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- Has uploaded over 3000+ educational videos for CA Foundation and CA Inter students
- Known for his dynamic, conceptual and “fun-and-learn” teaching style
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- Strong academic background with B.Com (BMCC, Pune) and ACA qualification
- Widely appreciated for his clarity, energy, and practical approach to law subjects
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CAADARSHJOSHI

CA DARSHAN JAIN

CA , CS , LLB , DISA , DIRM , B.COM

CO FOUNDER

- Chartered Accountant by profession & educator by passion
- Teaching Financial Accounting , Financial Management & Strategic Management to CA Students For 12 Years.
- Practicing Chartered Accountant For Past 13 years in The Field of Audit , Direct & Indirect Taxes & Management Consultancy
- Elected as Convenor of The Jalna CA CPE Chapter of WIRC of ICAI For 2 consecutive years 20-21 & 21-22.
- He Has Successfully Completed & Qualified Following Certificate Course Conducted By ICAI

1. Forensic Accounting & Fraud Detection
2. Concurrent Audit of Banks
3. Goods & Service Tax (GST)
4. Public Finance & Accounting
5. Drafting & Pleading Before Authorities
6. Wealth management & Financial Planning
7. Artificial Intelligence

@CA_DARSHAN_JAIN

CA TUSHAR TAPARIA

CA , LLB

- A multi-faceted professional with a Chartered Accountancy qualification and a Bachelor’s degree in Law.
- Brings 7+ years of teaching experience across CA and CS professional courses.
- Specializes in:
- Taxation at CA Intermediate and CS Executive levels
- Economics at CA Foundation level
- Known for simplifying complex concepts with crystal-clear explanations and practical insights.
- Expert in delivering Fasttrack batches with proven accelerated learning techniques.
- Frequently invited as a visiting faculty for Taxation at reputed coaching institutes.
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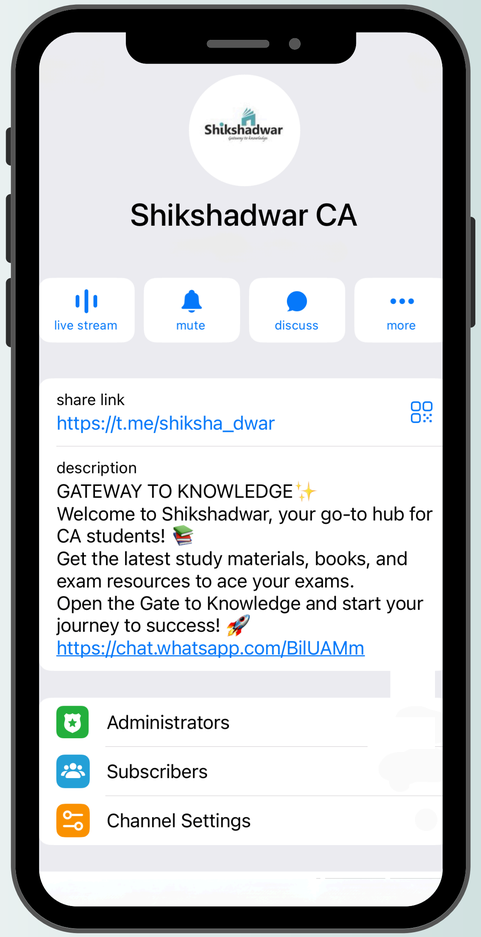

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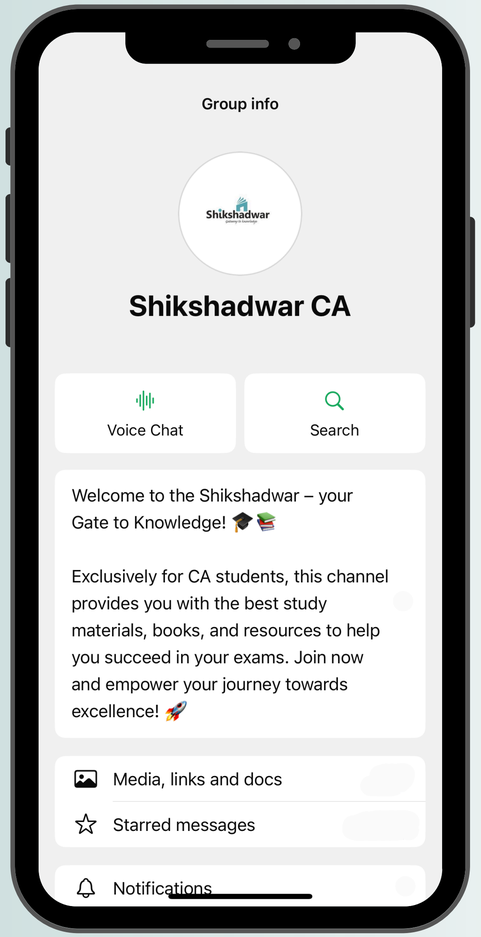

