

CA Nitin Guru

Subject- **Financial Management - By CA NITIN GURU**

Mock Test – 5 - SOLUTIONS

Financing Decisions – Leverages; Investment Decisions

Time: 1 Hour

M.M. – 20 Marks

Instructions-

1. This is a self paced test series, where you can do the test anytime after you complete your chapter and attempt the test and email it to us for checking or self evaluation with help of the solution set provided. For video solutions and test paper to be checked please email us at email id provided below.
2. Answer Sheet is in a single pdf format.
3. First Sheet contains all the information- Name, Registered Email id, Registered Mobile No., Test Number with Subject, website name through which you are watching our class..
4. NO late submission will be entertained.
5. NO answer sheet will be accepted over a chat box or telegram or any other mode other than email.
6. Test solutions should be emailed to test.canitinguru@gmail.com
7. Please give us at least 10 working days time to check and send back your test copy.
8. Sir, will record test paper discussion video as well, which you can watch and clarify your doubts if you have any. Solution videos will be available on youtube and please join our telegram channel [@canitinguru](https://t.me/canitinguru) to be updated with any announcement about test discussion.

Solution 1.

[10 Marks]

Income Statement

Particulars	Amount (Rs)
Sales	85,00,000
Less: Variable cost (56% of Rs 85,00,000)	(47,60,000)
Contribution	37,40,000
Less: Fixed costs	(20,00,000)
Earnings before interest and tax (EBIT)	17,40,000
Less: Interest on debt (@ 12% on Rs 45 lakh)	(5,40,000)
Earnings before tax (EBT)	12,00,000

(i)
$$\text{ROI} = \frac{\text{EBIT}}{\text{Capital employed}} \times 100 = \frac{\text{EBIT}}{\text{Equity} + \text{Debt}} \times 100$$

$$= \frac{17,40,000}{55,00,000 + 45,00,000} \times 100 = 17.4\%$$
 (ROI is calculated on Capital Employed)

(ii) ROI = 17.4% and Interest on debt is 12%, hence, it has a favourable financial leverage.

(iii)
$$\text{Capital Turnover} = \frac{\text{Net sales}}{\text{Capital}}$$
 Or,
$$\frac{\text{Net sales}}{\text{Capital}} = \frac{85,00,000}{1,00,00,000} = 0.85$$
 Which is very low as compared to industry average of 3.

(iv) Calculation of Operating, Financial and Combined leverages

(a)
$$\text{Operating Leverage} = \frac{\text{Contribution}}{\text{EBIT}} = \frac{37,40,000}{17,40,000} = 2.15$$

(b)
$$\text{Financial Leverage} = \frac{\text{EBIT}}{\text{EBT}} = \frac{17,40,000}{12,00,000} = 1.45$$

(c)
$$\text{Combined Leverage} = \frac{\text{Contribution}}{\text{EBT}} = \frac{37,40,000}{12,00,000} = 3.12$$

Or,
$$\text{Operating Leverage} \times \text{Financial Leverage} = 2.15 \times 1.45 = 3.12$$

(v) Operating leverage is 2.15. So if sales is increased by 10%. EBIT will be increased by 2.15×10 i.e. 21.50% (approx.)

(vi) Since the combined Leverage is 3.12, sales have to drop by $100/3.12$ i. e. 32.05% to bring EBT to Zero

Accordingly,
$$\text{New Sales} = \text{Rs } 85,00,000 \times (1 - 0.3205)$$

$$= \text{Rs } 85,00,000 \times 0.6795 = \text{Rs } 57,75,750$$

Hence at Rs 57,75,750 sales level, EBT of the firm will be equal to Zero.

(vii) Financial leverage is 1.45. So, if EBIT increases by 20% then EBT will increase by $1.45 \times 20 = 29\%$

Solution 2.

[10 Marks]

(i) Optimizing returns when projects are independent and divisible

Computation of NPVs per Re. 1 of Investment and Ranking of the Projects

Project	Investment (Rs)	NPV (Rs)	NPV per Re. 1 invested (Rs)	Ranking
C	40,000	20,000	0.50	1
D	1,00,000	35,000	0.35	3

E	50,000	24,000	0.48	2
F	60,000	18,000	0.30	4

Building up of a Package of Projects based on their Rankings

Project	Investment (Rs)	NPV (Rs)
C	40,000	20,000
E	50,000	24,000
D (1/10th of Project)	10,000	3,500
Total	1,00,000	47,500

The company would be well advised to invest in Projects C, E and D (1/10th) and reject Project F to optimize return within the amount of Rs 1,00,000 available for investment.

(ii) Optimizing returns when projects are indivisible.

Package of Project	Investment (Rs)	Total NPV (Rs)
C and E	90,000 (40,000 + 50,000)	44,000 (20,000 + 24,000)
C and F	1,00,000 (40,000 + 60,000)	38,000 (20,000 + 18,000)
Only D	1,00,000	35,000

The company would be well advised to invest in Projects C and E to optimize return within the amount of Rs 1,00,000 available for investment.