Paper-12: FINANCIAL MANAGEMENT & INTERNATIONAL FINANCE

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

Answer Question No. 1 from Part A which is compulsory and any five questions from Part B.
Working notes should form a part of the answer
"Wherever necessary, suitable assumptions should be made and indicated in answers by the candidates"

Question 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): [10×2]

(i) The average daily sales of a company are ₹ 5 lac. The company normally keeps a cash balance of ₹ 80,000.If the weighted operating cycle of the company is 45 days, its working capital will be:

A. ₹ 112.9 lac;
B. ₹ 113.3 lac;
C. ₹ 5.8 lac;
D. ₹ 225.8 lac.

(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) The following various currency quotes are available from a leading bank: ₹/£ 75.31/75.33 £ / $ 0.6391/0.6398 $ /¥ 0.01048/0.01052. The rate at which yen (¥) can be purchased with rupees will be:

A. ₹ 0.5070
B. ₹ 1.5030
C. ₹ 1.7230
D. None of the above.

(iv) 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.

(v) Xee Ltd. paid a dividend of ₹4.00 per share for the year 2013-14. If the expected growth rate is 12% and the rate of return is 20%, the intrinsic value for its share would be:

A. ₹ 50;
B. ₹ 200;
C. ₹ 100;
D. ₹ 55.

(vi) The stock of Blue Company sells for ₹ 120. The present value of exercise price and the value of a call option are ₹ 108.70 and ₹ 19.80 respectively. Hence the value of the put option is:

A. ₹ 8.50
B. ₹ 9.00
C. ₹ 10
D. Zero

(vii) The spot and 6 month forward rates of $ in relation to rupee are ₹60.34/ 72 and 61.02/66 respectively. What would be the annualized forward margin (premium with respect to bid price)?

A. 15.32%
B. 12.32%
C. 13.52%
D. 15.23%

(viii) The total asset – turnover ratio and total asset to net- worth ratio of a company are 2.10 and 2.50 respectively. If the net profit margin of the company is 6%, what would be the return on equity?

A. 30.50%
B. 31.50%
C. 30.00%
D. 32.50%

(ix) Calculate the price of 3 months ADS futures, if ADS (FV ₹ 10) quotes ₹ 440 on NSE and 3 months future price quotes at ₹ 430 and the 1 month borrowing rate is given as 15% and the expected annual dividend yield is 25% per annum payable before expiry.

A. ₹ 454
B. ₹ 464
C. ₹ 444
D. ₹ 450

(x) S Limited earns ₹ 6 per share, has capitalisation rate of 10% and has a return on investment at the rate of 20%. According to Walter's model, what should be the price per share at 30% dividend payout ratio?

A. ₹ 120
B. ₹ 102
C. ₹ 112
D. ₹ 106

Answer:

(i) D. ₹ 225.8 lac.

The working capital requirement is for 45 days of the weighted operating cycle plus normal cash balance = Sales per day × weighted operating cycle+ cash balance requirement = ₹ 5 lac × 45 + ₹ 0.80 lac = ₹ 225.80 lac.

(ii) C. 2.00 %

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) A. ₹ 0.5070

To purchase (¥) we need to have a quote of (¥) in terms of ₹. We need only the ASK quote.

ASK (₹ / ¥) = ASK (₹/ £) × ASK (£ /$) × ASK ($/ ¥) = 75.33 × 0.6398 × 0. 01052 = ₹ 0.5070 (approx.)

(iv) C. ₹ 2,50,000

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

(v) A. ₹ 50

$$\text{Price} = \frac{\text{Dividend}}{\text{Cost of capital} - \text{Growth rate}}$$

$$= \frac{4}{0.20 - 0.12} = ₹\ 50$$

(vi) A. ₹ 8.50

Value of put option = Value of call option + PV of exercise price – Stock price = ₹ 19.80 + ₹ 108.70 – ₹ 120 = ₹ 8.50

(vii) C. 13.52%

Forward Margin (premium with respect to bid price)
= [(61.02 – 60.34) ÷ 60.34] × 12 × 100 = 13.52%

(viii) B. 31.50%

$$\text{Return on Equity (ROE)} = \frac{\text{Profit after Tax}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Assets}} \times \frac{\text{Total Assets}}{\text{Net Worth}}$$

= 0.06 × 2.10 ×2.50 = 0.315 = 31.5%

(ix) A. ₹ 454

Future Price = Spot Price + Cost of Carry- Dividend
= 440 + (440 × 0.15 × 0.25) – (10 × 0.25)
= 440 + 16.50 – 2.50 = 454
The future price is ₹ 454 which is now quoted at ₹ 430 in the exchange. The fair value of Futures is more than the actual future price.

