- Determine the minimum rent which will yield an IRR of 16% to the lessor.

Decision Tree Analysis

4. Small Oil is wondering whether to drill for oil in chemsfield Basin. The prospectuses are as follows:

Depth of well in feet	Total cost (Million €)	Probability of		PV of Oil (if found) (Million €)
		Finding oil	Not Finding oil	
2000	4	0.5	0.5	10
4000	5	0.2	0.8	9
6000	6	0.25	0.75	8

Draw a decision tree showing the successive drilling decisions to be made by Small Oil. How deep should it be prepared to drill?

Simulation Analysis

5. A company manufactures 3000 units of 'Product P' per day. The sale of this product depends upon demand which has the following distribution.

Sales(Units)	2700	2800	2900	3000	3100	3200
Prob.	0.10	0.15	0.20	0.35	0.15	0.05

The production cost and sale price of each unit are Rs.4 and Rs.5 respectively. Any unsold product is to be disposed off at a loss of Rs.1.50 per unit. There is a penalty of Rs.0.50 per unit if demand is not met.

Using the following random numbers estimate total profits/loss for the company for next 10 days: 11,98,66,97,95, 01, 79,12,17,21.

If the company decides to produce 2900 items per day, what is profit/loss position of the company.

Economic Value Added

6. Tabsum plc engaged in manufacturing business are summarized below:

Income Statement for current year ended March 31, 2008.

	(\$ Million) (Amount)
Sales	<u>93.50</u>
EBIT	18.00
Less: Interest on loan	<u>1.80</u>
Earning before tax	16.20
Less: Corporate Tax @ 35%)	<u>5.67</u>
Earning after taxes	<u>10.53</u>

Balance sheet as at March 31, 2008

	(\$ Millions) Amount		(\$ Millions) Amount
Liabilities		Assets	
Equity Share Capital of \$100 per share	10.00	Freehold land & building (Net)	20.00
Reserve/Surplus	32.50	Plant and Machinery (Net)	29.50
10% Loan	18.00	Current Assets:	
Creditor and other liabilities	18.00	Stock	10.00
		Debtors	15.00
		Bank & Cash Balance	4.00
	78.50		78.50

The company's weighted average cost of capital is 12%.

- Determine Economic Value Added (EVA).
- If the company's share are currently quoted at \$500 per share. Determine the amount of market value added.

Valuation of Shares

7. AB Limited's shares are currently selling at Rs.130 per share. There are 10,00,000 shares outstanding. The firm is planning to raise Rs.2 crores to Finance new project.

Required: What is the ex-right price of shares and value of a right, if.

- (i) the firm offers one right share for every two shares held.
- (ii) The firm offers one right share for every four shares held.
- (iii) How does the shareholder's wealth change from (i) to (ii)? How does right issue increase shareholder's wealth.

Dividend Theory

8. Om Tech Ltd., engaged in the manufacturing of engineering goods, expects a moderate growth in coming years. Dividend for the last year has just been paid and the company is contemplating to pay a dividend of Rs.18 after one year. The equity shares are currently traded at Rs.200 per share.

If MM assumptions are met and the equity capitalization rate is 14% then what would be the market price of the share after one year. Assume that Capital gains tax rate applicable to an investor is 20%. He buys one share today and sell after one year after dividend receipt. What is his after tax rate of return.

Dividend Policy

9. Bharti Ltd., has 5000 equity shares of Rs.100 each. These shares are currently traded at Rs.400 per share in the market. The company has been paying a dividend of Rs.50 per share for several years. It is expected that same dividend would continue to be paid in future also.

The company is evaluating a new project costing Rs.2,00,000 and which is expected to generate cash flow of Rs.65,000 p.a. till perpetuity. Assuming that the funds for the new project are raised by a right issue of 2:5 and the company would continue to follow 100% Dividend Payout Ratio, find out

- (a) New Dividend per share.
- (b) New Market value per share; and
- (c) Overall gain to shareholders.

Bond Valuation

10. A 7% Bond was issued several years ago when the market interest rate was also 7%. Now the bond has a remaining life of 3 years when it would be redeemed at par value of Rs.1,000. The market rate of interest has increased to 8%. Find out the current market price, price after 1 year and price after 2 years from today.

Foreign Exchange Management

11. The ¥den, a dealer in foreign exchange have the following positions in US\$ on 31st March, 2008.

	US\$
Balance in the Nostro A/c (Credit)	1,00,000

Opening position over bought	50,000
Purchased a bill on New York	80,000
Sold forward TT	60,000
Forward purchase contract cancelled	30,000
Remitted by TT	75,000
Draft on New York cancelled.	30,000

What steps would be taken by ¥den, if it is required to maintain a Credit Balance of US\$ 30,000 in the Nostro A/c and keep as overbought position on US \$10,000?

Cross Rates of Foreign Exchange

12. You export goods worth Yen 10,00,000 to your customer at ¥ 3.5= Re.1 & covered yourself in Foreign Exchange Market on the same day, when exchange rates were:

US\$ = ¥ 144 ¥150

Local inter bank market rates for US \$ were

Spot 1 US \$ = Rs.40.50 Rs.40.60

Calculate cover rate & ascertain the profit or loss in the transaction ignore brokerage.

Hedging Payable

13. On 1st March, 2008, A Inc, a US company bought certain products from Tapland. The currency of Tapland is Tapa. The price agreed was Tapa 900000 payable on 31st May, 2008.

The spot price on 1st March, 2008 was 10 Tapa per US \$. The expected future spot rate was 8 Tapa per US \$; and the 3-months forward rate is 9 Tapa per US\$. The US and Tapland annual interest rate are 12% and 8% respectively. The tax rate for both countries is 40%. A Inc., is considering three alternatives to deal with the risk of exchange rate fluctuations.

- To enter the forward market to buy Tapa 9,00,000 at 3 months forward rate.
- To borrow appropriate amount in \$ to buy Tapa at current spot rate and to invest the Tapa purchased for 3 months.
- To wait until May 31, 2008, and buy Tapas at whatever spot rate prevailing at that time.

Which alternative the A Inc. should follow in order to minimize its cost of future payment of Tapas.

Forward Cover

14. At the end of August, 2008, an Indian company, an exporter has an export exposure of 5,00,000 H.K.\$ due at the end of September, 2008. HK \$ is not directly quoted against

India rupee. The current spot rates are $\text{INR/USD} = \text{Rs.46}$ and $\text{HK\$/USD} = \text{HK\$2.3}$. It is estimated that HK\$ will depreciate to HK \$2.5 level and Indian Rupee to appreciate against US\$ to Rs.47. One month forward rate at the end of August are $\text{HD\$/USD} = \text{HK\$ 2.45}$ and $\text{INR/USD} = \text{Rs.47.04}$.

- (i) Calculate expected loss if hedging is not done. How the position will change with the company taking a forward cover?
- (ii) If spot rate on 30th September, 2008 are eventually $\text{HK\$/USD} = \text{HK\$ 2.52}$ and $\text{INR/USD} = 47.88$ is the decision to take forward cover justified.