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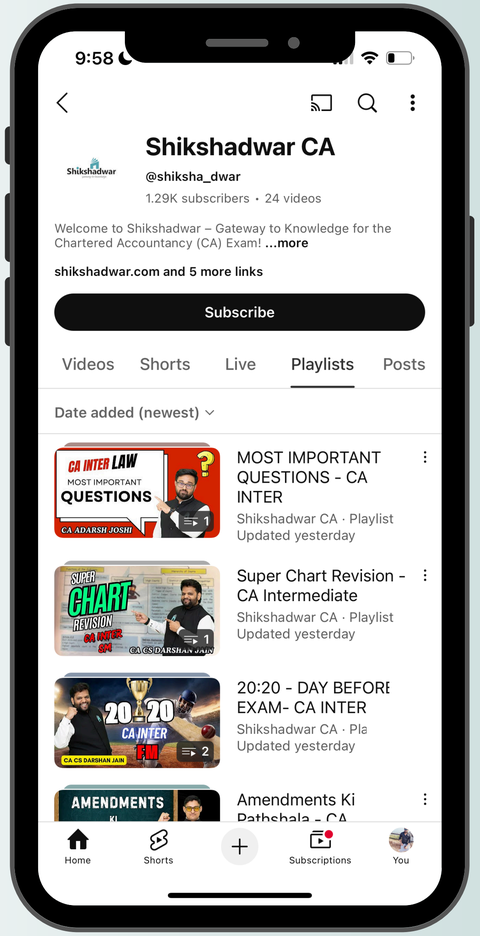

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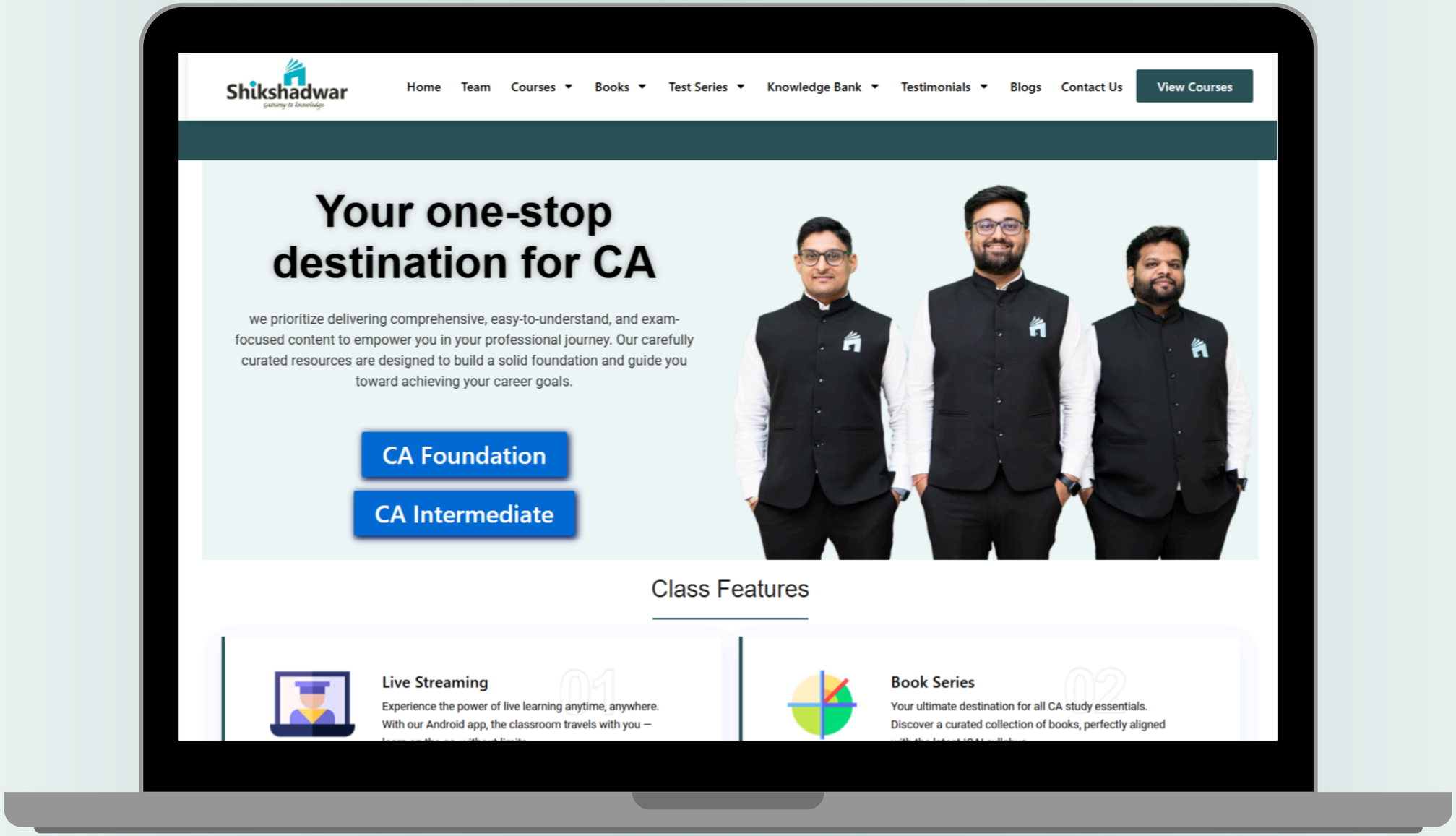