(x) B. ₹ 102

$$\text{Market Value of share } (P) = \frac{D + \frac{r}{k_e}(E - D)}{k_e}$$

$$= \frac{1.80 + \frac{0.20}{0.10}(6 - 1.80)}{0.10}$$

b) State whether the following statements are true or false: [1 × 5 = 5]

(i) The amount of cheques issued by a company not yet paid out is referred to as net float.

(ii) Annual capital charge method is used for evaluating projects having different life spans.

(iii) According to Modigliani and Miller Theory on dividends, dividend pay-out ratio is irrelevant for all firms.

(iv) Simulation is done for capturing the different possible outcomes and determining the probability of a particular event happening.

(v) A call option is the right to sell, whereas a put option is a right to buy.

Answer:

b)

(i) False

Net float is the total amount of float in a bank account. It is calculated by subtracting the disbursement float money spent but not yet taken out of the account from the collection float money deposited but not yet cleared. The net float, when added to or subtracted from the previous balance, shows how much money is in the bank account. The net float is important when an account holder deal primarily in cheques.

(ii) True

Annual capital charge provided basis of comparing projects whose life span are otherwise different.

(iii) True
According to MM approach it is earning potentiality and investment policy of firm rather than pattern of distribution of earning that affects value of firm.

(iv) True
Simulation is the imitation of the operation of a real-world process or system over time. The act of simulating something first requires that a model be developed; this model represents the key characteristics or behaviours of the selected physical or abstract system or process.

The model represents the system itself, whereas the simulation represents the operation of the system over time.

(v) False
Call Options give the option buyer the right to buy the underlying asset. Put Options give the option buyer the right to sell the underlying asset.

PART B (75 MARKS)

Question 2.

(a) The sales turnover and profit during 2012-13 and 2013-14 are as follows.

	Sales (₹)	Profit (₹)
Year 2012-13	**20,00,000**	**2,00,000**
Year 2013-14	**30,00,000**	**4,00,000**

Calculate:

i) Profit Volume Ratio.
ii) Sales required to earn a profit of ₹ 5,00,000
iii) Profit when sales is ₹ 10,00,000 **[1+2+2]**

Answer:
i) Profit Volume Ratio

	2012-13 (₹)	2013-14 (₹)	Net Increase (₹)
Sales	20,00,000	30,00,000	10,00,000
Profit	2,00,000	4,00,000	2,00,000
Increase in costs			8,00,000

Since the fixed costs are constant, the increase in cost is the increase in variable cost in tune with increase in sales volume. So, variable cost is 80% of sales Profit – volume ratio is 100 – 80 = 20%.

ii) Sales required to earn a profit of ₹ 5,00,000

Fixed Cost = Contribution – Profit = 20% of ₹ 30,00,000 – ₹ 4,00,000 = ₹ 2,00,000

$$\text{Required Sales} = \frac{\text{Fixed Cost + Desired Profit}}{\text{P/ V Ratio}}$$

$$= \frac{2,00,000 + 5,00,000}{20} \times 100$$

= ₹ 35,00,000

iii) Profit when sales is ₹ 10,00,000

Profit at sales of ₹10,00,000 = Sales × P/V Ratio – Fixed Cost

= ₹ 10,00,000 × 20% - ₹ 2,00,000

= ₹ 2,00,000 - ₹ 2,00,000 = Nil

(b) Ashi Ltd furnishes the following information for the year, 2013 from which you are required to determine the indifference point.