SWAP

15. Electrometic Limited enjoys a high rating in Indian money market due to its strong financials and track record. Tim software Ltd., is a new but a growing company. Electrometic and Tim Software Ltd., can obtain loans at the rate given below:

	CD (Company Deposit) Fixed Rate	Mumbai Inter-bank money market with variable rate
Electronic Ltd.	$T^* + 0.50$	$\text{MIBOR} + 0.10$
Tim Software Ltd.	$T^* + 2.10$	$\text{MIBOR} + 060$

*Here T means the risk free 15 years Government Bonds.

Electrometic Ltd., wants to take a loan at variable rate, while Tim Software wants to take loan at fixed rate. The two companies approached a bank to design a suitable Swaps.

- (a) If the bank wants to have a profit of 0.20% to be contributed from Tim Software's (out of total profits of Swap) share of Swap benefit, what would be the two agreements that the bank will enter with these two companies.
- (b) What are the likely costs of debts to the two companies.

Multinational Capital Budgeting

16. An Indian company is planning to set up a subsidiary in US. The initial project cost is estimated to be US \$40 million; Working Capital required is estimated to be \$4 million.

The finance manager of company estimated the data as follows:

Variable Cost of Production (Per Unit Sold)	\$2.50
Fixed cost per annum	\$ 3 Million
Selling Price	\$ 10
Production capacity	5 million units
Expected life of Plant	5 years
Method of Depreciation	Straight Line Method (SLM)
Salvage Value at the end of 5 years	NIL

The subsidiary of the Indian company is subject to 40% corporate tax rate in the US and the required rate of return of such types of project is 12%. The current exchange rate is Rs.48/US\$ and the rupee is expected to depreciate by 3% per annum for next five years.

The subsidiary company shall be allowed to repatriate 70% of the CFAT every year along with the accumulated arrears of blocked funds at the end of 5 years, the withholding taxes are 10%. The blocked fund will be invested in the USA money market by the subsidiary, earning 4% (free of taxes) per year.

Determine the feasibility of having a subsidiary company in the USA, assuming no tax liability in India on earnings received by the parent company from the US subsidiary.

Portfolio Management

17. A Ltd. Has an expected return of 22% and standard deviation of 40%. B Ltd. Has an expected return of 24% and standard deviation of 38%. A Ltd. has a beta of 0.86 and B Ltd. A beta of 1.24. The correlation coefficient between the return of A Ltd. and B Ltd. Is 0.72. If standard deviation of the market return is 20%. Suggest:
- Is investing in B Ltd. better than investing in A Ltd.
 - If you invest in B Ltd. 30% and 70% in A Ltd., what is your expected rate of return and portfolio Standard Deviation.
 - What is expected return from market portfolio and how much is the free rate?
 - What is the beta of Portfolio expected if A Ltd.'s weight is 70% and B Ltd's weight is 30%.

Portfolio Management

18. A Ltd., pays no taxes and is entirely financed by equity shares. The company's equity has a Beta of 0.6 and is expected to earn 20%. The company has now decided to buy back half of the equity shares by borrowing an equal amount. If the debt yield a risk free return of 10%. Calculate.
- The beta of the equity shares after the buy back.
 - The required return and risk premium on the equity shares before the buy back.
 - The required return and risk premium on the equity shares after the buyback.
 - The required return on debt.

Adjusted Present Value

19. Moon Engineering Ltd. Has a Cost of Equity (k_e) of 17%, Cost of Debt (k_d) 12% and debt ratio of 40%. A new investment is under consideration. The project will need a cash outlay of 120 crore. It is expected that an annual operating profit of Rs.35 crore shall be generated for 8 years. In addition to this, project shall require Rs. 3 crore each year for net working capital and capital expenditure. The company will be able to borrow 50% of the project's cost from a financial institutions. The interest rate is 12% p.a. and the loan

will be repaid in five equal instalments after 3 years at end of year. The tax rate applicable is 30%. Assuming that SLM of depreciation and with no salvage value.

- (a) What will be NPV of the project.
- (b) Should Moon Engineering Ltd. accept the project.

Mutual Fund

20. Templan Mutual Fund had Rs. 10,00,00,000 as on Jan. 1, 2007. The fund had issued 1,00,00,000 units of Rs.10 each. It made following investments.

	Rs.
5,00,000 Equity Shares of Rs.100 each @ Rs.160/-	8,00,00,000
8% Central Government Securities	80,00,000
9% Debentures (unlisted)	50,00,000
10% Debentures (Listed)	50,00,000
Total	9,80,00,000

During the year, dividends of Rs.120,00,000 were received on equity shares. Interest on all types of debt securities was received as and when due. At the end of the year, the equity shares and 10% debentures are quoted at Rs. 175 and Rs. 90 respectively. Find out the NPV per unit given that operating expenses incurred during the year amounted to Rs.50,00,000. Also find out the NPV, if the mutual fund had distributed a dividend of Rs.0.80 per unit during the year to the unit holders.

Assume that no load was charged.

Merger and Acquisition

21. ABC Ltd., is considering merger with PQR Ltd. ABC Ltd.'s shares are currently traded at Rs. 20. It has 2,50,000 shares outstanding and its earnings after taxes (EAT) amount to Rs. 5,00,000. PQR Ltd., has 1,25,000 shares outstanding; its current market price is Rs. 10 and its EAT are Rs. 1,25,000. The merger will be effected by means of a stock swap (exchange). PQR Ltd., has agreed to a plan under which ABC Ltd., will offer the current market value of PQR Ltd.'s shares:
- (i) What is the pre-merger earnings per share (EPS) and P/E ratios of both the companies?
 - (ii) If PQR Ltd.'s P/E ratio is 6.4, what is its current market price? What is the exchange ratio? What will ABC Ltd.'s post-merger EPS be?
 - (iii) What should be the exchange ratio, if ABC Ltd.'s pre-merger and post-merger EPS are to be the same?

Merger and Acquisition

22. Fuller Plc. is intending to acquire Felicity Plc. by merger and the following information is available in respect of the companies:

	Fuller Plc.	Felicity Plc.
Number of equity shares	1,00,000	60,000
Earnings after tax (£)	5,00,000	1,80,000
Market value per share (£)	42	28

Required:

- What is the present EPS of both the companies?
- If the proposed merger takes place, what would be the new earning per share for Fuller Plc.? Assume that the merger takes place by exchange of equity shares and the exchange ratio is based on the current market price.
- What should be exchange ratio, if Felicity Plc. wants to ensure the earnings to members are as before the merger takes place?

Foreign Exchange Management

23. On July 28, 2008 Unicon (an importer) requested a bank to remit Singapore Dollar (SGD) 2,50,000 under an irrevocable LC. However, due to bank strikes, the bank could effect the remittance only on August 4, 2008. The interbank market rates were as follows:

	July, 28	August 4
Bombay US\$1	= Rs. 45.85/45.90	45.91/45.97
London Pound 1	= US\$ 1.7840/1.7850	1.7765/1.7775
Pound 1	= SGD 3.1575/3.1590	3.1380/3.1390

The bank wishes to retain an exchange margin of 0.125%. How much does the customer stand to gain or lose due to the delay?

24. Write short notes on the following:
- Types of orders.
 - Hypothecation and Pledge;
 - Risk Capital Foundation;
 - Current Cost Accounting;
 - Debt route for foreign exchange funds.
25. Distinguish between:
- ESOS and ESPS
 - Caps and Collars.
 - Factoring and Bill discounting

SUGGESTED ANSWERS/HINTS

1. In the given case, the selling price may be £36 or £38 or £40, and the variable cost of production may be £10 or £12. This would affect the contribution per unit. The entire information can be presented as follows:

If Variable Cost = £10, then contribution is £26 or £28 or £30

If Variable Cost = £12, then contribution is £24 or £26 or £28.

