Chapter 5 – Capital Structure Theories and Decision Making

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Q.1

The following information is available for two firms. Box Corporation and Cox Corporation

Particulars	Box	Cox
Net Operating Income	20,00,000	20,00,000
Interest on Debt	-	5,00,000
Cost of Equity	15%	15%
Cost of Debt	10%	10%

a) Calculate the market value of equity, market value of debt and market value of firm.
b) What is the average cost of capital of each of the firms
c) What happens to the average cost of capital of Box Corp if it employs Rs.30 mn Debt to finance a project that yields operating income of Rs.4 mn
d) What happens to the average cost of capital of Cox Corp if it sells Rs.5 mn of additional equity (at par) to retire Rs.5 mn outstanding debt?

Q.2

The Hardware Company Ltd has to make a choice between debt issue and equity issue for its expansion Programme. Its current position is as follows:

5% Debt	20,000
Equity capital (Rs. 10 per share)	50,000
R&S	30,000
Total capitalization	**1,00,000**
Sales	3,00,000
Total costs	2,69,000
Income before interest and taxes	**31,000**
Interest	1,000
Earnings before taxes	**30,000**
Income tax	10,500
Income after taxes	**19,500**

Q.2 contd.

The expansion programme is estimated to cost of Rs. 50,000.

i) If this is financed through debt, the rate of interest on new debt will be 7 per cent and the price-earnings ratio will be 6.

ii) If the expansion programme is financed through equity, new shares can be sold netting Rs. 25 per share; and the price-earnings ratio will be 7.

The expansion will generate additional sales of Rs. 1,50,000 with a return of 10 per cent on sales before interest and taxes.

If the company is to follow a policy of maximizing the market value of its shares, which form of financing should it choose?

Q.3

The existing capital structure of XYZ Ltd. is as under:

Equity Shares of Rs.100 each	Rs.40,00,000
Retained Earnings	Rs.10,00,000
9% Preference Shares	Rs.25,00,000
7% Debentures	Rs.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 Rs.25,00,000 to finance its expansion programme for which it is considering the following alternatives :

i) Issue of 20,000 Equity Shares at a premium of Rs.25 per share.
ii) Issue of 10% Preference Shares.
iii) Issue of 8% Debentures.

It is estimated that the Price Earnings 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? Why ?

Q.4 - HW

Paranjape Chemical Ltd. requires ` 25,00,000 for a new plant. This plant is expected to yield earnings before interest and taxes of 20% on investment.

While deciding about the financial plan, the company considers the objective of maximizing earning 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% up to 2,50,000, at 15% over, 2,50,000 and up to 10,00,000 and at 20% over 10,00,000. The tax rate applicable to the company is 30%. Equity shares are issued at market price. Which form of financing should the company choose?

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