Paper-12: FINANCIAL MANAGEMENT & INTERNATIONAL FINANCE

Time Allowed: 3 Hours **Full Marks: 100**

The figures in the margin on the right side indicate full marks.

Answer Question No. 1 from Part A which is compulsory and any five questions from Part B.

Working Notes should form part of the answer.

"Whenever necessary, suitable assumptions should be made and indicated in answer by the candidates."

PART A (25 Marks)

1. (a) In each, of the cases given below, one out of four answers is correct. Indicate the correct answer (= 1 mark) and give workings/reasons briefly in support of your answer (= 1 mark) **[2x9=18]**

(i) TEENZA LTD. currently pays a dividend of ₹ 5 per share that is expected to grow at a rate of 10% for the next year, after which it is expected to grow at a rate of 7% forever. What value would you place on the stock of this company if a 15% rate of return is required? (Rounded off your answer to the nearest integer.)

[Given PVIF (15% 1year) = 0.8696]

(A) ₹ 63.05
(B) ₹ 68.75
(C) ₹ 67.10
(D) ₹ 66.98

(ii) The Degree of Operating Leverage (DOL) and the Degree of Financial Leverage (DFL) of ARASKA LTD. are 3 and 1.67 respectively. If the management of the company targets to increase the EPS by 10%, by how much percentage should sales volume be increased? (Rounded off your answer to the nearest integer.)

(A) 5.00%
(B) 3.00%
(C) 2.00%
(D) 4.00%

(iii) SUPER LTD., an export customer who relied on the inter bank rate of ₹/$ 47.50/10 requested his banker to purchase a bill for USD 80,000. What is the rate to be quoted to SUPER LTD., if the banker wants a margin of 0.09%?

(A) ₹ 47.40
(B) ₹ 47.46
(C) ₹ 47.60
(D) ₹ 47.80

(iv) The total asset-turnover ratio and total asset to net-worth of LEENZA LTD. are 2 and 1.75 respectively. If the net-profit margin of the company is 8%, What will be its Return on Equity (ROE)?

(A) 28.0%
(B) 25.5%
(C) 20.0%

(D) 26.4%

(v) The current price of a share of VOLTAS LTD. is ₹ 130. The company is planning to go for rights issue. The subscription price for one rights share is proposed to be ₹ 114. If the company targets that ex-rights value of a share shall not fall below ₹ 126, the number of existing shares required for one rights share will be

(A) 1
(B) 2
(C) 3
(D) None of the above

(vi) Consider the following:

One year euro interest rate is 3% (compounded quarterly).

One year Rupee interest rate is 6% (compounded quarterly).

The forward six months exchange rate is, ₹ 58.82/euro.

According to interest rate parity, the spot exchange rate is

(A) ₹ 57.96
(B) ₹ 58.10
(C) ₹ 58.60
(D) None of the above

(vii) The dividend payout ratio of ANKITA LTD. is 40%. If the company follows traditional approach to dividend policy with a multiplier of 9, the P/E of ANKITA LTD. will be

(A) 4.4
(B) 6.6
(C) 7.1
(D) 7.7

(viii) A company has expected Net Operating Income – ₹ 4,80,000; 10% Debt – ₹14,40,000 and Equity Capitalisation rate - 20% what is the weighted average cost of capital for the company?

(A) 0.15385
(B) 0.13585
(C) 0.18351
(D) 0.15531

(ix) The P/V ratio of a firm dealing in precision instruments is 50% and margin of safety is 40%. Calculate net profit, if the sales volume is ₹ 12,50,000.

(A) ₹ 25,000
(B) ₹ 1,25,000
(C) ₹ 2,50,000
(D) ₹ 1,50,000

(b) State if each of the following sentences is T (= true) or F (= false): [1x7=7]

(i) CVP analysis assumes a linear revenue function and a linear cost function.
(ii) The key issue of the theory of capital structure is to examine whether a business can change its value and cost of capital by changing its capital structure.

(iii) In case of projects which are divisible, capital rationing is done by ranking the projects on the basis of Net Present Value (NPV).

(iv) Leading and netting are internal hedging techniques whereas swap is an external technique for hedging.

(v) If a forward currency is FLAT, it means that the expected spot rate is equal to the forward rate.

(vi) TRIMs are the rules, a country applies to the domestic regulations to promote Foreign investment, often as a part of an Industrial Policy.

(vii) A project is a "One-shot" major undertaking.

