1. LEVERAGES

ASSIGNMENT SOLUTIONS

PROBLEM NO: 1

a) **Income statement**

Particulars	Amount (Rs. In lakhs)
Sales	40
Less: Variable cost	(25)
Contribution	15
Less: Fixed cost	(6)
EBIT	9
Less: Interest	(3)
EBT	6

b)

i) Operating leverage $= \frac{\text{Contribution}}{\text{EBIT}} = \frac{15\text{ lakhs}}{9\text{ lakhs}} = 1.67$ times

ii) Financial leverage $= \frac{\text{EBIT}}{\text{EBT}} = \frac{9\text{ lakhs}}{6\text{ lakhs}} = 1.5$ times

iii) Combined leverage = OL x FL = 1.67 x 1.50 = 2.505

iv) Return on investment = EBIT/ Capital employed = 9/75 = 12%

v) Sales increases by 20% =
Operating leverage is 1.67. So if sales is increased by 20%.
EBIT will be increased by 1.22 × 10 i.e. 33.40% (approx.) = 9 lakhs x 33.34% = 3,00,000

PROBLEM NO: 2

Statement showing the calculation of degree of various leverages at 2500 units and 3000 units

Particulars	2,500 units (Rs.)	3,000 units (Rs.)
A. Sales	35,000	42,000
B. **Less:** Variable Costs	22,500	27,000
C. Contribution	12,500	15,000
D. **Less:** Fixed Costs	10,000	10,000
E. Earnings Before Interest & Tax (EBIT)	2,500	5,000
F. Operating Leverage (Contribution/EBIT)	5	3

Working Note:- Estimation of fixed cost

Break even units = 2000 units.

We know that , at 2000 breakeven units

Total sales revenue = Total cost

Contribution = Fixed cost

Fixed cost = 2000 x (14-9) = 10,000

PROBLEM NO: 3

Income Statement

Particulars	Amount (Rs.)
i) Sales	3,40,000
ii) Less: Variable Cost (W.N.-1)	60,000
iii) Contribution (a-b)	2,80,000
iv) Less: Fixed Cost	60,000
v) EBIT (c-d)	2,20,000
vi) Less: Interest	60,000
vii) EBT (e-f)	1,60,000
viii)Less: Tax @ 35% (W.N.-2)	56,000
ix) EAT (g-h)	1,04,000

$\therefore$ Degree of Operating Leverage = $\frac{\text{Contribution}}{\text{EBIT}} = \frac{2,80,000}{2,20,000}$ = 1.27 times

$\therefore$ Degree of Financial Leverage = $\frac{\text{EBIT}}{\text{EBT}} = \frac{2,20,000}{1,60,000}$ = 1.375 times

$\therefore$ Degree of Combined Leverage = DOL x DFL = 1.27 x 1.375 = 1.75 times

Working Notes:

W.N.- 1: Calculation of Variable Cost:

Variable Cost = Operating Exp. - Depreciation

= 1,20,000 - 60,000 = 60,000

W.N.- 2: Tax Rate = $\frac{\text{Amount of Tax}}{\text{Taxable Amount}} = \frac{56,000}{1,60,000}$ = 35%

EPS at the new sales level:

Particulars	If sales Increase by 20%	If sales Decrease by 20%
(A)Combined Leverage	1.75	1.75
(B)Impact on Change in combined leverage if Increase/Decrease by 20%	35% (1.75*20%)*100	35% (1.75*20%)*100
(C) EPS (EAT/No.of shares)	1.3 (104000/80000)	1.3 (104000/80000)
(D) Impact on EPS	1.755 (1.3X135%)	0.845 (1.3X65%)

PROBLEM NO: 4

1. Total contribution = 1,000 units x Rs. 60 per unit	Rs. 60,000
2. DCL $\frac{\text{Contribution}}{\text{EBT}} = \frac{\text{Rs. 60,000}}{\text{EBT}} = 24$. So, EBT $= \frac{\text{Rs. 60,000}}{24}$	Rs. 2,500
3. Earnings after tax = EBIT(1- Tax) = Rs. 2,500(1-0.30)	**Rs. 1,750**