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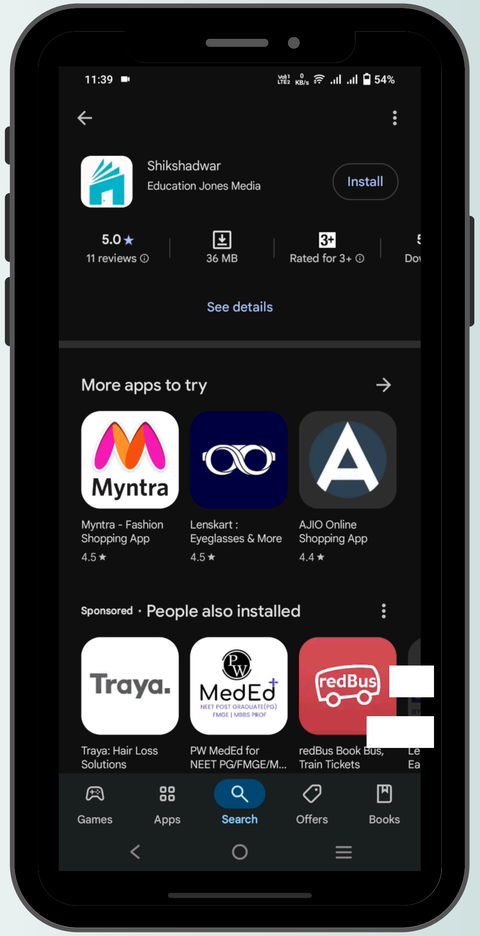

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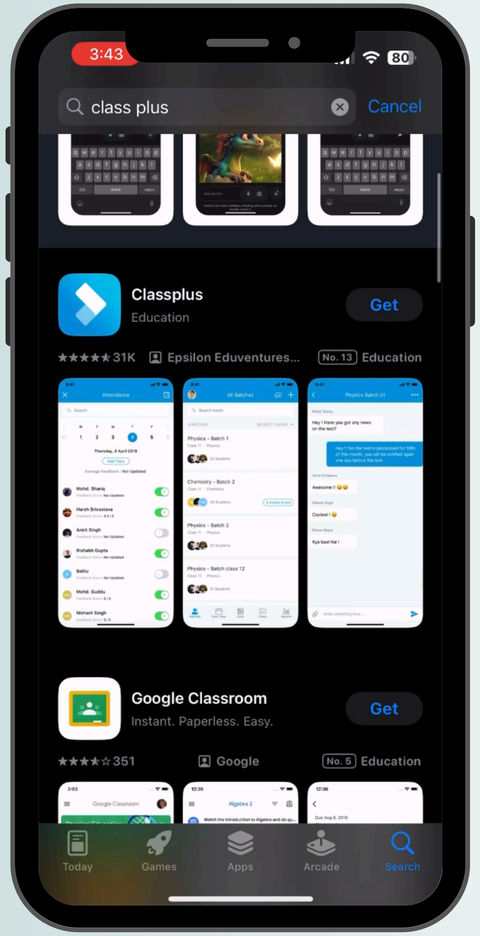

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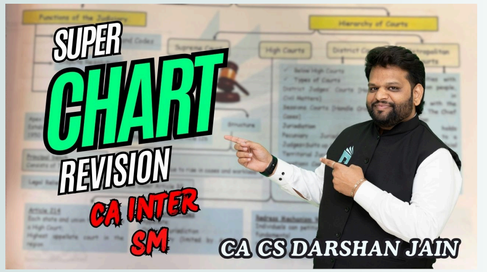
CA INTERMEDIATE MAY 25

Marathons Live Streams

RRR - Result Oriented Rapid Revision

Most Imp Questions

One Shot MCQ's Marathon



Super Chart Revision

Amendments Ki Pathshala

20 -20 Series

CA INTERMEDIATE MAY 25

Marathons Schedule With Links

DATE	TIME	EDUCATOR	SUBJECT	TOPICS	YOUTUBE LINK
17/4/2025	8.00 AM	CA ADARSH JOSHI	LAW	RRR	WATCH NOW
18/4/2025	12.00 NOON	CA TUSHAR TAPARIA	GST	RRR	WATCH NOW
19/4/2025	8.00 AM	CA CS DARSHAN JAIN	FM	RRR	WATCH NOW
20/4/2025	8.00 AM	CA ADARSH JOSHI	LAW	ONE SHOT MCQ MARATHON	WATCH NOW
21/4/2025	2.00 PM	CA TUSHAR TAPARIA	GST	GST AMENDMENTS & ITS IMPORTANT QUESTIONS	WATCH NOW
23/4/2025	8.00 AM	CA CS DARSHAN JAIN	FM	ONE SHOT MCQ MARATHON	WATCH NOW

