3. FINANCING DECISIONS – CAPITAL STRUCTURE

CLASS WORK PROBLEMS

Ex. : (1) The Net Sales of Apex Co. are ₹ 15 crores.

EBIT of the company as a percentage of Net Sales is 12%. The capital employed comprises ₹ 5 crores of equity, ₹ 1 crore of Cumulative Redeemable Preference Shares bearing 13% rate of dividend and Debt Capital of ₹ 3 crores at an annual interest rate of 15% and corporate income tax rate is 40%.

Required :

(1) Calculate Return on Equity (ROE) for the company and indicate its segments due to the presence of Preference Share Capital and Debt Capital.

(2) Calculate the Operating Leverage of the Company given that its combined leverage is 3.

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Ex. : (2) (a) The existing capital structure of XYZ Ltd. is as under :

Equity Shares of ₹ 100 each	₹ 40,00,000
Retained Earnings	₹ 10,00,000
9% Preference Shares	₹ 25,00,000
7% Debentures	₹ 25,00,000

The existing rate of return on the company's capital is 12% and the income tax rate is 50%. The company requires a sum of ₹ 25,00,000 to finance its expansion programme for which it is considering the following alternatives :

(1) Issue of 20,000 Equity Shares at a premium of ₹ 25 per share.

(2) Issue of 10% Preference Shares.

(3) Issue of 8% Debentures.

It is estimated that the Price Earning Ratio in the cases of equity, preference and Debenture financing would be 20, 17 and 16 respectively. Which of the above alternatives would you consider to be the best?

(b) Give reasons for your choice in (a) above.

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Ex. : (3) XY Ltd. provides you with the following figures :

	₹
Profit	2,60,000
Less : Interest on Debentures @ 12%	60,000
	2,00,000
Less : Income Tax @ 50%	1,00,000
Profit after tax	1,00,000
Number of Equity Share (of ₹ 10 each)	40,000
EPS (Earning Per Share)	2.50
Ruling Price in Market	25
PE Ratio (i.e. Price / EPS)	10

The company has undistributed reserves of ₹ 6,00,000. The company needs ₹ 2,00,000 for expansion. This amount will earn at the same rate as funds already employed. You are informed that a debt equity ratio (D/D+E) higher than 35% will push the P/E Ratio down to 8 and raise the interest rate on additional amount borrowed to 14%.

You are required to ascertain the probable price of the share (i) if the additional funds are raised as debt; (ii) if the amount is raised by issuing Equity Shares.

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Ex. : (4) The capital structure of JCPL Ltd. is as follows :

	₹
Equity Share Capital of ₹ 10 each	8,00,000
8% Preference Shares of ₹ 10 each	6,25,000
10% Debentures of ₹ 100 each	4,00,000
	18,25,000

Additional Information :

Profit after tax (tax rate 30%) ₹ 1,82,000.

Operating expenses (including depreciation ₹ 90,000) being 1.50 times of EBIT Equity Share dividend paid 15%.

Market price per equity share ₹ 20.

Require to calculate :

(i) Operating and financial leverage.

(ii) Cover for the preference and equity share of dividends.

(iii) The earning yield and price earning ratio.

(iv) The net fund flow.

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Ex. : (5) EXE Limited is considering three financing plans. The key information is as follows :

(a) Total investment to be raised ₹ 2

(b) Plans of Financing Proportion :

Plans	Equity	Debt	Preference Shares
A	100%	-	-
B	50%	50%	-
C	50%	-	50%

(c) Cost of Debt 8%

Cost of Preference Shares 8%

(d) Tax Rate 50%

(e) Equity Shares of the face value of ₹ 10 each will be issued at a premium of ₹ 10 per share.

(f) Expected PBIT is ₹ 80,000.

Determine for each plan :

(i) Earning Per Share (EPS) and

(ii) The financial break even point.

(iii) Indicate if any of the plans dominate and compute the PBIT range among the plans for indifference.

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Ex. : (6) Hypothetical Ltd. is in need of ₹ 1,00,000 to finance its increased net working capital requirements. The finance manager of the company believes that its various financial costs and share price will be unaffected by the selection of a particular plan, since a small sum is involved.

Debentures will cost 10 per cent, Preference Shares 11 per cent and Equity Shares can be sold for ₹ 25 per share. The tax rate is 35 per cent.

Sources of Funds	Financial Plans (per cent)		
	1	2	3
Equity Shares	100	30	50
Preference Shares	0	10	20
Debentures	0	60	30

(i) Determine the financial break even point.

(ii) Which plan has greater risk? Assume EBIT level of ₹ 50,000.

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Ex. : (7) A new project consideration by your company requires a capital investment of ₹ 150 lakh. The required funds can be raised either through the sale of Equity Shares or borrowed from a financial institution. Interest on term loans is 15 per cent and tax rate is 35 per cent. If the debt-equity ratio insisted by the financing agencies is 2 : 1, calculate the indifference point for the project. Explain its meaning. Also prepare a verification table.

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Ex. : (8) The Modern Chemicals Ltd. requires ₹ 25,00,000 for a new plant. This plant is expected to yield earnings before interest and taxes of ₹ 5,00,000. While deciding about the financial plan, the company considers the objective of maximizing earnings per share. It has three alternatives to finance the project – by raising debt of ₹ 2,50,000 or ₹ 10,00,000 or ₹ 15,00,000 and the balance, in each case, by issuing Equity Shares. The company's share is currently selling at ₹ 150, but is expected to decline to ₹ 125 in case the funds are borrowed in excess of ₹ 10,00,000. The funds can be borrowed at the rate of 10% upto ₹ 2,50,000, at 15% over ₹ 2,50,000 and upto ₹ 10,00,000 and at 20% over ₹ 10,00,000.

The tax rate applicable to the company is 50%.

Analyse, which form of financing should the company choose?

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Ex. : (9) Ganesha Limited is setting up a project with a capital outlay of ₹ 60,00,000. It has two alternatives in financing the project cost.

Alternative – I : 100% equity finance by issuing Equity Shares of ₹ 10 each.

Alternative – II : Debt-equity ratio 2 : 1 (issuing Equity Shares of ₹ 10 each) The rate of interest payable on the debts is 18% p.a. The corporate tax rate is 40%.

Calculate the indifference point between the two alternative methods of financing.

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Ex. : (10) Key information pertaining to the proposed new financing plans of Hypothetical Ltd. is given below.

Sources of Funds	**Financing Plans**	
	1	**2**
Equity	15,000 shares of ₹ 100 each	30,000 shares of ₹ 100 each
Preference Shares	12%, 25,000 shares of ₹ 100 each	-
Debentures	₹ 5,00,000 at a coupon rate of 0.10	₹ 15,00,000 at a coupon rate of 0.11

Assuming 35 per cent tax rate

(i) Determine the two EBIT – EPS coordinates for each financial plan.

(ii) Determine the (a) indifference point, & (b) financial break-even point for each financing plan.

(iii) Which plan has more financial risk and why?

(iv) Indicate over what EBIT range, if any, one plan is better than the other.

(v) If the firm is fairly certain that its EBIT will be ₹ 12,50,000, which plan would you recommend, and why?

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Ex. : (11) Following data is available in respect of Levered and Unlevered companies having same business risk :

Capital employed = ₹ 2,00,000, EBIT = ₹ 25,000 and $K_e = 12.5\%$

Sources	Levered Company (₹)	Unlevered Company (₹)
Debt (@8%)	75,000	Nil
Equity	1,25,000	2,00,000

An investor is holding 12% shares in levered company. Calculate the increase in annual earnings of investor if he switches over his holding from Levered to Unlevered Company.

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