PROBLEM NO: 5

Income Statement

Particulars	A	B	C
Sales (W.N-2)	3,600	8,000	12,000
Less: Variable cost (b/f)	(2,400)	(6,000)	(6,000)
Contribution	1,200	2,000	6,000
Less: Fixed Cost (b/f)	(900)	(1,600)	(4,000)
EBIT (W.N-1)	300	400	2,000
Less: Interest	(200)	(300)	(1,000)
EBT (W.N-1)	100	100	1,000
Less: Tax	(45)	(45)	(450)
EAT	55	55	550

Working Note 1: Calculation of EBIT basing on DFL and contribution basing on DOL

Particulars	A	B	C
Degree of financial Leverage (DFL)	3:1	4:1	2:1
$\frac{EBIT}{EBT} = \frac{EBIT}{EBIT - \text{int}erest}$	$\frac{EBIT}{EBIT - 200} = 3$	$\frac{EBIT}{EBIT - 300} = 4$	$\frac{EBIT}{EBIT - 1000} = 2$
	3 EBIT-600 = EBIT	4 EBT - 1200 = EBIT	2 EBIT – 2,000 = EBIT
EBIT (A)	EBIT = 300	EBIT = 400	EBIT = 2000
Degree of operating leverage (DOL)	4:1	5:1	3:1
$\frac{\text{Contribution}}{EBIT} = DOL$	$\frac{Contribution}{300} = 4$	$\frac{Contribution}{400} = 5$	$\frac{Contribution}{2000} = 3$
Contribution (B)	1,200	2,000	6,000

Working Note 2: Calculation of sales

Particulars	A	B	C
Given VC As a % of sales	66.66%	75%	50%
$\frac{\text{Contribution}}{\text{Sales}}$	33.33%	25%	50%
Contribution	1,200	2,000	6,000
Sales	$3,600\left(\frac{1,200}{33.33\%}\right)$	$8,000\left(\frac{2,000}{25\%}\right)$	$12,000\left(\frac{6,000}{50\%}\right)$

PROBLEM NO: 6

Working Note 1: Estimation of EBIT basing on DFL

Degree of Financial Leverage = $\frac{EBIT}{EBT} = 3$

$\frac{EBIT}{EBIT - Rs.10,00,000} = 3$

3 EBIT - Rs.30,00,000 = EBIT

$EBIT = \frac{Rs.\ 30,00,000}{2} = Rs.15,00,000$

Working Note 2: Estimation of contribution basing on DOL

Contribution = Fixed Cost + EBIT = Rs.50,00,000 + Rs.15,00,000 = Rs.65,00,000

a) Degree of Operating Leverage = $\frac{\text{Contribution}}{EBIT} = \frac{Rs.\ 65,00,000}{Rs.\ 15,00,000} = 4.33$ times

b) Sales Volume = $\frac{\text{Total Contribution}}{\text{Contribution Per Unit}} = \frac{Rs.\ 65,00,000}{Rs.200} = 32,500$ units

PROBLEM NO: 7

a)

Step 1: Finding of Sales Revenue basing on Asset turnover ratio

$$\text{Given total Asset turnover ratio} = \frac{\text{Turnover / sales}}{\text{Total Assets}} = 3$$

$$\frac{\text{Sales}}{2,00,000} = 3$$

$$\text{Sales} = 6,00,000$$

Step 2: Profit Statement:

Particulars	Amount (Rs.)
a) Sales revenue	6,00,000
b) **Less:** Variable Cost (Rs.6,00,000 x 40%)	2,40,000
c) Contribution	**3,60,000**
d) **Less:** Fixed Cost	1,00,000
e) EBIT	**2,60,000**
f) **Less:** Interest (80,000 x 10%)	8,000
g) EBT	**2,52,000**
h) **Less:** Tax @ 35%	88,200
i) EAT / EAESH	**1,63,800**
j) No. of Equity Shares $\frac{60,000}{10}$	6,000 Shares
k) EPS $\left(\frac{\text{EAESH}}{\text{No.of Shares}}\right)$	27.3