Answer:

1. (a)

i.) ₹68.75 (B)

The Present Value of dividend stream to an investor is given as:

₹ 5(1.10) × 0.8696 = ₹ 4.7828

D_2 = ₹ 5 × 1.10 × 1.07 = ₹ 5.885

$$\text{Price Share} = \frac{5.885}{0.15 - 0.07} \times 0.8696 + ₹4.7828$$

= ₹ 68.75

ii.) 2.00% (C)

DTL =DOL × DFL = 3 × 1.67 = 5.01
Therefore, as per the concept of DTL, in order to increase the EPS by 10% the sales volume will be increased by 10 ÷ 5.01 = 2%

iii.) ₹47.46 (B)

Profit margin of 0.09% is to be deducted from the bid rate.

That is 47.50 × 0.0009 = ₹ 0.04

Spot bid rate = 47.50 - 0.04 = ₹ 47.46

iv.) 28.0% (A)

The Return on Equity (ROE):

PAT/Sales × (SALES /TA × TA/Net worth)

= 0.08 × 2.00 × 1.75 = 28% (0.28).

v.) 3 (C)

$$\text{Ex - rights price of a share} = \frac{nP_0 + s}{n+1}$$

On substituting the value,

$$126 = \frac{130n+114}{n+1} \text{ or, } 126n+126 = 130n+114$$

$$\text{or, } n = \frac{12}{4} = 3$$

vi.) ₹ 57.96 (A)

$$\frac{(+0.06)^2}{4} = \frac{1}{S}\frac{(+0.03)^2}{4} \times 58.82$$

$$\text{or, } 1.0302 = \frac{1}{S}(9.7056)$$

S =₹57.96 Thus, Spot Exchange Rate = ₹ 57.96

vii.) 6.6 (B)

According to the traditional Approach

$$P = m\frac{(O+E)}{3}$$

Substituting the value, we get.

$$P = 9\left(0.40E + \frac{E}{3}\right) = E(3.6+3) = 6.6E$$

$$P/E = 6.6$$

viii.) 0.15385 (A)

Market value of equity (s) = $\frac{4,80,000 - 1,44,000\,(I)}{0.20} = 16,80,000$

Total value of firm (V) = S + D = 16,80,000 + 14,40,000 = 31,20,000

$$K_0 = \frac{NOI}{V} = \frac{4,80,000}{31,20,000} = 0.15385$$

ix.) ₹2,50,000 (C)

Margin of Safety	12,50,000 @40%	₹ 5,00,000
BEP Sales	12,50,000 – 5,00,000	₹ 7,50,000
Fixed cost	[BEP (s) × p/v ratio] 7,50,000 × 50%	₹ 3,75,000
Contribution	12,50,000 x 50%	₹ 6,25,000
Profit	6,25,000 – 3,75,000	₹ 2,50,000

1. (b) True/False

(i) True
(ii) True
(iii) False
(iv) True
(v) False
(vi) True
(vii) True

PART B (75 Marks for any five questions)

2 (a) What do you understand by the term "Covenants" in the context of term loan agreements? Give some typical examples.

(b) Akbar Ltd. is an all equity company with an equilibrium market value of ₹ 32.5 million and a cost of capital of 18% per year. The company proposes to repurchase ₹ 5 million of equity and to replace it with 13% irredeemable loan stock.

Akbar's earnings before interest and tax are expected to be constant for the foreseeable future. The company's tax rate is 30%. All profits are paid out as dividends.

Required:

Using the assumptions of Modigliani and Miller explain and demonstrate how this change in capital structure will effect

(i) The market value

(ii) The cost of equity

(iii) The cost of capital of Akbar Ltd.

(c) What are the needs for a range of various performance measures in an organization? What are the various categories of performance indicatory? [5+6+4]

Answer: (a)

COVENANTS: In a Term Loan agreement, the lender often places certain restrictions on the borrowings, which if violated will force the borrower to repay the entire amount of the loan along with interest, as due, immediately. Such restrictions are called "Restrictive Covenants" in the context of term loan agreements.

Covenants are primarily designed to maintain the financial position of the Borrower on par with that existing at the time the loan was granted. In order to protect their interest financial institutions generally impose the restrictive covenants on the borrowers. However, the specifics of covenants may vary depending on the nature of the Project and the financial soundness of the Borrower.

Some typical examples of Covenants may vary depending on the nature of the Project and the financial soundness of the Borrower. Some typical examples of Covenants are as under:-

- Furnishing periodic information about the work breakdown structure of the project,
- Prohibition from seeking extension of loan the period or from going for further borrowing in future
- Restricting the promoters from disposing of their shareholding in the company.
- Insisting on repayment of existing loans as per the terms of the financial institutions.
- Imposing limits on the outgoings and/or usage of surplus generated from the project.
- Insisting that promoters should not tap other subsidiary sources for additional funds, without the prior approval of the principal financial Institutions.
- Requiring that all assets and other properties of the project organisation be maintained in good repair till the dues of the lenders are paid back.
- Prohibitions on getting some of the pledged fixed assets released out of mortgage.
- Requiring prior permission be obtained from the financial institutions if assets are to be sold and that the proceeds be used for repayment of the loan.