DATE	TIME	EDUCATOR	SUBJECT	TOPICS	YOUTUBE LINK
24/4/2025	2.00 PM	CA TUSHAR TAPARIA	DT	DT AMENDMENTS & ITS IMPORTANT QUESTIONS	WATCH NOW
27/4/2025	8.00 AM	CA CS DARSHAN JAIN	SM	ONE SHOT MCQ MARATHON	WATCH NOW
4/5/2025	8.00 AM	CA ADARSH JOSHI	SM	MOST IMPORTANT QUESTIONS	WATCH NOW
6/5/2025	3.00 PM	CA TUSHAR TAPARIA	TAXATION	20-20	WATCH NOW
12/5/2025	8.00 AM	CA CS DARSHAN JAIN	FM	20-20	WATCH NOW
13/5/2025	8.00 AM	CA CS DARSHAN JAIN	SM	SUPER CHART REVISION	WATCH NOW

RRR

RESULT ORIENTED RAPID REVISION

CA INTER

FM

CA CS DARSHAN JAIN

CA INTER- FM

ONE SHOT

MCQ'S

MARATHON

CA CS DARSHAN JAIN


20_20
CA INTER
FM
CA CS DARSHAN JAIN

20-20

TOP TWENTY QUESTION OF FM

WEIGHTAGE ANALYSIS

SR.NO	NAME OF TOPIC	May 18	Nov 18	May 19	Nov 19	Nov 20	Jan 21	Jul 21	Dec 21	May 22	Nov 22	May 23	Nov 23	May 24	Sep 24	Jan 25
1	MEANING , SCOPE AND OBJECTIVES OF FM	4	2		3	4	4	2	2	2	2		4	4	2	4
2	TYPES OF FINANCING	6	8	6	4	4	2	4	4	2	4	6	8	6	6	4
3	LEVERAGE ANALYSIS	5	10	10	10	12	10	10	10	10	10	7	5	5	5	5
4	COST OF CAPITAL		10	5	14	5	10	10	5	10	11	10	10	6	8	9
5	CAPITAL STRUCTURE	10	5	10		10	10	5	10	10	6	10	10	4	7	10
6	CAPITAL BUDGETING	28	10	15	20	5	12	12	2	14	20	10	10	9		6

SR.NO	NAME OF TOPIC	May 18	Nov 18	May 19	Nov 19	Nov 20	Jan 21	Jul 21	Dec 21	May 22	Nov 22	May 23	Nov 23	May 24	Sep 24	Jan 25
7	ESTIMATION & FINANCING OF WORKING CAPITAL	10		10		10	5			5		4	5		5	4
8	MANAGEMENT OF ACCOUNT RECIEVABLES		10					9	5			5		5	5	
9	MANAGEMENT OF CASH & MARKETABLE SECURITIES				10		4		5		9					7
10	MANAGAMENT OF PAYABLES															
11	DIVIDEND DECISION		5	5	5	5	5	5	5	4		5	10	3	4	5
12	RATIO ANALYSIS	5	5	5	5	5	5	10	10	5	5	10	5	5	5	8
13	MCQ'S													15	15	
	TOTAL	68	65	66	71	60	67	67	58	62	67	67	67	62	62	62

ILLUSTRATION 1

Information of A Ltd. Is given below :

- Earning after tax : 5% on sales
- Income tax rate : 50%
- Degree of Operating Leverage : 4 times
- 10% Debenture in capital structure : Rs 3 lakhs
- Variable cost : Rs 6 lakhs

1) From the given data complete the following statement :

Sales	XXXX
Less : Variable cost	Rs. 6,00,000
Contribution	XXXX
Less : Fixed Cost	XXXX
EBIT	XXXX
Less : Interest expenses	XXXX
EBT	XXXX
Less : Income tax	XXXX
EAT	XXXX

2) Calculate Financial Leverage & Combined Leverage.

3) Calculate the percentage change in earning per share, if sales increased by 5%

Profitability Statement

Sr.No	Particulars	Assumed	Actual
A	Sales	x	1200000
B	less. Variable Cost	600000	600000
C	Contribution	$x - 600000$	600000
D	less. Fixed cost		450000
E	EBIT	$0.10x + 30000$	150000
F	less. Interest	30000	30000
G	EBT	$0.10x$	120000
H	less. Tax @ 50%	$0.05x$	60000
I	EAT	$0.05x$	60000

Operating leverage = Contribution / EBIT

$$4 = \frac{x - 600000}{0.10x + 30000}$$

$$0.40x + 120000 = x - 600000$$

$$-0.60x = -720000$$

$$x = 720000 / 0.60$$

$$= 1200000$$

Financial leverage = $\frac{\text{EBIT}}{\text{EBT}}$

$= \frac{15000}{12000}$

$= 1.25$ times.

Combined leverage = $\frac{\text{Contribution}}{\text{EBT}}$

$= \frac{60000}{12000}$

$= 5$ times.

Combined leverage = % change in EPS / % change in sales.

5 = % change in EPS / 5

∴ % change in EPS = 5 × 5

= 25%.

ILLUSTRATION 2

BEST Limited, a prominent company in semi-conductors' industry, aims to understand the impact of operating and combined leverage on its financial performance for the year ended 31st March 2024. By examining the provided financial details, the company seeks to make informed decisions regarding its cost structure and financing mix.