The total expenses are: £4,00,000 + 80,000 = £4,80,000

or, : £4,00,000 + 1,60,000 + 80,000 = £6,40,000.

Units	Contribution per unit		Total Contribution	Expenses	Net Income	Probability	Exp. Value of Contribution
Selling price £36:							
70,000	£ {	26	£18,20,000	£6,40,000	£11,80,000	0.3×0.6=0.18	£2.12,400
		24	16,80,000	6,40,000	10,40,000	0.3×0.4=0.12	1,24,800
	{	26	20,80,000	6,40,000	14,40,000	0.5×0.6=0.30	4,32,000
		24	19,20,000	6,40,000	12,80,000	0.5×0.4=0.20	2,56,000
90,000	{	26	23,40,000	6,40,000	17,00,000	0.2×0.6=0.12	2,04,000
		24	21,60,000	6,40,000	15,20,000	0.2×0.4=0.08	1,21,600
							13,50,800
							=====
Selling price £38:							
60,000	{	28	16,80,000	4,80,000	12,00,000	0.1×0.6=0.06	72,000
		26	15,60,000	4,80,000	10,80,000	0.1×0.4=0.04	43,200
70,000	{	28	19,60,000	6,40,000	13,20,000	0.7×0.6=0.42	5,54,400
		26	18,20,000	6,40,000	11,80,000	0.7×0.4=0.28	3,30,400
90,000	{	28	25,20,000	6,40,000	18,80,000	0.2×0.6=0.12	2,25,600
		26	23,40,000	6,40,000	17,00,000	0.2×0.4=0.08	1,36,000
							13,61,600
							=====

Selling Price £40:

30,000	{	30	9,00,000	4,80,000	4,,20,000	0.4×0.6=0.24	1,00,800
		28	8,40,000	4,80,000	3,60,000	0.4×0.4=0.16	57,600
60,000	{	30	18,00,000	4,80,000	13,,20,000	0.5×0.6=0.30	3,96,000
		28	16,80,000	4,80,000	12,00,000	0.5×0.4=0.20	2,40,000
70,000	{	30	21,00,000	6,40,000	14,60,000	0.1×0.6=0.06	87,600
		28	19,60,000	6,40,000	13,20,000	0.1×0.4=0.04	52,800
							9,34,800

The expected value of profit is maximum at the selling price of £38. So the firm should fix up the price at £38.

2. Working Notes:

(1) Calculation of present value of tax shield on depreciation

(Amount in Rs.)

Period	WDV	Depreciation	PVF (14%)	PV
1	33,00,000	8,25,000	0.877	7,23,525
2	24,75,000	6,18,750	0.769	4,75,819
3	18,56,250	4,64,063	0.675	3,13,242
4	13,92,187	3,48,047	0.592	2,06,044
5	10,44,140	2,61,035	0.519	<u>1,35,477</u>
				18,54,107

$$\begin{aligned}
 \text{Tax Shield} &= \text{Rs.}18,54,107 \times \text{Tax Rate} \\
 &= \text{Rs.}18,54,107 \times 35\% \\
 &= \text{Rs.}6,48,937
 \end{aligned}$$

(2) Present value of tax benefits on Initial Expenditure (Revenue)

$$\begin{aligned}
 &\text{Rs.}80,000 (\text{PV F}_{14\%,1}) \times \text{Tax Rate} \\
 &= \text{Rs.}80,000 \times 0.877 \times 35\% \\
 &= \text{Rs.}24,556
 \end{aligned}$$

(3) Present Value of Salvage Value

$$\begin{aligned}
 &\text{Salvage Value} \times \text{PVF (14\%, 5)} \\
 &= \text{Rs.}3,30,000 \times 0.519 = \text{Rs.}1,71,270
 \end{aligned}$$

STATEMENT OF COMPUTATION OF BREAK EVEN LEASE RENTAL

Cost of Machine (inclusive of CST)		33,00,000
Less: Present value of tax benefit on Depreciation (1)	(6,48,937)	
Present value of tax benefit on Initial Expenses (2)	(24,556)	
Present value of salvage	<u>(1,71,270)</u>	(8,44,763)
Required total PV of after tax lease rent.		24,55,237
PVIFA for 5 years at 14%		3.433
After tax lease rental		715187
Before tax lease Rent	$\left[\frac{\text{Rs.7,15,187}}{1-0.35} \right]$	<u>11,00,288</u>

3. (a) (i) PV of cash outflows under leasing alternative.

Year	After Tax Lease Payment	PVAF (14%, 4)	Total PV
1 – 4	Rs.5,00,000	2.913	Rs.14,56,500

- (ii) Calculation of instalment payable under Buying option.

Present Value Annuity Factor at 16% for 4 years. 2.798

$$\text{Value of Instalment} = \frac{\text{Rs.50,00,000}}{2.798} = \text{Rs.17,86,990}$$

- (iii) Calculation of Interest component in Installments and tax benefit on interest component.

(Amount in Rs.)

Period	Loan in Beginning	Loan installment	Interest @ 16%	Principal Repayment	Principal outstanding	Tax benefit on Interest
1	50,00,000	17,86,990	8,00,000	9,86,990	40,13,010	4,00,000
2	40,13,010	17,86,990	6,42,082	11,44,908	28,68,102	3,21,041
3	28,68,102	17,86,990	4,58,896	13,28,094	15,40,008	2,29,448
4	15,40,008	17,86,990	2,46,982	15,40,008	Nil	1,23,491
			(Balancing Figure)			

(iv) Calculation of Tax benefits on interest and Depreciation.

Period	Interest	Depreciation	Total	Tax Benefit
1	8,00,000	7,50,000	15,50,000	7,75,000
2	6,42,082	7,50,000	13,92,082	6,96,041
3	4,58,896	7,50,000	12,08,896	6,04,448
4	2,46,982	7,50,000	9,96,982	4,98,491

Present value of Cash Outflow under buying alternatives

Year	Loan instalment	Tax Savings on Interest and Depreciation	Net outflow	Salvage Value	PVF (14%)	Present value
1	17,86,990	7,75,000	10,11,990	-	0.877	8,87,515
2	17,86,990	6,96,041	10,90,949	-	0.769	8,38,940
3	17,86,990	6,04,448	11,82,542	-	0.675	7,98,216
4	17,86,990	4,98,491	12,88,499	-	0.592	7,62,791
5		-	-	(20,00,000)	0.592	(11,84,000)
						21,03,462

Recommendation: The lease option is financially better.

(b) (i) Determination of Cash Flow after tax

	Rs.
Lease Rent receivable	10,00,000
Less: Depreciation	7,50,000
EBIT	2,50,000
Less: Tax @ 50%	1,25,000
EAT	1,25,000
Add: Depreciation	7,50,000
	8,75,000

(ii) Determination of NPV

Particulars	Year	Cash Flows	PVF @ 14%	Prevent Value
Purchase of computer	0	(50,00,000)	1.00	(50,00,000)
Annual Cash Inflow	1-4	8,75,000	2.914	25,49,750

Salvage Value	4	20,00,000	0.592	<u>11,84,000</u>
				<u>(12,66,250)</u>

Recommendation: The proposal is not financially viable.