1. **Funds required, ₹ 50,000**
2. **Existing number of Equity shares outstanding, 5000 @ ₹10 per share**
3. **Existing 10% debt, ₹ 20,000**
4. **Funds required can be raised either by**
   (A) issue of 2,000 equity shares, netting ₹ 25 per share or (B) new 15% debt
5. **The P/E Ratio will be 7 times in equity alternative and 6 times in debt alternative**
6. **Corporate tax is levied @ 40%.** **[5]**

Answer:

Indifference point:

$$\frac{(x - I_1)(1-t)}{N_1} = \frac{(x - I_1 - I_2)(1-t)}{N_2}$$

Where, x = Earnings before interest and taxes (EBIT), at the indifference point

I_1 = Interest payable on existing debt

I_2 = Interest payable at additional debt

N_1 = Number of equity shares, if only equity shares are issued

N_2 = Number of equity share if both debt and equity is issued

t = Corporate income tax rate

Hence, as per the above details:

Indifference point:

$$\frac{(x - 2,000)(1-0.4)}{7,000} = \frac{(x - 2,000 - 7,500)(1-0.4)}{5,000}$$

$$\text{or,} \frac{(x - 2,000)0.6}{7,000} = \frac{(x - 9,5000)0.6}{5,000}$$

5 (0.6x - 1,200) = 7 (0.6x – 5,700)

or, x = 28,250

(c) What is 'Covered Interest Arbitrage'? Briefly state the role of an arbitrageur under covered interest arbitrage. [1+4]

Answer:

A covered interest arbitrage exists when an arbitrage profit can be made. The process of borrowing in one currency and simultaneously investing in another with the exchange risk hedged in the forward market is referred to covered Interest Arbitrage.

If domestic interest rates are higher than the foreign interest rates, an arbitrageur would do the following:

He would borrow in foreign currency, convert receipts to domestic currency at the prevailing spot rate, and invest in domestic currency denominated securities (as domestic securities carry higher interest). At the same time he would cover his principal and interest from the investment at the forward rate. At maturity, he would convert the proceeds of the domestic investment at prefixed domestic forward rate and payoff the foreign liability. The difference between the receipts and payments serve as profit to customer.

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Question 3.

(a) The financial position (extract) of Anju Ltd. On Apr. 1, 2013 and Mar. 31, 2014 is as follows:

Liabilities	Apr. 1, 2013 (₹)	Mar. 31, 2014 (₹)	Assets	Apr. 1, 2013 (₹)	Mar. 31, 2014 (₹)
Current Liabilities for goods	36,000	40,600	Cash	4,000	3,600
			Debtors	35,000	38,000
Loan from ABC Co.		20,000	Stock	25,000	22,000
Loan from Bank	30,000	25,000	Land	20,000	30,000
Hire-purchase Vendor		20,000	Building	50,000	55,000
Capital	1,48,000	1,54,000	Machinery	80,000	86,000
			Delivery Van		25,000
	2,14,000	2,59,600		2,14,000	2,59,600

The delivery van was purchased in March, 2014 on hire-purchase basis; a payment of ₹ 5,000 was made immediately and the balance of amount is to be paid in 10 monthly installments of ₹ 2000 each together with an interest @ 15% p.a. During the year the partners withdrew ₹ 20,000 for personal expenditure. The provision for depreciation against machinery on 31-03-2013 was ₹ 27,000 and 31-03-2014 was ₹ 36,000. You are requested to prepare the Cash Flow Statement. [10]

Answer:

Cash Flow Statement as per AS – 3 (Revised)
(Indirect Method)

	₹	₹
I. Cash flows from operating activities:		
Net profit before tax and extraordinary items	26,000	
Adjustment for depreciation	9,000	
Operating profit before working capital changes (WN)	35,000	
Increase in creditors	4,600	
Decrease in stock	3,000	
Increase in debtors	(3,000)	
Net cash flow from operating activities		39,600
II. Cash flow from investing activities:		
Payment for delivery van	(5,000)	
Purchase of Machinery	(15,000)	
Purchase of Building	(5,000)	
Purchase of land	(10,000)	
Net cash flow from investing activities		(35,000)
III. Cash flow from financing activities:		
Loan from ABC Co	20,000	
Payment of Bank Loan	(5,000)	
Drawings by partners	(20,000)	
Net Cash flow from financing activities		(5,000)
IV. Net increase / decrease in cash & cash equivalents		(400)
V. Cash & cash equivalents at the beginning of the period		4,000
VI. Cash & cash equivalents at the end of the period		3600