Answer: (b)

1. MM theory of relevance takes taxes into account while MM theory of irrelevance assumes that there are no taxes.
2. MM theory states that the value of the firm can be increased up to a certain limit with the use of debt in the capital structure because the interest charges on debt are tax deductible expenses. Use of debt also reduces the cost of capital up to a certain limit because debt interest charges are less than what the firm is earning out of that debt.

3. Value of the levered firm (value of firm with debt) - Value of unlevered firm + tax rate x debt.
4. The leverage will increase the value of the firm to the tune of tax saving on the debt.
5. Value of the unlevered firm is given by EBIT x (1 - tax rate)/Overall cost of capital.
6. Overall value of the firm = Value of unlevered firm + Value of debt x tax rate = 32.50 + 0.30 x 5.0 = ₹34.0 million.
   The market value will go up to ₹ 34.0 million i.e. an increase of ₹ 1.50 million.
7. Cost of capital will decrease with the use of debt, up to a certain limit. It means the cost of equity will increase with the use of debt because presence of debt is an indicator of financial risk.

"As seen above, the value of firm is ₹ 34 million consisting of ₹ 29 million for equity and ₹ 5 million for debt. The tax rate is 30%. The WACC is easy to determine"

Component of Capital	Amount	After tax cost		Cost
Equity share capital	29	18%	18%	5.22
Debt	5	13% (1 – 0.3)	9.1%	0.46
	34			5.68

WACC: 5.68/34 = 17%

The new cost of equity can now be determined when overall cost of capital is known. The cost of equity should increase because of presence of debt.

WACC = K x [Equity/ (equity + debt)] + Debt interest x (1 – t) x [D/ (equity + debt)]

17 = K x (29/34) + 0.13 x (1 – 0.30) x (5/34) Giving K i.e. cost of equity = 18.6%.

The cost of equity has increased from 18% to 18.6% because of presence of financial risk.

Answer: (c)

The needs for a range of performances measures are as under:

(a) to know current status, degree of achievement and how far to go to achieve the ultimate goal
(b) for strategic alignments to communicate and reinforce messages to employees on company focus, direction and targets
(c) for strategic learning to know what works and what does not.

As to the selection of a range of performance measures which are appropriate to a particular company, this selection will have to be made taking into account company's strategic intentions.

Performance indicators can be categorised as under:

- competitive advantage
- financial performance
- quality of service
- flexibility
- resource utilization
- innovation

3 (a) Profit Margin and Turnover Ratio vary from one industry to another. What differences would you expect to find between a grocery chain such as Big Bazaar and a steel company such as Tata Steel?

(b) TITANIC INSTRUMENTS LTD. is in the business of manufacturing bearings. Some more product lines are being planned to be added to the existing system. The company has decided to acquire a machine costing ₹10,00,000 having a useful life of 5 years with the salvage value of ₹2,00,000 (consider short-term capital loss/gain for the income tax). The full purchase value of machine can be financed by bank loan at the rate of 10% interest p.a.

repayable in five equal installments falling due at the end of each year. Alternatively, the machine can be procured on a 5 years lease, year end lease rentals being ₹2,50,000 per annum. The company follows the written down value method of depreciation at the rate of 25 per cent. The company is in the 30 per cent tax bracket.

Requirements:

(i) What is the present value (PV) of cash outflow for each of these financing alternatives using the after-tax cost of Debt?

(ii) Which of the two alternatives is preferable?

Note: Extracted from the TABLE of PV:

(i) PVIF at 7% for 0 to 5 years 1.000, 0.9346, 0.8734, 0.8163, 0.7629, 0.7130.

(ii) PVIF at 10% for 0 to 5 years are: 1.0000, 0.9091, 0.8264, 0.7513, 0.6830, 0.6209.

(iii) PVIFA for 5 years at 10%= 3.7908.

(iv) PVIFA for 5 years at 7% = 4.1002. [3+(10+2)]

Answer: (a)

Differences in the amounts of assets necessary to generate a rupee of sales cause Asset Turnover Ratios to vary among industries. For example, a steel company needs a greater number of rupees in assets to produce a rupee in sales than does a grocery store chain. Also, profit margins and Turnover Ratios may vary due to differences in the amount of expenses incurred to produce sales. For example, one would expect a grocery store chain to spend more per rupee of sales than does a steel company. Often, a large turnover will be associated with a low profit margin and vice versa.