(c) Let desired CFAT to earn a return of 16% is X, then

$$\text{Rs.}50,00,000 = \sum_{t=1}^4 \frac{X}{1+0.16} + \frac{\text{Rs.}20,00,000}{(1+0.16)^4}$$

$$\text{Rs.}50,00,000 = X (2.798) + \text{Rs.}20,00,000 (0.552)$$

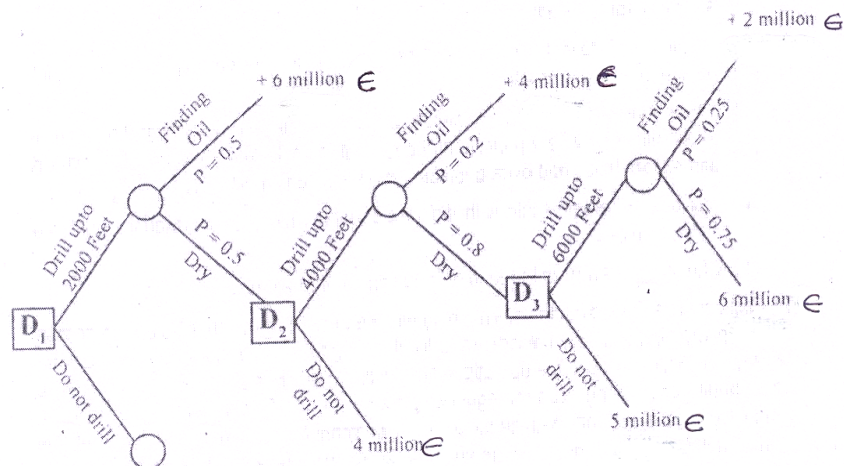
$$\text{Rs.}50,00,000 = 2.798 X + 11,04,000$$

$$\text{Rs.}38,96,000 = 2.798 X$$

$$X = \text{Rs.}13,92,423$$

Thus, lease rent for IRR of 16% should be Rs.13,92,423.

4. The given data can be easily represented by the following decision tree diagram



There are three decision points in three indicated by D_1 , D_2 and D_3

Using rolling back technique, we shall take the decision at decision point D_3 first and then it to arrive decision at a decision point D_2 and then use it to arrive decision at a point D_1 .

Statement showing evaluation of decision at D₃ Point

Decision	Event	Prob.	PV. Of Oil (if found) (Million €)	Expected PV of Oil (if found) (Million €)
1. Drill upto 6000 feet. }	Finding oil	0.25	+2	0.5
	Dry	0.75	-6	<u>-4.50</u>
				<u>-4.00</u>
2. Do not Drill				-5.00

Since the expected PV of Oil (if found) on drilling upto 6000 feet 4 million Euro is greater than the cost of not drilling 5 million. Therefore, small oil should drill upto 6000 feet.

Statement showing the evaluation of decision at point D₂

Decision	Event	Prob.	P.V. of Oil (if found) (Million €)	Expected P.V. of Oil (if found) (Million €)
1. Drill upto 4000 feet.	Find Oil	0.2	4	0.80
	Dry	0.8	-4	<u>-3.2</u>
				<u>-2.4</u>
2. Do not Drill				<u>-4.00</u>

Since the expected P.V. of Oil (if found) on drilling upto 4000 feet 2.4 million € which is greater than the cost of not drilling -4.00 Million €. Therefore, small oil should drill upto 4000 feet.

Statement showing the evaluation of decision at D₁

Decision	Event	Prob.	P.V. of Oil (if found) (Million €)	Expected P.V. of Oil (if found) (Million €)
1. Drill upto 2000 feet.	Finding Oil	0.50	6	3.0
	Dry	0.50	-2.4	<u>-1.20</u>
				<u>1.80</u>
2. Do not Drill				NIL

Since the Expected P.V. of Oil (if found) on drilling upto 2000 feet is 1.8 Million € (positive). Small oil should drill upto 2000 feet.

5. Assignment of Random Number.

Sales (Units)	Prob.	Cumulative Prob.	Random Number assigned.
2700	0.10	0.10	00-09
2800	0.15	0.25	10-24
2900	0.20	0.45	25-44
3000	0.35	0.80	45-79
3100	0.15	0.95	80-94
3200	0.05	1.00	95-99

Statement Showing Profit/Loss position on Producing 3000 items and 2900 items per day.

Day	Random Number	Estimated Sales	Profit/Loss today when production = 3000 per	Profit/loss per day when Production = 2900 item per day
1	11	2800	$2800 \times 1-200 \times 1.50 = 2500$	$2800 \times 1-100 \times 1.50 = 2650$
2	98	3200	$3000 \times 1-200 \times 0.50 = 2900$	$2900 \times 1-300 \times 0.50 = 2750$
3	66	3000	$3000 \times 1 = 3000$	$2900 \times 1-100 \times 0.50 = 2850$
4	97	3200	$3000 \times 1-200 \times 0.50 = 2900$	$2900 \times 1-300 \times 0.50 = 2750$
5	95	3200	$3000 \times 1-200 \times 0.50 = 2900$	$2900 \times 1-100 \times 0.50 = 2750$
6	01	2700	$2700 \times 1-300 \times 1.50 = 2250$	$2700 \times 1-200 \times 1.50 = 2400$
7	79	3000	$3000 \times 10 = 3000$	$2900 \times 1-100 \times 0.50 = 2850$
8	12	2800	$2800 \times 1-200 \times 1.50 = 2500$	$2800 \times 1-100 \times 1.50 = 2650$
9	17	2800	$2800 \times 1-200 \times 1.50 = 2500$	$2800 \times 1-100 \times 1.50 = 2650$
10	21	2800	$2800 \times 1-200 \times 1.50 = \underline{2500}$	$2800 \times 1-100 \times 1.50 = \underline{2650}$
			<u>26,950</u>	<u>26,950</u>

The total profit for next 10 days will be Rs.26,950, if company manufactures 3000 items per day. In case company decides to produce 2900 items per day profit shall remain unchanged.

6. (a) Determination of Economic value added (EVA).

	(\$ in Million)
Net operating profit before taxes	18.00
Less: Corporate Taxes (0.35)	<u>6.30</u>
Net Operating profit after tax	11.70

Less: Cost of Capital Employed (\$ 60.5 Million x 0.120)	<u>7.26</u>
Economic Value ADDED	<u>4.44</u>

(b) Determination of Market Value Added (MVA).