Working Notes:

1. Fund from Operations

	₹
Capital as on 31.03.2014	1,54,000
Add: Drawings during the year	20,000
	1,74,000
Less: Capital as on 01.04.2013	1,48,000
Profit for the year	26,000

Add: Depreciation for the year (₹36,000 - ₹27,000)	9,000
	35,000

Dr. 2. Machinery Account Cr.

	₹		₹
To, Balance b/d	80,000	By, Depreciation for the year	9,000
To, Bank (acquired during the year)	15,000	By, Balance c/d	86,000
	95,000		95,000

(b) What is meant by Capital Asset Pricing Model (CAPM)? State the underlying assumptions of CAPM. [1+4]

Answer:

In finance, the capital asset pricing model (CAPM) is used to determine a theoretically appropriate required rate of return of an asset, if that asset is to be added to an already well-diversified portfolio, given that assets non-diversifiable risk. The model takes into account the asset's sensitivity to non-diversifiable risk (also known as systematic risk or market risk), often represented by the quantity beta (β) in the financial industry, as well as the expected return of the market and the expected return of a theoretical risk-free asset.

The assumptions underlying the CAPM's development are as follows:

1. All investors focus on a single holding period, and they seek to maximize the expected utility of their terminal wealth by choosing among alternative portfolios on the basis of each portfolio's expected return and standard deviation.
2. All investors can borrow or lend an unlimited amount at a given risk-free rate of interest and there are no restrictions on short sales of any assets.
3. All investors have identical estimated of the expected returns, variances, and covariance among all assets (that is, investors have homogeneous expectations).
4. All assets are perfectly divisible and perfectly liquid (that is, marketable at the going price).
5. There are no transaction costs.
6. There are no taxes.
7. All investors are price takers (that is, all investors assume that their own buying and selling activity will not affect stock prices).
8. The quantities of all assets are given and fixed.

Question 4.

(a) An Indian bank sells FF 10,00,000 spot to a customer at ₹6.40. At that point of time, the following rates were being quoted.
FF/$: 5.5880/5.5920
₹/$: 35.50/35.60
How much profit do you think the bank has made in the transaction? [5]

Answer:

We first need to calculate only the Rs./FF forward Offer/Ask rates. This is because customer buys FF from the bank.

$$\text{Ask}\left(\frac{₹}{FF}\right) = \text{Ask}\left(\frac{₹}{\$}\right) \times \text{Ask}\left(\frac{\$}{FF}\right)$$

$$\text{Ask}\left(\frac{₹}{FF}\right) = \text{Ask}\left(\frac{₹}{\$}\right) \times \text{Bid}\frac{1}{\left(\frac{FF}{\$}\right)}$$

= 35.60 × 1/5.588

= ₹ 6.3708

Thus, the exchange rate at which the bank does the cover transaction is = ₹ 6.3708/FF.

So, profit for the bank = ₹ (6.40 – 6.3708) (1,000,000) = ₹ 29,200.

(b) Explain the term "Swaps". Outline the possible benefits to Company of undertaking an Interest rate Swap. [2+3]

Answer:

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.

(c) Given the following quotes for per unit of each currency against US dollar, on two different dates:

	Date 1	Date 2

British Pound	**1.5398**	**1.6385**
Canadian Dollar	**0.6308**	**0.6591**
EMU euro	**0.9666**	**1.0835**
Japanese yen	**0.008273**	**0.008343**
Mexican peso	**0.1027**	**0.0917**
Swedish Krona	**0.1033**	**0.1179**

What is the rate of appreciation or depreciation of each currency over the period?