Step 3: Calculation of Leverages:

$$\text{Degree of Operating Leverage} = \frac{\text{Contribution}}{\text{EBIT}} = \frac{3,60,000}{2,60,000} = 1.38$$

$$\text{Degree of Financial Leverage} = \frac{\text{EBIT}}{\text{EBT}} = \frac{2,60,000}{2,52,000} = 1.031$$

$$\text{Degree of Combined Leverage} = 1.39 \times 1.031 \cong 1.43 \text{ (or) } \frac{3,60,000}{2,52,000} = 1.42$$

b)

EPS is Rs. 1:

$$\text{We know that EPS} = \frac{(EBIT - Int)(1-t)}{n}$$

$$1 = \frac{(EBIT - 8,000)(1-0.35)}{6,000}$$

$$6,000 = (EBIT - 8,000)(0.65)$$

$$EBIT - 8,000 = \frac{6,000}{0.65} = 9,230.76$$

$$EBIT = 17,230.76$$

If the level of EBIT is 17,231 then EPS will be equal to Rs. 1

EPS is Rs. 3:

$$\text{We know that EPS} = \frac{(EBIT - Int)(1-t)}{n}$$

$$3 = \frac{(EBIT - 8,000)(1-0.35)}{6,000}$$

$$EBIT - 8,000 = \frac{18,000}{0.65}$$

$$EBIT = 35,692.31$$

EPS is Rs. 0:

$$\text{We know that EPS} = \frac{(EBIT - Int)(1-t)}{n}$$

$$0 = \frac{(EBIT - 8,000)(1-0.35)}{6,000}$$

$$EBIT = 8,000$$

PROBLEM NO: 8

Income Statement:

Particulars	Amount (Rs.)
Sales	100,00,000
Less: Variable cost (60% of Rs. 100,00,000)	(60,00,000)
Contribution	40,00,000
Less: Fixed costs	(10,00,000)
Earnings before interest and tax (EBIT)	30,00,000
Less: Interest on debt (@ 10% on Rs 45 lakhs)	(4,50,000)
Earnings before tax (EBT)	25,50,000

i) $ROI = \frac{EBIT}{\text{Capital Employed}} \times 100 = \frac{30,00,000}{55,00,000 + 45,00,000} \times 100 = 30\%$

(ROI is calculated on Capital Employed)

ii) ROI = 30% and Interest on debt is 10%, hence, it has a favourable financial leverage.

iii) $\text{Capital Turnover} = \frac{\text{Net sales}}{\text{Capital}} = \frac{Rs.1,00,00,000}{Rs.1,00,00,000} = 1.00$

Which is very low as compared to industry average of 3.

iv) Calculation of Operating, Financial and Combined leverages

a) Operating Leverage $= \frac{\text{Contribution}}{EBIT} = \frac{40,00,000}{30,00,000} = 1.33$

b) Financial Leverage $= \frac{EBIT}{EBT} = \frac{30,00,000}{25.50,000} = 1.17$

c) Combined Leverage $= \frac{\text{Contribution}}{EBT} = \frac{40,00,000}{25,50,000} = 1.56$

Or = Operating Leverage × Financial Leverage = 1.33 × 1.17 = 1.55 (approx)

v) Operating leverage is 1.33. So if sales is increased by 10%. EBIT will be increased by 1.33 × 10 i.e. 13.30% (approx.)

vi) Since the combined Leverage is 1.56, sales have to drop by 100/1.56 i.e. 64.10% to bring EBT to Zero

Accordingly, New Sales = Rs. 100,00,000 × (1 - 0.6410)

= Rs. 100,00,000 × 0.359

= Rs. 35,90,000 (approx.)