Market value per share	\$500
Number of equity shares outstanding	1,00,000
Total Market Value (\$ Million)	50.00
Equity Funds (\$ 10 Million + \$ 32.5 Millions)	42.50
Market value added (\$50 - \$ 42.50) Millions	\$7.50 Millions

7.	Offer I	Offer II
Amount to be raised (A)	Rs.200,00,000	Rs.200,00,000
Offer Ratio	1:2	1:4
Existing shares	10,00,000	10,00,000
New Shares (B) 10,00,000/2 and 10,00,000/4	5,00,000	2,50,000
Right Price (A÷B)	Rs.40	Rs.80
Existing value @selling price i.e. Rs. 130	Rs.260	Rs.520
Total wealth	Rs.300	Rs.600
No. of Shares (Total)	3	5
Ex-right Price	100	120
Value of Right [$MP_{ER} - OP$] ÷ No	Rs. 30	Rs. 10

8. Market Price of the share after one year

$$P_1 = P_0 (1+K_e) - D_1$$

$$= \text{Rs.}200 (1+0.14) - 18 = \text{Rs.}210$$

Return on Equity Shares:

$$\text{Capital Gain} = \text{Rs.}210 - \text{Rs.}200 = \text{Rs.}10$$

$$\text{After Tax Gain} = \text{Rs.}10(1 - 0.20) = \text{Rs.}8$$

$$\text{Dividend Income} = \text{Rs.}18$$

$$\text{Total Income} = \text{Rs.}18 + \text{Rs.}8 = \text{Rs.}26.$$

$$\text{After Tax Return} = \frac{\text{Rs.}26}{200} \times 100 = 13\%$$

9. Dividend per share	Rs.50
Market Price Per Share	Rs.400
Equity Capitalization Rate (50/400)	12.5%
Existing Profit (5,000 × Rs. 50)	Rs. 2,50,000
Increase in Profit	<u>Rs. 65,000</u>
	<u>Rs. 3,15,000</u>
No. of equity shares after right issue 2:5	7000
New Dividend Per Share	Rs. 45
New Market Price Per Share $\left(\frac{45}{.125} \right)$	Rs.360

Gain to Shareholders

New market value (7000 × 360)	25,20,000
Less: Existing Value (5,000 × 400)	20,00,000
Less: Cost of New Project	<u>2,00,000</u>
	<u>3,20,000</u>

The gain to shareholders can also be found as the NPV of the new project as under.

Annual cash inflow	Rs.65,000
Capitalisation Rate	.125
PV of Cash flow series (Rs.6500 ÷ 0.125)	Rs.5,20,000
Less: Cost of Project	<u>Rs.2,00,000</u>
Net Gain to Shareholders	<u>Rs.3,20,000</u>

10. The market price on various dates can be found as the present value (at 8%) of the remaining payments after that date. So, the market price would be:

$$\begin{aligned}
 \text{Current Price} &= \text{Interest} \times \text{PVAF}_{(8\%,3)} + \text{R.V.} \times \text{PVF}_{(8\%,3)} \\
 &= \text{Rs.}70 \times 2.577 + \text{Rs.}1,000 \times 0.794 \\
 &= 974.39
 \end{aligned}$$

$$\begin{aligned}
 \text{After one year} &= \text{Interest} \times \text{PVAF}_{(8\%,2)} + \text{RV} \times \text{PVF}_{(8\%,2)} \\
 &= \text{Rs.}70 \times 1.783 + \text{Rs.}1,000 \times 0.857 = \text{Rs.} 981.81
 \end{aligned}$$

$$\text{After 2 years} = (\text{Int.} + \text{RV}) \text{PVF}_{(8\%,1)}$$

$$= (70 + 1,000) \times 0.926$$

$$= \text{Rs.}990.82$$

11. Exchange Position/Currency Position

Particulars	Purchase US\$	Sale US\$
Opening Balance over bought	50,000	-
Bill on New York	80,000	-
Forward Sales – TT	-	60,000
Cancellation of Forward Contract	-	30,000
T.T. Sales	-	75,000
Draft on New York Cancelled	30,000	
	1,60,000	1,65,000
Closing Balance Oversold	5,000	-
	1,65,000	1,65,000
Cash Position (Nostro A/c)	Credit	Debit
Opening balance credit	1,00,000	-
TT Sales	-	75,000
	1,00,000	75,000
Closing Balance Credit	-	25,000
	<u>1,00,000</u>	<u>1,00,000</u>

The dealer has to buy spot TT \$ 5000 to increase the balance in Nostro account to \$30000.

This would bring down the oversold position on US\$ as Nil.

Since the dealer requires an over bought situation of US \$10000, it has to buy forward US\$ 10,000.

12. The bank (Dealers) covers itself by buying from the market at selling price.

Rupees - \$ Selling Rate	40.60
\$ - ¥	144.00
Rupee - ¥ Cross rates	$\frac{40.60}{144.00} = 0.2819444$

Profit/Loss to the Bank

Amount received from customer ($\text{¥ } 10,00,000 \times 0.2857143$)	2,85,715
Amount paid on cover deal ($\text{¥ } 10,00,000 \times 0.2819444$)	<u>2,81,944</u>
Profit	<u>3,771</u>

13. Option (A): Forward hedge

Cost at forward rate = \$1,00,000 ($9,00,000/9$)

Cost at current spot rate = \$90,000 ($9,00,000/10$)

Exchange Loss = \$1,00,000 - \$ 90,000 = \$ 10,000

Tax shield on exchange loss = \$10,000 $\times$ 0.40 = \$4000

Net Cost of using forward market = \$1,00,000 - \$4000 = \$96000

Option (B): Money Market Hedge

Post tax interest rates in US and Tapland are 7.2% and 4.8% respectively. Each Tapa deposited at 4.8% now grows into Tapa 1.012 in 3 months.

A Inc, should buy and invest Tapa 8,89,328 ($9,00,000/1.012$) for 3 months

Spot purchase and deposit at 4.8% (Tapas)	8,89,328
Payment accumulated of Tapa deposits to make payment to Tapland Supplier	9,00,000
Exchange rate for spot purchase	\$1 = 10 Tapa
Borrow US \$ at 7.2% to finance spot purchased	88,932.80

Repay \$ loan with interest ($88,932.80 \times 1.018$)	90,533.59
--	-----------

Option (C) No hedge

Cost at future spot Rate = \$ 1,12,500 ($9,00,000/8$)

Cost at Current spot rate = \$90,000 ($9,00,000/10$)

Exchange loss = \$1,12,500 - \$90,000 = \$22,500

Tax shield on exchange loss = \$22,500 $\times$ 0.40 = \$9000

Net cost if not hedged = \$1,12,500 - \$9,000 = \$1,03,500.

The money market hedge (Option B) is best.

14. HK\$/INR Spot Rate (Actual at the end of August)

2.3 HK\$ = 1 US \$ = Rs.46.

$$\text{HK\$} = 46/2.3 = \text{INR}20$$

HK\$ / INR Expected Rate (At the end of September)

$$2.5 \text{ HK\$} = 1 \text{ US\$} = \text{Rs.}47$$

$$\text{HK\$} = 47/2.5 = \text{Rs.}18.8$$

Expected Loss without forward cover

$$= \text{HK\$} 5,00,000 \times (\text{Rs.}20 - \text{Rs.}18.8) = \text{Rs.}6,00,000$$

HK\$ /INR Forward Rate (To be exercised at the end of September)

$$2.45 \text{ HK\$} = 1 \text{ US\$} = \text{Rs.}47.04$$

$$1 \text{ HK\$} = \frac{47.04}{2.45} = \text{Rs.}19.20$$

Expected loss with forward cover

$$= \text{HK\$} 5,00,000 (\text{Rs.}20 - \text{Rs.}19.20)$$

$$= \text{Rs.}4,00,000$$

HK\$/Rs. Spot Rate (Actual at the end of September)

$$2.52 \text{ HK\$} = 1 \text{ US\$} = \text{Rs.}47.88$$

$$1 \text{ HK\$} = \frac{47.88}{2.52} = \text{Rs.}19$$

$$\text{Actual loss without forward cover HK\$} 5,00,000 (\text{Rs.}20 - \text{Rs.}19) = \text{Rs.}50,00,000$$

Thus decision of forward cover is justified.

