Operating Leverage

Que 1.: A firm's sales and expenses details are as follows:

Sales: Rs. 600 lakh

Variable cost: Rs. 360 lakh

Fixed cost: Rs. 140 lakh

(a) Calculate the DOL.
(b) Interpret the result in (a).
(c) How will the profit change if sale increase by10%?
(d) How will the profit change if sales decreased by10%?

Que 2 (Practice): Company A and company B have been operating in the same industry and in the same industry since last year. Both are quite comparable in terms of investment, products and capacity. The selected financial data of these two companies are given below.

('in Rs. "000)

Particulars	Company A	Company B
Sales revenue	1,000	1000
Variable cost	600	200
Operating fixed cost	200	600

Assuming a 10% increase in the sales revenue of both the firms.

Calculate the degree of operating leverage for each company.

Financial Leverage:

Que 3: Swagat corporation is considering a project costing Rs. 800 lakh. The project offers expected earnings of Rs. 100 lakhs under normal conditions. These earnings can change by +/- 50% under conditions of expansions and recession. Swagat corporation has two alternative financing plan: raise 100% equity financing through issue of 10 lakh shares of value Rs. 80 each, or avail of a loan of Rs. 800 lakhs –equivalent to 50% of the project cost –at interest of 10%, while rest 50% by issuing 5 lakh equity shares at Rs. 80 per share.

What is DFL of Swagat corporation under 100% equity financing arrangement, and under a 50% debt arrangement?

Que 4 (Practice):

A firm is considering a project with initial investment of Rs. 500 lakh. Under normal circumstances, the project is expected to earn Rs. 70 lakh. The expected earnings can change by +/- 30% in case of growth or recession. The firm can finance the project in two ways:

1. 100 per cent equity financing by 10 lakh shares of Rs. 50 each.
2. Mix of (50%) debt at 10% and 50% equity shares i.e. 5 lakh shares of Rs. 50 each

Calculate the DFL under both the options.

Combined Leverage:

Que 5: There are two firms, who are similar in nature. The firm A has financed all operations by equity whereas, the firm B has a combination of both equity and debts capital equally . The other informations for both the firms are mentioned below:

Sales revenue Rs. 2 crore
Selling price: Rs. 320
Variable cost (unit) Rs. 200
Fixed cost: Rs. 50,00,000
Interest on debt for firm B =Rs. 5,00,000
Calculate the degree of operating leverage, financial leverage and combined leverage for both firms.

Que 6 (Practice):

Following are relevant intonation pertaining to the two firm P and firm Q.:

(Rs. In lakh)

Particulars	Firm-P	Firm-Q
Sales	400	600
Variable cost	160	180
Fixed cost	120	200
Interest	40	60

Calculate the degree of operating leverage (DOL), degree of financial leverage (DFL) and degree of combined leverage (DCL) of the two firms and comment.

Que 7

Pasupati Acrylon Ltd. is a manufacturing company, has provided the following capital structure:

40,000 Equity shares of Rs. 50 each	Rs. 20,00,000
10% Debentures	Rs. 10,00,000
12% Preference Shares	Rs. 10,00,000
Long term debts at 11%	Rs. 5,00,000
Retained Earnings	Rs. 10,00,000
Total	Rs. 55,00,000

The present EBIT is Rs. 10,00,000. The company is contemplating an expansion programme requiring an additional investment of Rs. 10,00,000. It is expected that the company will be able to maintain the same rate of earnings. To raise the additional capital, the company has the following alternatives:

(i) To issue debentures at 11%.
(ii) To issue preference shares at 13%.
(iii) To raise the entire additional capital through equity shares.

Examine these alternatives and suggest which alternative is best for the company. Assume tax rate to be at 35%.

Que 8 (Practice): Blueline software Ltd. has appointed you as finance manager. The company wants to implement a project for expansion for which Rs. 20 lakhs (2 million) are required to be raised from the market. The company has an objective of maximising earning per share. The following three feasible financial plans are available:

(i) The company may issue 2 lakh equity shares of Rs. 10 each.
(ii) The company may issue 1,00,000 equity shares of Rs. 10 per share and 10,000 debentures of Rs. 100 denominations bearing 8% rate of interest.
(iii) The company may issue 1,00,000 equity shares of Rs. 10 per share and 10,000 preference shares at Rs. 100 per share carrying an 7% rate of dividend.

The expansion is expected to yield an annual EBIT of Rs. 3,20,000.

Assume a tax rate of 30%. Determine the EPS for three financing alternatives.

BEP:

Que 9

ABC Ltd. Has provided the following information:

Sales (@ Rs. 5 per unit)- 20,000 units

Variable cost per unit Rs. 3/-

Fixed cost Rs. 80,000 p.a

Calculate the Breakeven point.

Que 10 (practice):

A company produces a single product. The selling price of the product is Rs. 69.50 per ton. The variable cost is Rs. 35.50 per ton. The fixed cost for the period is Rs. 18.02 lakh.

Calculate the break-even volume.

Que 11

A company produces a single product and sell it as Rs. 200 each. The variable cost of the product is Rs. 120 per unit and fixed cost for the year is Rs. 96,000. The company is producing 2,000 units of the product. You are required to calculate

(i) What is break- even quantity?
(ii) If 10% increases in production units. What is the percentage change in profits?
(iii) If, there is an increase 10% in selling price. What is new BEP?
(iv) If fixed cost increase by 50%, what is the new BEP?
(v) If the variable cost increase by Rs. 10 per unit. What is the new break-even point?

Que 12

Shiva tiles Ltd manufactures 3 different products: A, B and C. The relevant informations are mentioned below:

Particulars	Product A	Product B	Product C
Product Units	10,000	16,000	12,000
Selling price (per unit)	Rs. 40/-	Rs. 60/-	Rs. 90/-
Variable cost (per unit)	Rs. 30/-	Rs. 40/-	Rs. 50/-
Fixed cost	Rs. 40,000	Rs. 1,20,000	Rs. 1,60,000

Find out:

(i) Break-even point for each product and for the company as a whole.
(ii) What is the combined contribution margin ratio?