HOMEWORK SECTION - Leverage

Q1. From the following information extracted from the books of accounts of Imax Ltd., CALCULATE percentage change in earnings per share, if sales increase by 10% and Fixed Operating cost is Rs. 1,57,500.

Particulars	Amount in (Rs.)
EBIT (Earnings before Interest and Tax)	31,50,000
Earnings before Tax (EBT)	14,00,000

Q2. Consider the following information for Mega Ltd.:

Production level	2,500 units
Contribution per unit	Rs. 150
Operating leverage	6
Combined leverage	24
Tax rate	30%

Required: COMPUTE its earnings after tax.

Q3. The capital structure of PS Ltd. for the year ended 31st March 2021 consisted as follows:

Particulars	Amount in (Rs.)
Equity share capital (face value Rs. 100 each)	10,00,000
10% debentures (Rs. 100 each)	10,00,000

During the year 2020-2021, sales decreased to 1,00,000 units as compared to 1,20,000 units in the previous year. However, the selling price stood at Rs. 12 per unit and variable cost at Rs. 8 per unit for both the years. The fixed expenses were at Rs. 2,00,000 p.a. and the income tax rate is 30%.

You are required to CALCULATE the following:

(i) The degree of financial leverage at 1,20,000 units and 1,00,000 units.

(ii) The degree of operating leverage at 1,20,000 units and 1,00,000 units.

(iii) The percentage change in EPS.

Q4. The Sale revenue of TM excellence Ltd. @ Rs. 20 Per unit of output is Rs. 20 lakhs and Contribution is Rs. 10 lakhs. At the present level of output, the DOL of the company is 2.5. The company does not have any Preference Shares. The number of Equity Shares are 1 lakh. Applicable corporate Income Tax rate is 50% and the rate of interest on Debt Capital is 16% p.a. CALCULATE the EPS (at sales revenue of Rs. 20 lakhs) and amount of Debt Capital of the company if a 25% decline in Sales will wipe out EPS.

Q5. Betatronics Ltd. has the following balance sheet and income statement information:

Balance Sheet as on March 31st 2021

Liabilities	(Rs.)	Assets	(Rs.)
Equity capital (Rs. 10 per share)	8,00,000	Net fixed assets	10,00,000
10% Debt	6,00,000	Current assets	9,00,000
Retained earnings	3,50,000		
Current liabilities	1,50,000		
	19,00,000		19,00,000

Income Statement for the year ending March 31st 2021

Particulars	(Rs.)
Sales	3,40,000
Operating expenses (including Rs. 60,000 depreciation)	1,20,000
EBIT	2,20,000
Less: Interest	60,000
Earnings before tax	1,60,000
Less: Taxes	56,000
Net Earnings (EAT)	1,04,000

(a) DETERMINE the degree of operating, financial and combined leverages at the current sales level, if all operating expenses, other than depreciation, are variable costs.

(b) If total assets remain at the same level, but sales (i) increase by 20 percent and (ii) decrease by 20 percent, COMPUTE the earnings per share at the new sales level?

Q6. A company had the following Balance Sheet as on 31stMarch, 2021 in crores

Liabilities	Amount	Assets	Amount
E.S.C (50 lakhs shares of Rs. 10 each)	5	Fixed Assets (Net)	12.5
Reserves and Surplus	1	Current Assets	7.5
15% Debentures	10		
Current Liabilities	4		
	20		20

The additional information given is as under:

Fixed cost per annum (excluding interest)	Rs. 4 crores
Variable operating cost ratio	65%
Total assets turnover ratio	2.5

Income Tax rate	30%

Required: CALCULATE the following and comment:

(i) Earnings Per Share
(ii) Operating Leverage
(iii) Financial Leverage
(iv) Combined Leverage

Q7. CALCULATE the operating leverage, financial leverage and combined leverage from the following data under Situation I and II and Financial Plan A and B:

Installed Capacity	4,000 units
Actual Production and Sales	75% of the Capacity
Selling Price	Rs. 30 Per Unit
Variable Cost	Rs. 15 Per Unit

Fixed Cost:

Under Situation-I	Rs. 15,000
Under Situation-II	Rs. 20,000

Capital Structure:

	Financial Plan	
	A (Rs.)	B (Rs.)
Equity	10,000	15,000
Debt (Rate of Interest at 20%)	10,000	5,000
	20,000	20,000

Q8. The following particulars relating to Navya Ltd. for the year ended 31st March 2021 is given:

Output	1,00,000 units at normal capacity
Selling price per unit	₹ 40
Variable cost per unit	₹ 20
Fixed cost	₹ 10,00,000

The capital structure of the company as on 31st March, 2021 is as follows:

Particulars	₹
Equity share capital (1,00,000 shares of ₹ 10 each)	10,00,000
Reserves and surplus	5,00,000
7% debentures	10,00,000

Current liabilities	5,00,000
Total	30,00,000

Navya Ltd. has decided to undertake an expansion project to use the market potential, that will involve ₹ 10 lakhs. The company expects an increase in output by 50%. Fixed cost will be increased by ₹ 5,00,000 and variable cost per unit will be decreased by 10%. The additional output can be sold at the existing selling price without any adverse impact on the market.

The following alternative schemes for financing the proposed expansion programme are planned:

(i) Entirely by equity shares of ₹ 10 each at par.

(ii) ₹ 5 lakh by issue of equity shares of ₹ 10 each and the balance by issue of 6% debentures of ₹ 100 each at par.

(iii) Entirely by 6% debentures of ₹ 100 each at par.

FIND out which of the above-mentioned alternatives would you recommend for Navya Ltd. with reference to the risk and return involved, assuming a corporate tax of 40%.

Q9. The following details of a company for the year ended 31st March, 2021 are given below:

Operating leverage	2:1
Fixed Cost excluding interest	Rs. 3.4 lakhs
Sales	Rs. 50 lakhs
8% Debentures of Rs. 100 each	Rs. 30.25 lakhs
Equity Share Capital of Rs. 10 each	34 lakhs
Income Tax Rate	30%

CALCULATE:

(i) P/V ratio and Earning per Share (EPS)

(ii) If the company belongs to an industry, whose assets turnover is 1.5, does it have a high or low assets turnover?

(iii) At what level of sales, the Earning before Tax (EBT) of the company will be equal to zero?