15. Electrometetics Ltd., has a comparative advantage in the fixed rate market of 1.6% per annum but wants to take loan at variable rates. In variable rate (floating rate) market the comparative advantage is of 0.50%. So, under swap arrangement there will be a total benefit of 1.6% - 0.5% = 1.1%.

(a) Electrometetics will raise money from the fixed rate market and Tim Software will raise money from the floating rate market. The bank will make an agreement with Electrometetics, under which bank will borrow fixed rate money and will lend floating rate money. Similarly, bank will make an arrangements with Tim Software for borrowing at floating rate and lending at fixed rate.

(b) As the total swap benefit is 1.1%, 0.55% benefit belongs to each party. The bank's share is 0.20% of Tim Software's share of benefit. As a result, Tim Software's share of profit will decrease to 0.35% per annum; Electrometetics is gaining 0.55% per annum.

So, the likely cost of debt for Electrometetic will be MIBOR – 0.45% per annum and the cost of debt for Tim Software will be (T+1.75)% per annum.

16. Working Notes:

(1)	Cash Outflow (Initial)	(Figures in Million)
	Cost of Plant & Machinery	\$40
	Working Capital Requirement	\$4
		\$44
	Cash outflow in Rs. (Millions)	2112

		(Figure in Million \$)
(2)	Annual Cash Inflow	
	Sales Revenue (5 Million X \$10)	50.00
	Less: Costs	
	Variable Cost (5 Million units × \$2.5)	\$12.5
	Fixed Cost	\$3
	Depreciation (\$40 Million/ 5year)	<u>\$8</u> 23.50
	Earning before tax	26.50
	Less: Taxes (40%)	10.60
	Earning after tax	15.90
	Add: Back Depreciation	8.00
		23.90
(3)	Terminal year Cash Flows	
	Release of Working Capital	\$4 Million
	Salvage Value	Nil
		\$4 Million

Calculation of exchange Rate over a period of 5 years.

	Year	Rate Expected
(4)	0	= 48.00
	1	$48 \times \frac{103}{100} = 49.44$

$$\begin{array}{rcl}
 2 & 49.44 \times \frac{103}{100} = & 50.9232 \\
 3 & 50.9232 \times \frac{103}{100} = & 52.4509 \\
 4 & 52.4509 \times \frac{103}{100} = & 54.0244 \\
 5. & 54.0244 \times \frac{103}{100} = & 55.6451
 \end{array}$$

(5) Calculation of Repatriable/Accessible Funds

Period	Particulars	Millions\$
1-4 years	Operating Cash Flow After Tax	23.90
	Less: Retention	7.17
	Repatriable amount	16.73
	Less: Withholding Tax	1.673
	Accessible Funds	15.057
5 year	Operating Cash Flow After Tax	23.90
	Less: Withholding Tax	2.39
		21.51
	Add: Repatriation of Blocked Funds*	27.40
	Accessible Funds	48.91
*Future Value of Blocked Funds of \$7.17 Million shall be computed as follows:		
	Value of Funds blocked from year 1-4	7.17 M\$
	PV AF (4%, 4)	4.246
	Value of Funds at end	30.4438 M\$
	Withholding Tax	3.0444 M\$
		27.3994 M\$

Statement Showing Net Present Value of the Project

Period	Particulars	Cash Flow		PVF@12%	PV
		US\$	Exchange Rate		
0	Initial Outflow	44	48	(2112)	(2112)
1	Annual Cash Flow	15.057	49.44	744.42	0.893
2	"	15.057	50.9232	766.75	0.797
3	"	15.057	52.4509	789.75	0.712
4	"	15.057	54.0244	813.45	0.636
5	"	48.91	55.6451	2721.60	0.567
6	Release of WC	4.00	55.6451	222.58	0.567
					1912.87

Decision: Since NPV of the project is positive, the Indian Company should go for its decision of subsidiary in US.

17. Data Given

Particulars	A Ltd.,	B Ltd.
Expected Return (k)	22%	24%
Standard Deviation (σ)	0.40	0.38
Beta (β)	0.86	1.24

Coefficient of Correlation (r_{AB}) = 0.72

Standard Deviation of Market = $\sigma_M = 0.20$

(1) Comparing to A Ltd., B Ltd., produces higher return for lower risk. Investing in B Ltd., is therefore better than investing in A Ltd.

(2) Expected Return from Portfolio

$$= 0.7 \times 22\% + 0.3 \times 24\% = 22.6\%$$

$$\text{Portfolio variance} = \sigma_p^2$$

$$\sigma_p^2 = (0.7)^2 (0.4)^2 + (0.3)^2 (0.38)^2 + 2(0.7)(0.3)(0.4)(0.38)(0.72)$$

$$\sigma_p^2 = 0.137$$

$$\sigma_p = \text{Portfolio Risk} = \sqrt{0.137}$$

- (3) Expected Return from Market Portfolio (R_m) and risk free rate (R_f)

$$K(A) = 22 = R_f + \beta (R_m - R_f) = R_f + 0.86 (R_m - R_f)$$

$$K(B) = 24 = R_f + \beta (R_m - R_f) = R_f + 1.24 (R_m - R_o)$$

$$2 = 0.38(R_m - R_f)$$

$$R_m - R_f = 5.263$$

$$K(A) = 22 = R_f + \beta(R_m - R_f)$$

$$22 = R_f + 0.86 \times 5.263$$

$$22 = R_f + 4.526$$

$$R_f = 17.474$$

$$(R_m - R_f) = (R_m - 17.474) = 5.263$$

$$R_m = 17.474 + 5.263 = 22.737$$

- (4) Portfolio beta (β_p)

$$\beta_p = 0.7 \times 0.86 + 0.3 \times 1.24 = 0.974$$

18. (1) The β of the equity share after the buyback. The company was unleveraged before the buyback. Leverage after buyback is 50:50.

$$\beta (\text{Levered Equity}) = \beta (\text{unlevered Equity}) \left[1 + \frac{D(1-t)}{E} \right]$$

$$\beta (\text{Levered Equity}) = 0.6 \left[1 + \frac{50}{50} (1 - 0) \right] = 1.20 (\beta \text{ after buyback}).$$

- (2) The required return and risk premium on the equity share before the buyback.

$$\text{Required return after buyback} = 20\%$$

$$\text{Risk Premium} = \beta (R_m - R_f) = \text{Required Return} - R_f$$

$$= 20\% - 10\% = 10\%.$$

- (3) The required return and risk premium on the equity shares after buyback.

$$\text{Since before buyback } \beta = 0.6.$$

$$\text{Risk Premium} = 0.6 (R_m - 10\%) = 10\%.$$

$$R_m = 26.67\%$$

Market Risk Premium = $(R_m - R_f) = 26.67\% - 10\% = 16.67\%$.

Required equity return after buyback = $R_f + \beta (R_m - R_f)$

= $10\% + 1.20 (26.67\% - 10\%) = 30\%$.

Risk premium on equity returns after buyback = $30\% - 10\% = 20\%$.

Overall rate of return required after buyback

= $0.50 \times 30\% + 0.50 \times 10\%$.