BEST Limited is a well-established firm known for its products in the market. With a focus on innovation and customer satisfaction, the company has achieved significant growth and success over the years.

Financial Analysis: For the financial year ending 31st March 2024, BEST Limited provides the following financial details:

- Fixed Cost (Excluding interest): ₹2,040 Lakhs
- Sales: ₹30,000 Lakhs
- 12% Debentures of ₹100 each: ₹21,250 Lakhs
- Equity Share Capital of ₹10 each: ₹17,000 Lakhs
- Income tax rate: 30%

Mr. Pallav Kumar, an Executive Director from engineering background discussed following analysis with CA Nagarjuna, Additional Director - Finance of the company:

1. Operating Leverage: Operating leverage, which is currently at 1.4, measures the impact of fixed costs on the company's operating income.
2. Combined Leverage: Combined leverage considers both operating and financial leverage. It is calculated as the product of operating leverage and financial leverage. And company’s combined leverage is 2.8.

CA Nagarjuna explained to Mr. Pallav that the Finance department is already analysing the various leverages like Operating Leverage, Financial Leverage and Combined Leverage. Due to these, BEST Limited gains insights into its cost structure and financial risk. These information enables the company to make strategic decisions regarding its operating expenses, financing options, and overall business strategy. Continuous monitoring and evaluation of leverage ratios will be essential for BEST Limited to maintain financial stability and drive sustainable growth in the competitive market landscape.

Calculate the ratios to understand the financial health of BEST Ltd and CA Nagarjuna can submit his report to Mr. Pallav Kumar.

1. Calculate the Financial Leverage.

(a) 0.5

(b) 2

(c) 3.92

(d) 4

$CL = OL \times FL$

$2.8 = 1.4 \times FL$

$\therefore FL = \frac{2.8}{1.40}$

$= 2$

2. Calculate the Profit Volume Ratio.

(a) 47.60%

(b) 15.86%

(c) 23.8%

(d) 17.43%

PV ratio = C/sales

= 7140/30000

= 23.80%

$OL = \frac{C}{EBIT}$

$OL = \frac{C}{C - FC}$

$1.4 = \frac{C}{C - 2040}$

$1.4C - 2856 = C$

$0.4C = 2856$

$\therefore C = 7140$

3. Calculate the Earnings Per Share.

(a) ₹ 1.5

(b) ₹ 1.05

(c) ₹ 4.2

(d) ₹ 2.1

	Contribution (3000 × 23.80)	7140
WS - FC		2040
	EBI	5100
WS -	Int	2550
	EBT	2550
WS-	Tax@30%,	765
	EAT/EAES	1785
÷	No. of shares	1700
	EPS	1.05

4. Calculate the Asset Turnover ratio of BEST Ltd.

(a) 1

(b) 0.5

(c) 0.784

(d) 1.41

$$\text{Turnover} \rightarrow$$

$$\text{Total assets}$$

$$= \frac{30000}{\text{SC + Debn}}$$

$$= \frac{30000}{170000+21250}$$

$$= 30000 / 38250$$

$$= 0.784$$

5. Calculate the minimum level of Sales which must be attained to at least pay finance cost of BEST Ltd.

(a) ₹ 19,286 Lakhs

(b) ₹ 8,574 Lakhs

(c) ₹ 24,000 Lakhs

(d) ₹ 27,000 Lakhs

EBT = (Sales x PV ratio) − FC − Interest

$0 = (x \times 23.80\%) - 2040 - 2550$

$0 = 0.2380x - 4590$

$\therefore x = 4590 / 0.2380$

$= 19285.71$

Say 19286 lakhs.

ILLUSTRATION 3

ABC Ltd. has the following capital structure, which is considered to be optimum as on 31st March, 2022.

	(₹)
14% Debentures	*30,000*
11% Preference shares	*10,000*
Equity Shares (10,000 shares)	*1,60,000*
	2,00,000

The company share has a market price of ₹ 23.60. Next year dividend per share is 50% of year 2021 EPS. Following is the uniform trend of EPS for the preceding 10 years which is expected to continue in future:

Year	EPS (₹)	Year	EPS (₹)
2012	1.00	2017	1.61
2013	1.10	2018	1.77
2014	1.21	2019	1.95
2015	1.33	2020	2.15
2016	1.46	2021	2.36

The company issued new debentures carrying 16% rate of interest and the current market price of debenture is ₹ 96.

Preference shares of ₹ 9.20 (with annual dividend of ₹ 1.1 per share) were also issued. The company is in 50% tax bracket.

(A) CALCULATE after tax:

(i) Cost of new debt

(ii) Cost of new preference shares

(iii) Cost of new equity share (assuming new equity from retained earnings)

(B) CALCULATE marginal cost of capital when no new shares are issued.

(C) DETERMINE the amount that can be spent for capital investment before new ordinary shares must be sold. Assuming that the retained earnings for next year's investment is 50 percent of 2021.

(D) COMPUTE marginal cost of capital when the fund exceeds the amount calculated in (C), assuming new equity is issued at ₹ 20 per share?