Answer: (b) (i)

1. If financed by bank, the loan of ₹10.0 lacs along with 10% interest has to be paid in five equal installments. How will you calculate the installments?
2. Schedule of depreciation is to be prepared. Compute tax relief on depreciation.
3. Salvage value is not considered in computing the depreciation if WDV is followed.
4. The value of machine at the end of year 5, comes to ₹2.37 if WDV method is followed while salvage value as given in the question is ₹2.0 lacs. Thus there is a capital loss of ₹37,000 at the end of year 5. This loss would save taxes to the value of 0.30 x 37,000 = ₹ 11,100. The present value of this loss would be 0.71 x 11,1000 = ₹7,800. You must use discounting rate of 7% and not 10%. The question specifically mentions that after tax cost of debt should be used for discounting purposes.
   Suppose A is the annual installment paid for five years. The present value of these installments must be equal to ₹10.0 lacs which is cost of machine.

   Present value at 10% for five years would be as follows:

Year	1	2	3	4	5	
DF	0.91	0.83	0.75	0.68	0.62	3.79

The value of installment would be given by: 3.79 A = 10.0 giving A = 10/3.79 =₹ 2.64 lacs
After you have determined the installments, you have to separate the capital and revenue components of every installment. How you will do it?
Schedule of depreciation on WDV method at 25%:

Year	Opening balance	Depreciation	Closing Balance	Tax shield at 30% on depreciation.
1	10.00	2.50	7.50	0.75
2	7.50	1.88	5.63	0.56
3	5.63	1.41	4.22	0.42

4	4.22	1.05	3.16	0.32
5	3.16	0.79	2.37	0.24

Computation of interest component in installments:

Year end	Loan	Interest at 10%	Total due	Installments paid	Balance
1	10.00	1.00	11.00	2.64	8.36
2	8.36	0.84	9.20	2.64	6.56
3	6.56	0.66	7.21	2.64	4.57
4	4.57	0.46	5.03	2.64	2.39
5	2.39	0.24	2.64	2.64	0.00
		3.19		13.20	

Evaluation of loan option:

In this case interest as well as depreciation would qualify for tax deductible expenses. Tax relief on both the items would be 30%. What will be the discounting factor for this option?

The question specifically mentions that after tax discounting rate should be used.

Year end	Installment.	Tax relief		Total outflow	Net cash	D. F.	PV of Cash outflow
		Interest	Depreciation				
1	2.64	0.30	0.75	1.05	1.59	0.93	1.49
2	2.64	0.25	0.56	0.81	1.83	0.87	1.60
3	2.64	0.20	0.42	0.62	2.02	0.82	1.65
4	2.64	0.14	0.32	0.45	2.19	0.76	1.67
5	2.64	0.07	0.24	0.31	2.33	0.71	1.66
							8.06

Note: Since post tax analysis is being conducted, post tax cost of funds should be taken for discounting purposes. Discounting rate would be 10% less tax 30% i.e. 7%

Determination of NPV of the option: PV of cash out flow	8.06
Less: PV of salvage value (0.71 x 2.0)	(1.42)
Less: PV of tax saving on capital loss (0.71 x 0.11)	(0.08)
Net present value of loan option	6.56

Evaluation of lease option: It is comparatively easy. The lease rent is ₹2,50,000 per annum. It is tax deductible expense. The effective lease rent after tax would be ₹ 2,50,000 less 30% i.e. ₹ 1,75,000. Lease is for five years. PV can simply be computed.

Year end	1	2	3	4	5	
PV factor	0.93	0.87	0.82	0.76	0.71	4.10

PV of lease rental: 1,75,000 x 4.10 = ₹7,71,500.

(ii)

NPV of loan option (borrow and buy option)	6.56
NPV of lease option	7.71
Saving in loan option	1.15

Recommendation: In view of the saving of ₹1.15 lac the loan option recommended.

4. (a) PROGRESSIVE LTD. sells its products to wholesale distributors. The management is worried over the liquidity and is exploring methods of improving the cash flow, by speeding up collection from debtors. The following table summarises its turnover and profits for the last two years and comparable debtors level as at the end of last two years.

The alternatives before the management are:

(i) Offer a 2% discount to customers who settle within 10 days of invoicing. It is estimated that 50% of customers would take advantage of this offer.

(ii) Seek the services of a factor, who will operate on a "service only" basis, administering and collecting payments from customers. Savings are expected to be ₹ 5,00,000 annually; also debtor days will come down to 45 days. Charges payable to the factor would be 1.5% of turnover. Progressive Ltd. can borrow from bank at 15% per annum.