= 20% (Same as before buyback)

(4) Required return on Debt

$R_f = 10\%$ (Assuming that to be risk free).

19. (a) Cost of Capital

$K_a = 0.17 \times 0.60 + 0.12 \times 0.40 = 0.15$ i.e. 15%

The Free Cash Flow (FCF) shall be as follows:

$FCF = (EBIT - \text{Depreciation}) (1-T) + \text{Depreciation} - (NWC + \text{Capital Expenditure})$

= $(35-15) (1-0.30) + 15-3 = 26$ crores.

The Base NPV of the project shall be as follows:

= $-120 + FCF \times PVAF (15\%, 8)$

= $-120 + 26 \times 4.487$ crore = -Rs.3.34 crore.

Without considering the financing effect, the project is unattractive as it has negative base NPV.

Present Value of Interest Tax Shield

Year	Loan outstanding Rs. in crores.	Interest at 12% (Rs. in crores)	Interest Tax Shield (Rs. in crores)	PVF @ 12%	Present Value (Rs. In crores)
1	60	7.20	2.16	0.893	1.93
2	60	7.20	2.16	0.797	1.72
3	60	7.20	2.16	0.712	1.54
4	48	7.20	2.16	0.636	1.37
5	36	5.76	1.73	0.567	0.98
6	24	4.32	1.30	0.506	0.66
7	12	2.88	0.86	0.452	0.39
8	0	1.44	0.43	0.404	0.17
Present Value of Tax Shield					8.76

The Adjusted Present Value of the Project.

= Base NPV + PV of Interest Tax Benefit (Shield)

= -3.34 + 8.76 = Rs.5.42 crores.

Thus project has positive APV, hence should be accepted.

20. In order to find out the NPV, the cash balance at the end of the year is calculated as follows:

	(Amount in Rs.)
Cash balance in the beginning (Rs.10 crores – Rs.9.80 crore)	20,00,000
Dividend Received	1,20,00,000
Interest on 8% on Government Securities	6,40,000
Interest on 9% on Debentures	4,50,000
Interest on 10% on Debentures	5,00,000
	1,55,90,000
Less: Operating Expenses	50,00,000
	1,05,90,000

Calculation of NPV

Cash Balance	1,05,90,000
8% Government Securities (at par)	80,00,000
5,00,000 Equity Shares @ Rs.175	875,00,000
9% Debentures (Unlisted at Cost)	50,00,000
10% Debenture @ Rs.90	45,00,000
	11,55,90,000
No. of units	1,00,00,000
NAV per unit	11.559
Calculation of NAV, if dividend of Rs.0.80 is paid.	
Net Asset (Rs.11,55,90,000 – 80,00,000)	10,75,90,000
Number of Units	1,00,00,000
NAV.	10.759

21. (i) Pre-merger EPS and P/E ratios of ABC Ltd. and PQR Ltd.

Particulars	ABC Ltd.	PQR Ltd.
Earning after taxes	5,00,000	1,25,000
Number of shares outstanding	2,50,000	1,25,000
EPS	2	1
Market Price per share	20	10
P/E Ratio (times)	10	10

- (ii) Current Market Price of PQR Ltd. if P/E ratio is 6.4 = Rs. 1 × 6.4 = Rs. 6.40

$$\text{Exchange ratio} = \frac{\text{Rs. 20}}{6.40} = 3.125$$

Post merger EPS of ABC Ltd.

$$= \frac{\text{Rs. 5,00,000} + \text{Rs. 1,25,000}}{\text{Rs. 2,50,000} + (\text{Rs. 1,25,000}/3.125)}$$

$$= \frac{\text{Rs. 6,25,000}}{\text{Rs. 2,90,000}} = 2.16$$

- (iii) Desired exchange ratio

Total number of shares in post-merged company

$$= \frac{\text{Post - merger earnings}}{\text{Pre - merger EPS of ABC Ltd}} = \frac{\text{Rs. 6,25,000}}{2} = 3,12,500$$

Number of shares required to be issued

$$= 3,12,500 - 2,50,000 = 62,500$$

Therefore, the exchange ratio is

$$62,500 : 1,25,000$$

$$= \frac{62,500}{1,25,000} = 0.50$$

22. (i) Earnings per share = Earnings after tax /No. of equity shares

$$\text{Fuller Plc.} = \text{£ } 5,00,000 / 1,00,000 = \text{£ } 5$$

$$\text{Felicity Plc.} = \text{£ } 1,80,000 / 60,000 = \text{£ } 3$$

- (ii) Number of Shares Felicity Plc.'s shareholders will get in Fuller Plc. based on market value per share = £ 28 / 42 × 60,000 = 40,000 shares

Total number of equity shares of Fuller Plc. after merger = 1,00,000 + 40,000 = 1,40,000 shares

Earnings per share after merger = £ 5,00,000 + 1,80,000 / 1,40,000 = £ 4.86

- (iii) Calculation of exchange ratio to ensure shareholders of Felicy Plc. to earn the same as was before merger:

Shares to be exchanged based on EPS = (£ 3/£ 5) × 60,000 = 36,000 shares

EPS after merger = (£ 5,00,000 + 1,80,000)/1,36,000 = £ 5

Total earnings in Fuller Plc. available to shareholders of Felicy Plc. = 36,000 × £ 5 = £ 1,80,000.

Exchange ratio based on market price is beneficial to shareholders of Felicy Plc. because of higher Earnings available to them i.e. (40,000 shares × £ 4.86 = £ 194,400).

23. On July 28, 2008 the importer customer requested to remit SGD 2,50,000.

To consider sell rate for the bank:

US \$ = Rs. 45.90

Pound 1 = US\$ 1.7850

Pound 1 = SGD 3.1575

Therefore, SGD 1 = $\frac{\text{Rs. } 45.90 \times 1.7850}{\text{SGD } 3.1575}$

SGD 1 = Rs. 25.9482

Add: Exchange margin (0.125%) Rs. 0.0324

Rs. 25.9806

On August 4, 2008 the rates are

US \$ = Rs. 45.97

Pound 1 = US\$ 1.7775

Pound 1 = SGD 3.1380

Therefore, SGD 1 = $\frac{\text{Rs. } 45.97 \times 1.7775}{\text{SGD } 3.1380}$

SGD 1 = Rs. 26.0394

Add: Exchange margin (0.125%) Rs. 0.0325

Rs. 26.0719

Hence, loss to the importer

= SGD 2,50,000 (Rs.26.0719 – Rs.25.9806)

= Rs. 22,825

24. (i) Types of orders: Customers in futures and option markets are able to submit a complete range of dealing instructions to their brokers. This allows them to give precise instructions as to how their orders will be treated. Generally, following types of orders are issued:

- (i) Market order.
- (ii) Limit order.
- (iii) Stop loss order.
- (iv) Guaranteed stop.
- (v) Market-if-touched order.
- (vi) Spread order.
- (vii) Scale order.
- (viii) Opening order.
- (ix) Closing order.
- (x) Limit or Market on Close order.
- (xi) Stop limit order.
- (xii) Good till cancelled (GTC).
- (xiii) Public limit order.