Computation of Cost of New Debt

$$K_d = \frac{I(1-t)}{NP} \times 100$$

$$= \frac{16(1-0.50)}{96} \times 100$$

$$= \frac{8}{96} \times 100$$

$$= 8.33\%$$

Computation of Cost of New preference Shares

$$K_p = \frac{D}{P_0} \times 100$$

$$\simeq \frac{1.10}{9.20} \times 100$$

$$\simeq 11.96\%$$

Computation of Cost of New Equity Shares

As there is increase in EPS every year by 10%, we shall consider growth rate of 10%.

$$K_e = \frac{D_1}{P_0} + g \times 100$$

$$= \frac{50\% \text{ of } 2.36}{23.60} + 0.10 \times 100$$

$$= \frac{1.18}{23.60} + 0.10 \times 100 = 15\%$$

Statement Showing Marginal Cost of Capital

SR.NO	SOURCE	PROPORTION	COST	MCC
A	Equity Share Capital	0·80	15 %	0·12
B	Preference Shares	0·05	11·96 %	0·0060
C	Debentures	0·15	8·33 %	0·0125
		1·00		0·1385

Marginal Cost of Capital = 13·85 %

Capital Investment before issuing New Equity Shares

Earnings available for Investment = 50% of 2021 Earnings

= 50% of [10000 × 2.36]

= 50% of 23600

= 11800

Retained Earnings which is a form of equity of Rs. 11800 is available for Investment & proportion of Equity in Capital structure is 80%.

Hence Capital Investment that can be done from retained Earning & existing capital structure.

Capital Investment = 11800

80%

= 14750

Tutorial Note

14750

Equity 11800

Preference 738

Debt 2212

Marginal Cost of Capital If Company Spends more than 14750

$$Ke = \frac{D1}{P0} + G \times 100$$

$$= \frac{50\% \text{ of } 2.36}{20} + 0.10 \times 100$$

$$= \frac{1.18}{20} + 0.10 \times 100$$

$$= 15.90\%$$

Statement Showing Marginal Cost of Capital

SR.NO	SOURCE	PROPORTION	COST	MCC
A	Equity Shares	0.80	15.90%	0.1272
B	Preference Shares	0.05	11.96%	0.0060
C	Debentures	0.15	8.33%	0.0125
		1.00		0.145

Marginal Cost of Capital = 14.5%

ILLUSTRATION 4

A company issues:

- *15% convertible debentures of ₹ 100 each at par with a maturity period of 6 years. On maturity, each debenture will be converted into 2 equity shares of the company. The risk-free rate of return is 10%, market risk premium is 18% and beta of the company is 1.25. The company has paid dividend of ₹ 12.76 per share. Five year ago, it paid dividend of ₹ 10 per share. Flotation cost is 5% of issue amount.*
- *5% preference shares of ₹ 100 each at premium of 10%. These shares are redeemable after 10 years at par. Flotation cost is 6% of issue amount.*

Assuming corporate tax rate is 40%.

(i) Calculate the cost of convertible debentures using the approximation method.

(ii) Use YTM method to calculate cost of preference shares.

Year	1	2	3	4	5	6	7	8	9	10
$PVIF_{0.03, t}$	0.971	0.943	0.915	0.888	0.863	0.837	0.813	0.789	0.766	0.744
$PVIF_{0.05, t}$	0.952	0.907	0.864	0.823	0.784	0.746	0.711	0.677	0.645	0.614
$PVIFA_{0.03, t}$	0.971	1.913	2.829	3.717	4.580	5.417	6.230	7.020	7.786	8.530
$PVIFA_{0.05, t}$	0.952	1.859	2.723	3.546	4.329	5.076	5.786	6.463	7.108	7.722

Interest rate	1%	2%	3%	4%	5%	6%	7%	8%	9%
$FVIF_{i, 5}$	1.051	1.104	1.159	1.217	1.276	1.338	1.403	1.469	1.539
$FVIF_{i, 6}$	1.062	1.126	1.194	1.265	1.340	1.419	1.501	1.587	1.677
$FVIF_{i, 7}$	1.072	1.149	1.230	1.316	1.407	1.504	1.606	1.714	1.828

(1) Computation of Cost of Convertible Debentures

Redemption shall be higher of

(i) Redemption in Cash = 100

(ii) Redemption in shares = 2 shares × price at the end of 6 yrs

= 2 × 65.27

= 130.54

∴ Redemption value shall be = 130.54

Computation of Kd by approximation method

$$Kd = \frac{I(1-t) + \frac{RV - NP}{N}}{\frac{RV + NP}{2}} \times 100$$

$$= \frac{15(1-0.40) + \left(\frac{130.54 - 95}{6}\right)}{\frac{130.54 + 95}{2}} \times 100$$

$$= \frac{9 + 5.92}{112.77} \times 100 = \frac{14.92}{112.77} \times 100 = 13.23\%$$

INN1 Computation of Price after 6 years.