Hence at Rs. 35,90,000 sales level EBT of the firm will be equal to Zero.

vii) Financial leverage is 1.187. So, if EBIT increases by 20% then EBT will increase by 1.17 × 20 = 23.4% (approx)

PROBLEM NO: 9

Particulars	Situation A		Situation B	
	Plan XY	Plan XM	Plan XY	Plan XM
Selling price p.u	30	30	30	30
Variable cost p.u	(20)	(20)	(20)	(20)
Contribution per unit	10	10	10	10
Sales (units)	6,000	6,000	6,000	6,000
Total Contribution	60,000	60,000	60,000	60,000
Fixed Cost	(20,000)	(20,000)	(25,000)	(25,000)
EBIT	40,000	40,000	35,000	35,000
Interest (W.N)	(4,800)	(1,200)	(4,800)	(1,200)
EBT	**35,200**	**38,800**	**30,200**	**33,800**
DOL = $\frac{\text{Contribution}}{\text{EBIT}}$	$\frac{60,000}{40,000}$ = 1.5	$\frac{60,000}{40,000}$ = 1.5	$\frac{60,000}{35,000}$ = 1.71	$\frac{60,000}{35,000}$ = 1.71
DFL = $\frac{\text{EBIT}}{\text{EBT}}$	$\frac{40,000}{35,200}$ = 1.14	$\frac{40,000}{38,800}$ = 1.03	$\frac{35,000}{30,200}$ = 1.16	$\frac{35,000}{33,800}$ = 1.04
DCL = OL X FL	1.5 x 1.14 = 1.71	1.5 x 1.03 = 1.545	1.71 x 1.16 = 1.984	1.71 x 1.04 = 1.778

Working Note: Interest Calculation

Plan XY = 40,000 x 12% = 4,800

Plan XM = 10,000 x 12% = 1,200

PROBLEM NO: 10

i) Operating Leverage = $\frac{\text{Contribution}}{\text{EBIT}} = \frac{3,90,000}{3,00,000}$ = 1.30 times

Financial Leverage = $\frac{\text{EBIT}}{\text{EBT}} = \frac{3,00,000}{2,60,000}$ = 1.15 times

ii) Preference Dividend Cover = PAT/Preference share Dividend

= 1,82,000/50,000 = 3.64 times

Equity Dividend Cover = PAT - Pref. div/Equity Dividend

=1,82,000 - 50,000/1,20,000 = 1.10 times

iii) Earning yield= EPS/Market Price X100 = 1,32,000/ 80,000 = 8.25%

Price Earnings Ratio = Market price / EPS = 20/1.65 = 12.1 times

iv) Net Funds Flow = Net Profit After Tax + Depreciation- Total Dividend

= 1,82,000 + 90,000 - (50,000 + 1,20,000)

= 2,72,000 - 1,70,000

= 1,02,000

Working Note:-1

Calculation of EBIT

EBIT = (EAT/ 1- Tax) + Interest = 1,82,000/1- 0.3 + 40,000 = 3,00,000

Working Note:-2

Calculation of Contribution

Contribution = Sales – Variable cost Or **EBIT + Fixed cost** = 3,00,000 + 90,000 = 3,90,000

PROBLEM NO: 11

Working Notes:

a) Financial Leverage = $\frac{\text{Combined Leverage}}{\text{Operating Leverage}} = \frac{6}{3} = 2$

Financial Leverage = $\frac{\text{EBIT}}{\text{EBT} - \left(\frac{\text{Preference dividend}}{1 - \text{Tax}}\right)} = \frac{\text{EBIT}}{\text{EBIT} - 2,50,000 - 2,00,000} = 2$

EBIT = 2 EBIT - Rs.9,00,000

EBIT = Rs.9,00,000

b) Operating Leverage = $\frac{\text{Contribution}}{\text{EBIT}} = 3$

EBIT = Rs.9,00,000 x 3 = Rs.27,00,000

Sales = Variable Cost + Contribution = Rs.10,00,000 + Rs.27,00,000 = Rs.37,00,000