- (ii) Hypothecation and Pledge: Hypothecation is a charge against property for an amount of debt where neither ownership nor possession is passed to the creditor. Thus hypothecation is a legal transaction, whereby goods or other movable assets are made available as security for a debt, without transferring either the property or possession thereof to the lender. It is a useful means of raising loan on the security of movable property which cannot be pledged. It is sometimes granted side by side with pledge. For example, in a manufacturing unit, the stocks of raw material and finished goods can be conveniently pledged and, therefore, for such stocks which can be put under the lock and key of the bank, only pledge limit is sanctioned. But for the goods in process which have to be in the open and the bank cannot take possession, only a hypothecation limit can be considered. The margin in such limit is higher because of the difficulties in verification of the valuation of the stocks. Being only an equitable charge on movable property without possession, hypothecation facility is granted only to first class customers with higher integrity. Normally, banks do not grant hypothecation facilities to new customers.

On the other hand, pledge is bailment of goods (i.e., delivery of goods by one person to another) as security for payment of a debt or performance of a promise. Any kind of articles, goods, valuables, documents or securities may be pledged. In this case the delivery of the goods to the pledgee is essential. The advantage of pledge is that possession of goods passes to the creditor, who has actual control over it. A pledge is also called a pawn. The depositor is known as the pledger and

the other party is known as the pledgee. A valid pledge can also be made by a mercantile agent who is in possession of the goods with the consent of the owner as well as by one of the joint owners of goods. From the banker's point of view, of all the methods of charging the security, pledge is perhaps the most satisfactory. The bank has a right of lien and can retain possession of the goods pledged until payment of principal, interest and other expenses.

- (iii) **Risk Capital Foundation:** This Foundation was registered in 1975 under the Societies Registration Act, 1960. It has been sponsored by the Industrial Finance Corporation of India. The main objective of the Foundation is to encourage new entrepreneurs, particularly technologists and professionals by providing seed capital. During the recent years the Government of India has been laying increasing emphasis on encouragement of new entrepreneurs particularly technologists and professionals for promoting medium-size industries with a view to utilizing their experience and expertise and thus broadening the entrepreneurial base in the Indian industry. One of the most difficult problems faced by these technologists and professionals in their efforts to promote an industrial project is to provide necessary amount of the promoters' contribution which represents their financial stake in the project. This Foundation would provide supplementary finance in the form of interest free personal loans to such professionals and technologists who have reasonable industrial and business experience to enable them to make good the shortfall in the promoter's contribution to the equity capital of medium-size industrial projects promoted by them and which have been granted financial assistance by one or more of the All India Financial Institutions, namely, Industrial Finance Corporation of India, Industrial Development Bank of India and others.

- (iv) **Current Cost Accounting:** Current Cost Accounting is a well-known method of adjusting the financial statements for the effects of changing price level, i.e., inflation.

Generally, two main accounting problems are encountered when there is severe inflation in the economy. These are:

- (a) how to adjust profit/loss shown by the conventional profit & loss statement so that it shows a realistic operating result; and
- (b) how to reflect the shareholders' investment (or the net assets) more truly.
- (c) The current cost accounting method recommends the following adjustments to take profit/loss figure to solve the above problems:
 - (i) Depreciation adjustment.
 - (ii) Cost of sales adjustment.
 - (iii) Monetary working capital adjustment.
 - (iv) Gearing adjustment.

As a result of the above adjustments, fixed assets are shown in the balance sheet at their value to the business and not at their depreciated original cost. Similarly,

stocks are shown in the balance sheet at their value to the business and not at the lower of their original cost and realizable value. The Balance Sheet is then re-drawn on the above basis.

Thus current cost accounting attempts to resolve the accounting problems that arise due to changing price levels.

- (v) Debt route for foreign exchange funds: The following are some of the instruments used for borrowing of funds from the international market:
- (i) Syndicated bank loans: The borrower should obtain a good credit rating from the rating agencies. Large loans can be obtained in a reasonably short period with few formalities. Duration of the loan is generally 5 to 10 years. Interest rate is based on LIBOR plus spread depending upon the rating. Some covenants are laid down by the lending institutions like maintenance of key financial ratios.
 - (ii) Euro bonds: These are basically debt instruments denominated in a currency issued outside the country of the currency. For example, Yen bond floated in France. Primary attraction of these bonds is the shelter from tax and regulations which provide Scope for arbitraging yields. These are usually bearer bonds and can take the form of (i) traditional fixed rate bonds (ii) floating rate notes (FRN's) (iii) Convertible bonds.
 - (iii) Foreign bonds: Foreign bonds, are foreign currency bonds and sold at the country of that currency and are subject to the restrictions as placed by that country on the foreigners' funds.
 - (iv) Euro Commercial Papers: These are short term money market securities usually issued at a discount, for maturity in less than one year.
 - (v) External Commercial Borrowings (ECB's): These include commercial bank loans, buyer's credit and supplier's credit, securitised instruments such as floating rate notes and fixed rate bonds, credit from official export credit agencies and commercial borrowings from multi-lateral financial institutions like IFCI, ADB etc. External Commercial borrowings have been a popular source of financing for most of capital goods imports. They are gaining importance due to liberalization of restrictions. ECB's are subject to overall ceilings with sub-ceilings fixed by the government from time to time.
 - (vi) All other loans are approved by the government.

25 (a) ESOS and ESPS

ESOS	ESPS
1. Meaning	
Employee Stock Option Scheme means a scheme under which the company grants option to employees.	Employee Stock Purchase Scheme means a scheme under which the company offers shares to

employees as a part of public issue.

2. Auditors' Certificate

Auditors' Certificate to be placed at each AGM stating that the scheme has been implemented as per the guidelines and in accordance with the special resolution passed.

No such Certificate is required.

3. Transferability

It is not transferable.

It is transferable after lock in period.

4. Consequences of failure

The amount payable may be forfeited. If the option are not vested due to non-fulfillment of condition relating to vesting of option then the amount may be refunded to the employees.

Not applicable.

5. Lock in period

Minimum period of 1 year shall be there between the grant and vesting of options. Company is free to specify the lock in period for the shares issued pursuant to exercise of option.

One year from the date of allotment. If the ESPS is part of public issue and the shares are issued to employees at the same price as in the public issue, the shares issued to employees pursuant to ESPS shall not be subject to any lock in.

- (b) Caps and Collars: These are derivatives which a finance manager can use to manage his cash-flows effectively and also to reduce the risk involved in case of a major devaluation of currency.

Caps-if a company decides on a particular rate of a currency vis-à-vis the rupee over which it is not ready to take a risk, it can buy a cap at that rate. The cost of caps is very prohibitive and can be offset by selling a 'floor' which is just the opposite of cap. Collar – a combination of caps and floors is called collar.

- (c) Factoring and Bill discounting: The main differences between Factoring and Bill discounting are:

- (1) While factoring is management of book-debts, bill discounting is a sort of borrowing from commercial banks.
- (2) In factoring no grace period is given, whereas in bill discounting grace period

is 3 days.

- (3) For factoring there is no Specific Act, whereas in case of bill discounting Negotiable Instruments Act applies.
- (4) Factoring is a portfolio of complementary financial services whereas bill discounting is usually on case to case basis.
- (5) In factoring the basis of financing is turnover. Whereas in bill discounting it is the security provision as well as the requirement of finance which determine the amount of financing.
- (6) In factoring the risk of bad debts is passed on to the factor, whereas in bill discounting it is still retained by the business.