Amount in ₹'000

	Year 0	Year 1
Turnover	**60,000**	**80,000**
Profits	**11,500**	**15,000**
Debtors	**8,000**	**13,000**

Required:

Analyse the costs and benefits of both alternatives and state the preferred course of action.

[Note: Take 365 days in a year]

(b) Explain the salient feature of non-recourse project financing. [(4+4+1) +6]

Answer: (a)

Amount in ₹'000

Turnover in Year 1	80,000
Debtors at the end of year 1	13,000
Average collection period (13/80) x 365	59 days

If 2% discount is given it will bring down the collection period for 50% of debtors

Average collection period after discount (59/2 + 10/2) = 34.5 days

Revised value of debtors: 80,000 – 800 = 79,200

Average level of debtors 79,200 x 34.5/365 = 827

Cost of discount 2% of 50% of 80,000 = 800

Saving = 27

Option 2: Availing factoring services

Reduction in collection period : (59-45)	14 days	
Value of sales for reduction in days (14x80,000/365)	3,068	
Saving in interest (3,068x15%)	460	
Saving in administration cost	500	960
Service charge (1.5% of 80,000)		1,200
Net cost of factoring (1,200 - 960)		240

Recommendation: Factoring is not attractive. Discount policy is recommended.

Answer: (b)

Project financing should be distinguished from conventional direct financing, or what may be termed financing on a firm's general credit. In connection with a conventional direct financing, lenders to the firm look to the firm's asset portfolio to generate the cash flow to service their loans. The assets and their financing are integrated into the firm's asset and liability portfolios. Often; such loans are not secured by any pledge or collateral. The critical distinguishing feature

of a project financing is that the project is a distinct legal entity; project assets, project related contracts, and project cash flows are segregated to a substantial degree from the sponsoring entity. The financing structure is designed to allocate financial returns and risks more efficiently than a conventional financing structure.

In a project financing, the sponsors provide, at most, limited recourse to cash flows from their other assets that are not part of the project. Also, they typically pledge the project assets, but none of their other assets, to secure the project loans.

Project financing arrangements invariably involve strong contractual relationships among multiple parties. Project financing can only work for those projects that can establish such relationships and maintain them at a tolerable cost. Project financing will not necessarily lead to a lower cost of capita) in all circumstances. Project financing will be more cost-effective than conventional direct financing when

(i) Project financing permits a higher degree of leverage than the sponsors could achieve on their own and

(ii) The increase in leverage produces tax shield benefits sufficient to offset the higher cost of debt fund, resulting in a lower overall cost of capital for the project.

5 (a) Young Limited last paid a dividend of ₹ 2 per share. Its earnings and dividends are expected to grow @ 8% p. a. The beta of the company is 1.3. If risk free-return is 6% p. a. and the return on market portfolio is 10% p. a., what is the price per share of the equity stock?

(b) The following figures are available for Success & Co.:

Net sales ₹ 15 crores

EBIT as percentage of Net Sales — 12%

Capital employed

(1) Equity ₹ 5 crores

(2) Preference Shares of ₹ 1 crore bearing 13% Rate of Dividend

(3) Debt @ 15% ₹ 3 crores.

The applicable Income Tax to be taken as 40%.

You are required to calculate

(i) the Return on Equity of the company; and

(ii) the Operating Leverage of the company. Given that it's Combined Leverage is 3.

(c) Distinguish between Capital Market and Money Market. [4+(4+3)+4]

Answer: (a)

Cost of equity capital = (dividend/market price) + growth rate

The above formula can also be written as:

Market price = Dividend (expected)/(Rate of return - Growth rate)

The company paid ₹ 2 as dividend, the expected dividend would be 8% above the current dividend i.e. ₹ 2 x 1.08.

The rate of return or cost of capital for equity share both denotes the same meaning. The rate of return can be determined from CAPM.

Required rate of return = Risk free return + Beta x (Market return - Risk free return)
= 6% + 1.3 (10% - 6%) = 11.2%.

Market price = ₹ 2 x 1.08 /(11.2% - 8%) which gives Market price = ₹ 67.50.

Answer: (b)

(i) Computation of Return on Equity (figures in ₹lacs)

Net sales	1,500
EBIT @ 12% of net sales	180
Less: Interest on debt (15% of ₹ 300 lacs)	45

EBT	135
Tax @ 40%	54
Earning after tax	81
Less: Preference dividend at 13% on ₹ 100 lacs	13
Earnings for equity shareholder or Return on equity or ROE	68

ROE as % (68/500) = 13.6%.