PROBLEM NO: 12

Company	M	N	P	Q	R
Degree of Operating Leverage = $\frac{\text{Change in EBIT}}{\text{Change in Sales}}$ (in times)	$\frac{26\%}{28\%} = 0.93$	$\frac{34\%}{27\%} = 1.26$	$\frac{38\%}{25\%} = 1.52$	$\frac{43\%}{23\%} = 1.87$	$\frac{40\%}{25\%} = 1.60$
Degree of Combined Leverage = $\frac{\text{Change in EPS}}{\text{Change in Sales}}$ (in times)	$\frac{32\%}{28\%} = 1.14$	$\frac{26\%}{27\%} = 0.96$	$\frac{23\%}{25\%} = 0.92$	$\frac{27\%}{23\%} = 1.17$	$\frac{28\%}{25\%} = 1.12$

ADDITIONAL PROBLEMS SOLUTIONS

PROBLEM NO: 1

Particulars	N (Rs.)	S (Rs.)	D (Rs.)
Sales Value (17,500x85, 6700x130, 31800x37)	14,87,500	8,71,000	11,76,600
Variable Cost (17,500x38, 6700x42.50, 31800x12)	(6,65,000)	(2,84,750)	(3,81,600)
Contribution	8,22,500	5,86,250	7,95,000
Fixed cost	4,00,000	3,50,000	2,50,000
EBIT	4,22,500	2,36,250	5,45,000
Interest	1,25,000	75,000	-
EBT	2,97,500	1,61,250	5,45,000
Operating Leverage = $\frac{\text{Contribution}}{\text{EBIT}}$	8,22,500/4,22,500 = 1.95	5,86,250/2,36,250=2.48	7,95,000/5,45,000 = 1.46
Financial Leverage = $\frac{\text{EBIT}}{\text{PBT}}$	4,22,500/2,97,500 = 1.42	2,36,250/1,61,250 = 1.47	5,45,000/5,45,000 =1
Combine Leverage= Operating Leverage × Financial Leverage	2.77	3.65	1.46

PROBLEM NO: 2

Particulars	Firms			
	A	B	C	D
Sales (units)	5,000	5,000	5,000	5,000
Sales revenue (Units × price) (Rs.)	1,00,000	1,60,000	2,50,000	3,50,000
Less: Variable cost (Units × variable cost per unit) (Rs.)	(30,000)	(80,000)	(1,00,000)	(2,50,000)
Less: Fixed operating costs (Rs.)	(60,000)	(40,000)	(1,00,000)	Nil
EBIT	10,000	40,000	50,000	1,00,000

$$DOL = \frac{Current\,sales(S) - Variable\,Costs(VC)}{Current\,EBIT}$$

$$DOL_A = \frac{1,00,000 - 30,000}{10,000} = 7$$

$$DOL_B = \frac{1,60,000 - 80,000}{40,000} = 2$$

$$DOL_C = \frac{2,50,000 - 1,00,000}{50,000} = 3$$

$$DOL_D = \frac{3,50,000 - 2,50,000}{1,00,000} = 1$$

The operating leverage exists only when there are fixed costs. In the case of firm D, there is no magnified effect on the EBIT due to change in sales. A 20 per cent increase in sales has resulted in a 20 per cent increase in EBIT. In the case of other firms, operating leverage exists. It is maximum in firm A, followed by firm C and minimum in firm B. The interpretation of DOL of 7 is that1 per cent change in sales results in 7 per cent change in EBIT level in the direction of the change of sales level of firm A.