$$Ke = \frac{D7}{P6} + G \times 100$$

$$32.50 = \frac{12.76(110.05)^7}{P6} + 5 \times 100$$

(INN2) (WN3)

$$32.50 = \frac{17.95}{P6} + 5 \times 100$$

$$\frac{32.50 - 5}{100} = \frac{17.95}{P_f}$$

$$0.275 = \frac{17.95}{P_f}$$

$$\therefore P_f = \frac{17.95}{0.275} = \underline{\underline{65.27}}$$

IN2 Computation of k_e

$$k_e = R_f + \beta (R_m - R_f)$$

$$= 0.10 + 1.25 (0.18)$$

$$= 0.10 + 0.225$$

$$= 0.325 \text{ that}$$

$$32.50\%.$$

INN 3 Computation of growth rate in dividend

$$g = \frac{D0}{Dr}$$

$$= \frac{12.76}{10} = 1.276.$$

As per PVIF Table It can be seen that 1.276 is PVIF for 5 years at 5%.

∴ Growth rate = 5%.

(ii) Computation of Kp by YTM approach.

Year	Cash flow	PVF@ 3%	DCF	PVF@ 5%	DCF
0	(103.40) (110-6%)	1.00	(103.40)	1.00	(103.40)
1-10	5	8.530	42.65	7.722	38.61
10	100	0.744	74.40	0.614	61.40
			13.65		(3.39)

$$Kp = \text{start rate} + \frac{\text{Surplus at start rate}}{\text{Surplus at start rate} - \text{Deficit at end rate}} \times \text{Diff between rate}$$

$$= 3 + \frac{13.65}{13.65 + 3.39} \times 2$$

$$= 3 + \frac{13.65}{17.04} \times 2$$

$$= 4.60\ \%$$

ILLUSTRATION 5

Following data is available in respect of two companies having same business risk:

Capital employed = ₹2,00,000, EBIT = ₹30,000 and K_e = 12.5%

Sources	Levered Company (₹)	Unlevered Company (₹)
Debt (@10%)	1,00,000	Nil
Equity	1,00,000	2,00,000

An investor is holding 15% shares in levered company. CALCULATE the increase in annual earnings of investor if he switches his holding from Levered to Unlevered company.

Statement showing Value of firm :

Sr. No	Particulars	levered Co.	unlevered Co.
A	EBIT	300000	300000
B	less: Interest	100000	—
C	EBT / EAT / EAES	200000	300000
D	Ke (given)	12.50%	12.50%
E	Value of Equity [C/D]	1600000	2400000
F	Value of Debt (given)	1000000	—
G	Value of firm [E+F]	2600000	2400000

Statement showing Increase in Earning of Investor If he switchs from levered to unlevered co.

Sr. NO	Particulars	Amt
A	Amount recived on sale of 15% Shares of levered co. [260000 X 15%]	39000
B	Amount required on Purchase of 15% Shares of Unlevered Co. [240000 X 15%]	36000

C] Amount available for Investment (A-B) 3000

D] Return on Amount saved (Rr) 12.5%

E] Increase in Earning (C x D) 375

Conclusion:- If an investor switches his holding from levered to unlevered his earning increases by 375.

ILLUSTRATION 6

Following data is available in respect of two companies having same business risk:

Capital employed = ₹2,00,000, EBIT = ₹30,000

Sources	Levered Company (₹)	Unlevered Company (₹)
Debt (@10%)	1,00,000	Nil
Equity	1,00,000	2,00,000
K_e	20%	12.5%

An investor is holding 15% shares in Unlevered company. CALCULATE the increase in annual earnings of investor if he switches his holding from Unlevered to Levered Company.

Statement showing Value of firms

Sr. NO	Particulars	Levered Co.	Unlevered Co.
A	EBIT	30000	30000
B	less. Interest	10000	—
C	EBT / EAT / EAES	20000	30000
D	Ke (given)	20%	12.5%
E	Value of Equity [C/D]	100000	240000
F	Value of Debt (given)	100000	—
G	Value of firm (E+F)	200000	240000

Statement showing increase in earning if Investor switches from unlevered to levered Co.

Sr. No	Particulars	Amt
A	Amount received on sale of 15% shares of unlevered Co [240 crs × 15%]	36000
B	Amount required to purchase 15% shares of levered Co. [200 crs × 15%]	30000

C] Amount saved that can be invested [A - B] — 6000

D] Amount to be invested in proportion of Debt & Equity of levered Co. — 1 : 1

E] Increase in Earning on investment in Equity [3000 × 20%] — 600

f] Increase in Earnings on Investment in Debt [3000 × 10%] — 300

g] Total Increase in Earnings [E+F] — 900

Conclusion: If an investor switches his holding from Unlevered co. to levered co. his earnings increases by 900

ILLUSTRATION 7

The following data relates to two companies belonging to the same risk class:

Particulars	**A Ltd.**	**B Ltd.**
Expected Net Operating Income	₹ 18,00,000	₹ 18,00,000
12% Debt	₹ 54,00,000	-
Equity Capitalization Rate	-	18

REQUIRED:

(a) Determine the total market value, Equity capitalization rate and weighted average cost of capital for each company assuming no taxes as per M.M. Approach.

(b) Determine the total market value, Equity capitalization rate and weighted average cost of capital for each company assuming 40% taxes as per M.M. Approach.