(ii) Second part is formula based:

Financial leverage = EBIT/[EBT - {Pref.Div./(1 - T)}]
Financial leverage = 180/[135 - (13)/(1 - 0.40)] = 1.6
We have Combined leverage = Financial Leverage x Operating leverage
CL is given as 3. So operating leverage = 3/1.6 = 1.9

Answer: (c)
Capital market (or popularly called as Stock Market) refers to the market for financial assets like shares, debentures, mutual funds etc.
Money market refers to the market for short- term requirement and deployment of funds. The differences between capital market and money market are enumerated below:

Capital Market	Money Market
(i) There is a classification between primary market and secondary market.	There is a no classification between primary market and secondary market.
(ii) It deals with funds of long- term requirement.	It deals with funds of short- term requirement.
(iii) Capital Market instruments are shares and debt instruments.	Money market instruments include inter-bank call money, notice money upto 14 days, short term deposits upto three months, commercial paper, 91 days treasury bills.
(iv) Capital market participants include retail investors, institutional investors, like Mutual funds, Financial institution, Corporate and Banks,	Money market participants are banks, financial institutions, RBI and Government.

6 (a) Explain forfaiting as means of financing export receivable.

(b) The following table presents the proposed cash flows for projects M and N with their associated probabilities. Which project has a higher preference for acceptance?

	PROJECT M		PROJECT N	
Possibilities	**Cash flow**	**Probabilities**	**Cash flow (₹lacs)**	**Probability**
1	**7,000**	**0.10**	**12,000**	**0.10**
2	**8,000**	**0.20**	**8,000**	**0.10**
3	**9,000**	**0.30**	**6,000**	**0.10**
4	**10,000**	**0.20**	**4,000**	**0.20**
5	**11,000**	**0.20**	**2,000**	**0.50**

(c) The Shares of Bangaluree Corporation Limited are selling at ₹ 105 each. Chandrashekhar wants to chip in with buying a three months call option at a premium of ₹ 10 per option.

The exercise price is ₹ 110. Five possible prices per share on the expiration date ranging from ₹ 100 to ₹ 140, with intervals of ₹ 10 are taken into consideration by him. What is Chandrashkhar's pay-off as call option holder on expiration?

[5+6+4]

Answer: (a)

Forfaiting is a mechanism of financing exports.

- by discounting export receivables
- evidence by bills of exchange or promissory notes
- without recourse to the seller (viz exporter)
- carrying medium to long term maturities
- on a fixed rate basis (discount)
- upto 100 percent of the contract value

Simply put, forfaiting is the non-recourse discounting of export receivables. In a forfaiting transaction, the exporter surrenders, without recourse to him, his rights to claim for payment on goods delivered to an importer, in return for immediate cash payment from a forfaiter. As a result, an exporter in Indian can convert a credit sale into a cash sale, with no recourse to the exporter or his banker.

All exports of capital goods and other goods made on medium to long term credit are eligible to be financed through forfaiting.

Receivables under a deferred payment contract for export of goods, evidenced by bills of exchange or promissory notes, can be forfeited.

Bills of exchange or promissory notes, backed by co-acceptance from a bank (which would generally be the buyer's bank) are endorsed by the exporter, without recourse, in favour of the forfaiting agency in exchange for discounted cash proceeds. The banker's co-acceptance is known as avalisation. The co-accepting bank must be acceptable to the forfaiting agency. EXIM has been authorized by the Reserve Bank of India to facilitate export financing through forfaiting.

Answer: (b)

Calculation of Expected Monetary Value (EMV) for Project M and Project N

	PROJECT M			**PROJECT N**		
Possibilities	Cash flow (₹lacs)	Probability	EMV	Cash flow (₹lacs)	Probability	EMV
1	7,000	0.1	700	12,000	0.1	1,200
2	8,000	0.2	1,600	8,000	0.1	800
3	9,000	0.3	2,700	6,000	0.1	600
4	10,000	0.2	2,000	4,000	0.2	800
5	11,000	0.2	2,200	2,000	0.5	1,000
TOTAL			9,200			4,400

Table-A, Decision:

In the light of above comparative statement (as given in TABLE-A) it may be inferred that PROJECT-M should be preferred for acceptance since it has a higher Expected Monetary Value (EMV) i.e. ₹ 9,200 (lakhs) than PROJECT-N having EMV of ₹ 4,400

Answer: (c)

BENGALUREE CORPORATION LTD.