PROBLEM NO: 3

Total Assets = Rs. 20 Crores

Total Asset Turnover Ratio = 2.5

Hence,Total Sales = 2.5 x 20 = Rs. 50 Crores

Computation of Profit after Tax (PAT)

Particulars	(Rs. In crores)
Sales	50.00
Less: Variable Operating Cost @ 65%	32.50
Contribution	17.50
Less: Fixed Cost (other than Interest)	4.00
EBIT	13.50
Less: Interest on Debentures (15% □ 10)	1.50
PBT	12.00
Less: Tax @ 30%	3.60
PAT	8.40

(i) Earnings per Share

EPS = 8.40 Crores/ Number of Equity shares = 8.4/50 ,00,000 = Rs.16.80

It indicates the amount the company earns per share. Investors use this as a guide while valuing the share and making investment decisions. It is also a indicator used in comparing firms within an industry or industry segment.

(ii) Operating Leverage

$$\text{Operating Leverage} = \frac{\text{Contribution}}{\text{EBIT}} = 17.50/13.50 = 1.296$$

It indicates the choice of technology and fixed cost in cost structure. It is level specific. When firm operates beyond operating break-even level, then operating leverage is low. It indicates sensitivity of earnings before interest and tax (EBIT) to change in sales at a particular level.

(iii) Financial Leverage

$$\text{Financial Leverage} = \frac{\text{EBIT}}{\text{PBT}} = 13.50/12.00 = 1.125$$

The financial leverage is very comfortable since the debt service obligation is small vis-à-vis EBIT.

(iv) Combined Leverage

$$\text{Combined Leverage} = \frac{\text{Contribution}}{\text{EBIT}} \times \frac{\text{EBIT}}{\text{PBT}}$$

OR,

= Operating Leverage × Financial Leverage

= 1.296 □ 1.125 = 1.458

The combined leverage studies the choice of fixed cost in cost structure and choice of debt in capital structure. It studies how sensitive the change in EPS is vis-à-vis change in sales. The leverages operating, financial and combined are used as measurement of risk.

PROBLEM NO: 4

Particulars	60,000 (Rs.)	50,000 (Rs.)
Sales Value	7,30,000	6,00,000
Variable Cost	(4,80,000)	(4,00,000)
Contribution	2,40,000	2,00,000
Fixed expenses	(1,00,000)	(1,00,000)
EBIT	1,40,000	1,00,000
Debenture Interest	(50,000)	(50,000)
EBT	90,000	50,000
Tax @ 30%	(27,000)	(15,000)
Profit after tax (PAT)	63,000	35,000

(i) Earnings per share (EPS) = $\frac{63,000}{5,000}$ = Rs.12.6 $\frac{35,000}{5,000}$ =Rs.7

Decrease in EPS = 12.6 – 7 = 5.6

% decrease in EPS = $\frac{5.6}{12.6} \times 100 = 44.44\%$

(ii) Operating leverage = $\frac{\text{Contribution}}{\text{EBIT}}$ = $\frac{2,40,000}{1,40,000}$ =1.71 $\frac{2,00,000}{1,00,000}$ =2

(iii) Financial Leverage = $\frac{\text{EBIT}}{\text{PBT}}$ = $\frac{1,40,000}{90,000}$ = 1.56 $\frac{1,00,000}{50,000}$ = 2

PROBLEM NO: 5

Income Statements of Company A and Company B

Particulars	Company A (Rs.)	Company B (Rs.)
Sales Value	91,000	1,05,000
Variable Cost	(56,000)	(63,000)
Contribution	35,000	42,000
Fixed expenses	(20,000)	(31,500)
EBIT	15,000	10,500
Interest	(12,000)	(9,000)
EBT	3,000	1,500
Tax @ 30%	(900)	(450)
Profit after tax (PAT)	2,100	1,050

Working Notes:

Company A

(i) Financial Leverage = $\frac{\text{EBIT}}{\text{PBT (EBIT - Interest)}}$

So, $5 = \frac{\text{EBIT}}{\text{EBIT - 12,000}}$

5 (EBIT – 12,000) = EBIT

4 EBIT = 60,000

EBIT = Rs.15,000

(ii) Contribution = EBIT + Fixed Cost

= Rs. 15,000 + Rs. 20,000 = Rs. 35,000

(iii) Sales = Contribution + Variable cost

= Rs. 35,000 + Rs. 56,000

= Rs. 91,000

Company B

(i) Contribution = 40% of Sales (as Variable Cost is 60% of Sales)

= 40% of 1,05,000 = ` 42,000

(ii) Operating Leverage = $\frac{\text{Contribution}}{\text{EBIT}}$ Or, $4 = \frac{42,000}{\text{EBIT}}$

EBIT = Rs. 10,500

(iii) Fixed Cost = Contribution – EBIT = 42,000 – 10,500 = Rs. 31,500

PROBLEM NO: 6

Profit Volume Ratio = $\frac{\text{Contribution}}{\text{Sales}} \times 100$

So, $25.55 = \frac{\text{Contribution}}{42,00,000} \times 100$

Contribution = Rs.10,73,100

Income Statement

Particulars	Amount (Rs.)
Sales Value	42,00,000
Variable Cost (Sales – Contribution)	(31,26,900)
Contribution	10,73,100
Fixed expenses	(3,48,000)
EBIT	7,25,000
Interest	(2,03,500)
EBT(EBIT- Interest)	5,21,600
Tax	(1,82,500)
Profit after tax (PAT)	3,39,040

(i) Operating Leverage $= \frac{\text{Contribution}}{\text{EBIT}}$

$= \frac{10,73,100}{7,25,100}$

$= 1.48$

(ii) Combined Leverage = Operating Leverage x Financial Leverage

$= 1.48 \times 1.39 = 2.06$

Or, $\frac{\text{Contribution}}{\text{EBT}} = \frac{10,73,100}{5,21,600} = 2.06$

(iii) Earnings per Share (EPS)

$$EPS = \frac{PAT}{\text{No.of shares}} = \frac{3.39.040}{2,50,000} = 1.356$$

EPS = 1.36

PROBLEM NO: 7

Evaluation of proposal of process change assuming additional investment raised through debt

Particulars	Existing	New
Sales	(5,000 × 100) 5,00,000	(7,00,000 × 95) 6,65,000
Less: Variable cost (W.N-1)	(2,50,000 / 5,000 = 50) 2,50,000	(7,000 × 40) 2,80,000
Contribution	2,50,000	3,85,000
Less: Fixed cost	2,00,000	2,50,000
EBIT	50,000	1,35,000
Less: Interest	-	(4,00,000 × 10%) 40,000
EBT	50,000	95,000

W.N-1: Under existing proposal total variable cost = 5,00,000 - 2,50,000 = Rs. 2,50,000

$\therefore$ Variable Cost per unit $= \frac{2,50,000}{5,000}$ = Rs. 50

Given that variable cost reduced by Rs.10 per unit under new proposal.

$\therefore$ Variable Cost per unit = 50-10 = Rs. 40, Total Variable cost = 7,000 × 40 = Rs. 2,80,000

Conclusion: The overall profits of the company (EBT) have increased from Rs.50,000 to Rs.95,000. So it is advisable for the company to implement the proposed changes.

Additional Return on Investment $= \frac{45,000}{4,00,000} \times 100 = 11.25\%$.

If additional investment is raised through equity then additional return on investment

$$= \frac{1,35,000 - 50,000}{4,00,000} \times 100 = 21.25\%$$

Particulars	Existing	New
Breakeven point = $\frac{\text{Fixed cost}}{\text{Contribution per unit}}$	$= \frac{2,00,000}{50}$ = 4,000 units	$= \frac{2,50,000}{95-40} \cong 4,545.45$ = 4,546 units*
Degree of Operating Leverage = $\frac{\text{Contribution}}{\text{EBIT}}$	5 times	2.85 times

* Break-even point is rounded off to next number

Assumption: It is assumed that additional investment is raised through debt.

THE END