[5]

Answer:

		Appreciation (+) / Depreciation (-)	
Pound	($1.6385 – $1.5398)/$1.5398	+0.0641	+6.41%
Canadian dollar	($0.6591 – $0.6308)/$0.6308	+0.0449	+4.49%
Euro	($1.0835 – $0.9666)/$0.9666	+0.1209	+12.09%
Yen	($0.008343 – $0.008273)/$0.008273	+0.0086	+0.86%
Peso	($0.0917 – $0.1027)/$0.1027	-0.1071	-10.71%
Krona	($0.1179 – $0.1033)/$0.1033	+0.1413	+14.13%

Question 5:

(a) AB Ltd. Is considering to buy an equipment and it has two options. The cost of the equipment is ₹100000.
Option I – to buy with borrowed funds at a cost of 18% p.a repayable in five equal installments of ₹ 32000.
Option II – to take the equipment on lease on an annual rental of ₹ 32,000.
The salvage value of the equipment at the end of five year period will be zero. The company uses straight –line depreciation. Assume tax @ 30%.
Which of the two options would you recommend?

Discounting factors are:

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
@ 11%	**0.901**	**0.812**	**0.731**	**0.659**	**0.593**
@ 13 %	**0.885**	**0.783**	**0.693**	**0.613**	**0.543**
@ 18 %	**0.847**	**0.718**	**0.609**	**0.516**	**0.437**

[10]

Answer:
(a)

AB Ltd.

Cost of borrowed funds = 18%
After Tax Cost of borrowed funds: 0.18(1.030) = 0.126= 12.6 % (Discount rate applied =13%)

Cost of Owning:

Year	Annual	Interest	Amortization	Depreciation	Tax	Cost of

	Payment (₹)	(₹)	(₹)	(₹)	Saving (₹)	owning (₹)
1	32000	18000	14000	20000	11400	20600
2	32000	15480	16520	20000	10644	21356
3	32000	12506	19494	20000	9751.8	22248.2
4	32000	8997	23003	20000	8699.1	23300.9
5	31840	4857	26983	20000	7457.1	24382.9
	159840	59840	100000	100000	47592	111888

Note: Tax Saving = 30% of (Interest + Depreciation)
= 30 %of (18000+20000)
= 11,400

Computation of Present Value Advantage (₹)

Year	Cost of owning (₹)	Net Lease Cost (₹)	Advantage of owning (₹)	Discounting Factor @ 13%	Present Value Advantage (₹)
1	20600	22400	1800	0.885	1593.000
2	21356	22400	1044	0.783	817.452
3	22248.2	22400	151.8	0.693	105.1974
4	23300.9	22400	-900.9	0.613	-552.2517
5	24382.9	22400	-1982.9	0.543	-1076.715
	111888	112000	112		886.683

Net Lease Cost = Lease Rent (1- Tax rate)
= 32000 (1 - 0.3) = 22400

Recommendation : It is advantageous to purchase the asset using borrowed funds.

(b) Role of a Financial Adviser in a Public Sector Undertaking. [5]

Answer:

The financial adviser occupies an important position in all public sector undertakings. He functions as the principal advisor to the chief executive of the enterprise on all financial matters. The committee on public sector undertakings has specified the following functions and responsibilities for a financial adviser:

i. Determination of financial needs of the firm and the ways these needs are to be met.
ii. Formulation of a programme to provide most effective cost-volume profit relationship.
iii. Analysis of financial results of all operations and recommendations concerning future operations.
iv. Examination of feasibility studies and detailed project reports from the point of view of overall economic viability of the project.

v. Conduct of special studies with a view to reduce costs and improve efficiency and profitability.

Question 6:

(a) X Ltd. is foreseeing a growth rate of 14% per annum in the next 2 years. The growth rate is likely to fall to 12 % for the third year and fourth year. After that the growth rate is expected to stabilize at 10% per annum. If the last dividend paid was ₹ 2.25 per share and the investors' required rate of return is 18%, find out the intrinsic value per share of X Ltd. as of date. You may use the following table:

Years	0	1	2	3	4	5
Discounting Factor at 18%	1	0.85	0.72	0.61	0.52	0.44

[8]

Answer:

Present value of dividend stream for first 2 years.
= ₹ 2.25 (1.14) × 0.85 + 2.25 $(1.14)^2$ × 0.72
= ₹ 2.565 × 0.85 + 2.924 × 0.72
= ₹ 2.18 + 2.11 = 4.29 (A)
Present value of dividend stream for next 2 years
= ₹ 2.924 (1.12) × 0.61 + 2.924 $(1.12)^2$ × 0.52
= ₹ 3.27 × 0.61 + 3.67 × 0.52
= ₹ 2 + 1.91 = 3.91 (B)
Market value of equity share at the end of 4th year computed by using the constant dividend growth model would be:

$$P_4 = \frac{D_5}{K_s - g_n}$$

Where D_5 is dividend in the fifth year, g_n is the growth rate and K_s is required rate of return.
Now $D_5 = D_4 (1 + g_n)$
∴ D_5 = ₹ 3.67 (1 + 0.10)
= ₹ 4.037
∴ P_4=₹4.037/(0.18 - 0.10) =4.037/.08 = ₹ 50.46

Present market value of P_4 = 50.46 × 0.52 = ₹ 26.239 (C)

Hence, the intrinsic value per share of X Ltd. would be
A + B + C i.e. ₹ 4.29 + 3.91 + 26.239 = ₹ 34.439

(b) Calculate economic value added (EVA) with the help of the following information of HPC Limited:

Financial leverage	**:**	**1.4 times**
Capital structure	**:**	**Equity Capital ₹ 425 lacs**

		Reserves and surplus ₹ 325 lacs
		10% Debentures ₹ 1000 lacs
Cost of Equity	**:**	**17.9%**
Income Tax Rate	**:**	**30%.** **[7]**

Answer:

Financial Leverage = PBIT/PBT
1.4 = PBIT / (PBIT – Interest)
1.4 = PBIT / (PBIT – 100)
1.4 (PBIT – 100) = PBIT
1.4 PBIT – 140 = PBIT
1.4 PBIT – PBIT = 140
0.4 PBIT = 140
PBIT=140/0.4 = ₹ 350 lacs
NOPAT = PBIT – Tax = ₹ 350 lacs (1 – 0.30) = ₹ 245 lacs.
Weighted average cost of capital (WACC) = 17.9% × (750 / 1750) + (1 – 0.30) × (10%) × (1000 / 1750)
= 11.67%

EVA = NOPAT – (WACC × Total Capital)
= ₹ 245 lacs – 0.117 × ₹ 1750 lacs
= ₹ 245 - 204.75 lacs = ₹ 40.25

Question 7:

(a) The net Sales of W Ltd. is ₹ 45 crores. An earnings before interest and tax of the company as a percentage of net sales is 12%. The capital employed comprises ₹ 15 crores of equity, ₹ 3 crores of 12% Cumulative Preference Share Capital and 13% Debentures of ₹ 9 crores. Income-tax rate is 30%.

(i) Calculate the Return-on-equity for the company

(ii) Calculate the Operating Leverage of the Company given that combined leverage is 4.5 **[5+4]**

Answer:

Net Sales: ₹ 45 crores
EBIT ₹ 5.4 crores @ 12% on sales

$$ROI = \frac{EBIT}{CapitalEmployed} \times 100$$

$$= \frac{5.4}{(15+3+9)} \times 100 = 20\%$$

₹ in crores

EBIT	5.4
Interest on Debt	1.17
EBT	4.23
Less: Tax @ 30%	1.269
EAT	2.961
Less: Preference dividend	0.36
Earnings available for Equity Shareholders	2.601
Return on equity = 2.6/15 × 100 =	17.33%

(ii) $$\text{Degree of Financial Leverage} = \frac{\text{EBIT}}{\text{EBIT - Interest - Preference dividend}}$$

$$= \frac{5.4}{(5.4-1.17-0.36)} = \frac{5.4}{3.87} = 1.395$$

Degree of Combined Leverage = DFL × DOL

4.5 = 1.395 × DOL

∴ Degree of operating leverage = 4.5/1.395 = 3.22

(b) Explain the interrelationship between Investment, Finance and Dividend Decisions. [6]

Answer:

The finance functions are divided into three major decisions, viz., investment, financing and dividend decisions. It is correct to say that these decisions are inter-related because the underlying objective of these three decisions is the same, i.e. maximisation of shareholders' wealth. Since investment, financing and dividend decisions are all interrelated, one has to consider the joint impact of these decisions on the market price of the company's shares and these decisions should also be solved jointly. The decision to invest in a new project needs the finance for the investment. The financing decision, in turn, is influenced by and influences dividend decision because retained earnings used in internal financing deprive shareholders of their dividends. An efficient financial management can ensure optimal joint decisions. This is possible by evaluating each decision in relation to its effect on the shareholders' wealth.