Pay-off Table for Chandrasekhar **(in rupees)**

Market Price	100	110	120	130	140

Exercise Price	110	110	110	110	110
ACTION	Lapse	Lapse	Exercise	Exercise	Exercise
Gross Profit	0	0	10	20	30
Premium	10	10	10	10	10
Net pay – off	(10)	(10)	0	10	20

7 (a) Explain the term "Swaps". Outline the possible benefits to Company of undertaking an Interest rate Swap.

(b) A proposed foreign investment involves a plant whose entire output of 1 million units per annum is to be exported. With a selling price of $ 10 per unit, the yearly-revenue from this investment equals $ 10 million. At present rate of exchange, dollar-costs of local production equal to $ 6 per unit. A 10% devaluation is expected to lower unit costs by $ 0.30, while a 15% devaluation will reduce these costs by an additional $ 0.15. Suppose a devaluation of either 10% or 15% is likely, with respective probabilities of 0.4 and 0.2 (the probability of no currency change is 0.4). Depreciation at the current exchange rate equals $ 1 million annually, while the local tax rate is 40%.

(i) What will annual dollar cash flows (after-tax) be under each exchange rate scenario?

(ii) What is the expected value of annual after-tax dollar cash flows assuming no repatriation of profits to the United States?

(iii) Considering that the project involves a total investment of $ 25 million on plant and working capital, would you recommend the investment? Answer this question assuming that expected annual dollar cash flows, as worked out in (ii) above, would continue in perpetuity and dollar cash flows grow at an inflation rate of even 2 percent. Also assumed that the minimum required return on investment is 12 percent.

(c)VATSAN LTD.is considering a project with the following expected cash flows:

Initial investment: ₹ 1,00,000.

Year	**1**	**2**	**3**
Expected Cash Inflows (₹)	**70,000**	**60,000**	**45,000**

Due to uncertainty of future cash flows, the management decides to reduce the cash inflows to certainty equivalent (CE) by taking only 80% for 1st year, 70% for 2nd year and 60% for 3rd year respectively. The cost of capital is 10%.

Required:

Is it worthwhile to take up the project? [5+(2+2+2)+4]

Answer: (a)

Swaps, as the name implies, are exchange/swap of debt obligations (interest and/or principal payments) between two parts. These are of two types, namely interest swaps and currency swaps. While interest swaps involve exchange of interest obligations between two parties, currency swaps involve two parties who agree to pay each other debt obligations denominated in different currencies.

Benefits of Interest rate swap:

(i) A company can lower its overall interest burden by making use of the comparative advantage; it has of borrowing in one market compared with another company that has a comparative advantage in another market.

(ii) A company that is paying one type of interest can switch to paying another type of interest, for example from fixed to floating or floating to fixed rates.

(iii) Swaps can be a more cost effective way of reducing interest rate risk than other hedging methods.

(iv) Swaps can allow a company access to types of finance, for example - overseas markets, that it could not access directly.
(v) A company can change the structure of its borrowing without having to terminate existing loan arrangements, and hence incur early termination costs.
(vi) Swaps are more flexible than other methods of hedging- there are no prescribe sums or periods of swap. Swaps can be reversed as required by swapping with another counter party.

Answer: (b)

The current cost is 6 USD per unit. At 10% devaluation the cost would be reduced by 0.30 USD per unit or 5.70 USD per unit. 15% devaluation would reduce the cost further by 0.15 USD or the unit cost would be 5.55 USD per unit.

(i) & (ii) Statement of Cash flows: In million USD

Revenue	10.00	10.00	10.00	
Less: Cost	6.00	5.70	5.55	
Depreciation	1.00	1.00	1.00	
Profit before tax	3.00	3.30	3.45	
Tax @ 40%	1.20	1.32	1.38	
PAT	1.80	1.98	2.07	
Cash flows (PAT + Depreciation)	2.80	2.98	3.07	
Probabilities	0.40	0.40	0.20	
	1.12	1.19	0.61	2.93 USD million

(iii) If the growth rate is 2% per annum perpetually, the required rate of return would be 12% - 2% = 10%. The total cash inflows of 2.93 USD million would create a wealth of 2.93/0.10 =29.3 USD million. The net investment required is 25 million USD. Thus the NPV of the project works out to ₹ 4.30 million USD. The project is recommended to be taken up.

Answer: (c)

VATSAN LTD.

Calculation of Certainty Equivalents of Cash Inflow:

1st Year 70,000 x 80/100 = ₹ 56,000
2nd Year 60,000 x 70/100 = ₹ 42,000
3rd Year 45,000 x 60/100 = ₹ 27,000

Calculation of Risk Adjusted NPV of the Project:

Year	Cash flow (₹)	P.V. factor (10%)	P.V(₹)
0	(1,00,000)	1.000	(1,00,000)
1	56,000	0.909	50,904
2	42,000	0.826	34,692
3	27,000	0.751	20,277
NPV			5,873

Decision: The NPV of the project is positive and therefore, the project can be selected.