The above three decisions are briefly examined below in the light of their inter-relationship and to see how they can help in maximising the shareholders' wealth i.e. market price of the company's shares.

- Investment decision: The investment of long term funds is made after a careful assessment of the various projects through capital budgeting and uncertainty analysis. However, only that investment proposal is to be accepted which is expected to yield at least so much return as is adequate to meet its cost of financing. This have an influence on the profitability of the company and ultimately on its wealth.

- Financing decision: Funds can be raised from various sources. Each source of funds involves different issues. The finance manager has to maintain a proper balance between long-term and short-term funds. With the total volume of long-term funds, he has to ensure a proper mix of loan funds and owner's funds. The optimum financing mix will increase return to equity shareholders and thus maximise their wealth.

- Dividend decision: The finance manager is also concerned with the decision to pay or declare dividend. He assists the top management in deciding as to what portion of the profit should be paid to the shareholders by way of dividends and what portion should be retained in the business. An optimal dividend pay-out ratio maximises shareholders' wealth.

We can infer from the above discussion that investment, financing and dividend decisions are interrelated and are to be taken jointly keeping in view their joint effect on the shareholders' wealth.

Question 8:

Write short notes (on any three) **[3 ×5 = 15]**
(a) Green shoe option
(b) Forward as hedge instrument
(c) Foreign Exchange Risk
(d) 'Financial Engineering'

Answer:

(a) Green shoe option - It is option that allows the underwriting 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 exceptional interest of investors in terms of over subscription of the issue certain provisions are made to issue additional shares or bonds. In common parlance, it is retention of oversubscription to certain extent; it is a special feature of EURO issues.

In Indian context, green shoe option has limited connotation. SEBI guidelines governing public issues certain appropriate provisions for accepting oversubscriptions subject to a ceiling.

(b) 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 contract but payment and delivery takes place on maturity. Corporate 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.

(c) Foreign Exchange risk is an exposure of facing uncertain future exchange rate. When firms and individuals are engaged in cross- border transactions, they are potentially exposed to foreign exchange risk that they would not encounter in purely domestic transactions.

The following three categories are the most commonly used classification of foreign exchange risk exposure:

i) Transaction Exposure- It occurs when one currency is to be exchanged for another and when a change in foreign exchange rate occurs between the time a transaction is executed and the time it is settled.

ii) Consolidation (Translation) Exposure- When the assets and liabilities of trading transactions are denominated in foreign currencies, then there may be risk of translation from such denominations into home currencies. This will also be due to fluctuations in the rates of different currencies.

iii) Economic Exposure- It is the risk of a change in the rate affecting the company's competitive position in the market. It is normally defined as the effect on future cash flows of unpredicted future movements in exchange rates. This affects a firm's competitive position across the various markets and products and hence the firm's real economic value.

(d) 'Financial Engineering' involves the design, development and implementation of innovative financial instruments and processes and the formulation of creative solutions to problems in finance. Financial Engineering lies in innovation and creativity to promote market efficiency. It involves construction of innovative asset-liability structures using a combination of basic instruments so as to obtain hybrid instruments which may either provide a risk-return configuration otherwise unviable or result in gain by heading efficiently, possibly by creating an arbitrage opportunity. It is of great help in corporate finance, investment management, money management, trading activities and risk management.

In recent years, the rapidity with which corporate finance and investment finance have changed in practice has given birth to a new area of study known as financial engineering. It involves use of complex mathematical modeling and high speed computer solutions
It has been practiced by commercial banks in offering new and tailor-made products to different types of customers. Financial Engineering has been used in schemes of mergers and acquisitions.

The term financial engineering is often used to refer to risk management also because it involves a strategic approach to risk management.