8. Write short notes on (*any three*): [5×3]
(a) Strategic roll up,
(b) Factoring and its advantages.
(c) Du Pont Chart.

(d) Green shoe option
(e) Forward as hedge instrument

Answer: (a)
Strategic roll ups: Strategic roll up is multi merger strategy. A company acquires many private companies doing the same business. The new company goes public with a new IPO. The proceeds of the issue are used to pay the shareholders of the acquired (target) companies. Usually the payment is in the form of shares and cash both. This is also used for synergy effects e.g. many small companies are merged into one big company and the sum total is more than the aggregate of individuals. This allows the small companies to grow into big one. Family businesses that are going on for years are common targets of strategic roll ups.

Answer: (b)
Factoring and its advantages: In credit sales, the firm gives credit to the debtors who pay at a later date. The debtors generally give bills receivables payable at a particular date. The firm collects the bills on due dates.

When business increases, the number of BRs also increases. The firm gives the job of collection of amount of bills receivables to some agent. Factor is an agent who collects the amount on bills receivables on behalf of firm and it charges some commission for giving its services. Generally the firm sells the bills receivables to the factor at a discounted rate. The factor gives immediate cash to the firm and requirement and gets bills receivables. As per factoring agreement, the factor may also give some cash in advance to the firm.

On due dates, the factor collects the amount of bills receivables. The factor is responsible for the credit control, sales accounting and the collection of dues from the debtors or buyers.
Depending upon the agreement between the factor and the firm, the following advantages may, be obtained from factoring services:

1. Immediate cash is received by the firm by selling the BRs.
2. The factor maintains all books and ledgers relating to sales. This is major facility to the selling firm.
3. Factor assumes all risks related to credit sales. Problem of bad debts, late collection, and omission in collection, credit risks and restrictions are all transferred to the factor from the firm.
4. Factor acts as an advisor regarding credit sales and administration.
5. Continuous factoring may eliminate the need of credit and collection department.

Answer: (c)
Du Pont Chart: It is a chart of financial ratios, pioneered by the Du Pont company, that helps in understanding profitability in terms of profit margin and asset turnover. By including a financial leverage ratio, the Du Pont analysis may be extended to explore the determinants of the return on equity. The chart below shows the basic elements of the earning power of a firm:

Rate of return on Investment

Net Profit as % of sales	(x)	Investment turnover
Net Profit (÷) Sales		Sales (÷) Total assets
Gross Profit =		Fixed (+) current Assets Assets
Sales-Cost of		Alternatively
goods sold		Shareholders' equity
(-)		(+)
Expenses:		Long-term
Selling Admn. Other		borrowed funds
(-)		(+)
Income-tax		Current Liabilities

Du Pont Chart: The earning power or the ROI ratio is a central measure of the overall profitability and operational efficiency of a firm. It shows the interaction of profitability and activity ratios. It implies that the performance of a firm can be improved either by generating more sales volume per rupee of investment and/or by increasing the profit margin per rupee of sales.

Answer: (d)

Green Shoe Option: It is an option that allows the under writing of an IPO to sell additional shares if the demand is high. It can be understood as an option that allows the underwriter for a new issue to buy and resell additional shares up to a certain pre-determined quantity. Looking to the exceptional interest of investors in terms of over subscription of the issue certain provisions are made to issue additional shares or bonds to underwriters for distribution. The issuer authorizes for additional shares or bonds. In Common Parlance, it is retention of oversubscription to a certain extent, It is a Special feature of EURO-issues.

In the Indian context, green shoe option has a limited connotation. SEBI guidelines governing public issues certain appropriate provisions for accepting over-subscriptions subject to a ceiling say, 15% of the offer made to public.

Answer: (e)

Forward as hedge instrument: International transactions both trade and financial give rise to currency exposures. A currency exposure if left unmanaged leaves a corporate open to profits or losses arising on account of fluctuations in currency ratio. One way in which corporate can protect itself from effects of fluctuations in currency rates is through buying or selling in forward markets.

A forward transaction is a transaction requiring delivery at future date of a specified amount of one currency for a specific amount of another currency.
The exchange rate is determined at the time of entering into the contract but the payment and delivery takes place on maturity. Corporates use forwards to hedge themselves against fluctuations in currency price that would have a significant impact on their financial position. Banks use forward to offset the forward contracts entered into with non-bank customers.