MM without Taxes

Sr. NO	Particulars	A Ltd	B Ltd
A	Value of firm	1000000	1000000
B	Ke	25.04%	18%
C	WACC	18%	18%

MM with Tax

Sr. NO	Particulars	A Ltd	B Ltd
A	Value of firm	8160000	6000000
B	Ke	25.04%	18%
C	WACC	13.23%	18%

If No Taxy

Ke & Ko of B Ltd shall be 18%.

Value of levered firm = Value of unlevered firm.

Value of A Ltd = Value of B Ltd.

= EATS / Ke

= 180000 / 18%.

Value of A Ltd. = 1000000

Computation of Ke of A Ltd.

$$K_e = \frac{EAES}{\text{Value of Equity}}$$

$$= \frac{EBIT - \text{Interest}}{\text{Value of firm} - \text{value of Debt}}$$

$$= \frac{1800000 - (5400000 \times 12\%)}{10000000 - 5400000}$$

$$= \frac{1800000 - 648000}{4600000}$$

$$= \frac{1152000}{4600000}$$

$$= 0.2504 \quad \text{that is } 25.04\%$$

Or

$$\text{Ke of A Ltd} = K_o \text{ of } U_L + \frac{D}{E}(K_o \text{ of } U_L - K_d)$$

$$= 0.18 + \frac{540000}{460000}(0.18 - 0.12)$$

$$= 0.18 + 0.0704 = 0.2504$$

that 25.04%.

Computation of WACC

$$WACC = \frac{EBIT}{\text{Value of Firm}}$$

$$= \frac{1800000}{10000000}$$

$$= 0.18 \text{ that is } 18\%.$$

Q2

WACC Statement -

Sr. NO	Source	Amt	Cost in %	Cost in Rs.
A	Equity	460000	25.04%	115184
B	Debt	540000 / 1000000	12%	64800
				179840

∴ WACC = 179840 / 1000000 = 0.1800 that is 18%

If Taxes

Ke & Ko of Bud Shall be 18%.

Value of Bud (unlevered) : $\frac{EBIT}{Ke}$

$= \frac{EBIT - Interest - Tax}{18\%}$

$= \frac{1800000 - 0 - 40\%}{18\%}$

$= \frac{1080000}{18\%}$

$= 60\,00\,000$

Value of ltd (levered) = Value of + Value of
Unlevered Debt

= 6000000 + [Debt × Tax rate]

= 6000000 + [5400000 × 40%]

= 6000000 + 2160000

= 8160000

Computation of Ke of A Ltd.

Ke of A Ltd (levered) = $\frac{\text{EAES}}{\text{Value of Equity}}$

$= \frac{\text{EBIT} - \text{Interest} - \text{Tax}}{\text{Value of firm} - \text{Value of Debt}}$

$= \frac{1800000 - (5400000 \times 12\%) - 40\%}{8160000 - 5400000}$

$= \frac{1800000 - 648000 - 40\%}{2760000}$

$$= \frac{69120}{276000}$$

$$= 0.2504 \quad \text{that is } 25.04\%.$$

Or

$$\text{Ke of A Ltd} = \text{Ko of UL} + \frac{\text{Debt}(1-t)}{\text{Equity}}(\text{Ko of UL} - \text{Kd})$$

$$= 0.18 + \frac{540000(1-0.40)}{276000}(0.18 - 0.12)$$

$$= 0.18 + \frac{324000}{276000} \times 0.06$$

$= 0.18 + 0.0704$

$= 0.2504$ that is 25.04%.

Computation of WACC (Ko) of A Ltd.

WACC of A Ltd $= \frac{EBIT(1-t)}{\text{Value of firm}}$

$= \frac{180000(1-0.40)}{816000}$

$$= \frac{1086\ cr}{8160\ cr}$$

$$= 0.1324 \quad \text{that is } 13.24\%$$

Or

In ALC Statement:

Sr. No	Source	Amt	Cost in %	Cost in Rs.
A	Equity	2760 cr	25.04%	691104
B	Debt	5400 cr	7.2% (12.48%)	38880
		8160 cr		1079904

$$WACC = \frac{1079904}{8160000} \times 100$$

$$= 13.24\%$$

OR

$$Ko \text{ of Ind} = Ke \text{ of UL} \times \left[1 - \left(t \times \frac{D}{D+E}\right)\right]$$

$$= 0.18 \times \left[1 - \left(0.40 \times \frac{5400000}{8160000}\right)\right]$$

$$= 0.18 \times (1 - 0.2647)$$

$$= 0.18 \times 0.7353$$

$$= \underline{13.24\%}.$$

ILLUSTRATION 8

Coral Ltd. is an agri-business company that operates in two segments - animal feed and crop protection. The company's Research and Development Department has been instrumental in its growth and success.

The existing capital structure of Coral Ltd. is as follows:

Particulars	*Amount (₹)*
Equity Shares (10,00,000 shares of ₹ 10 each)	*1,00,00,000*
15% Debentures (30,000 Debentures of ₹ 100 each)	*30,00,000*

Coral Ltd. desires to expand its horizon in breeding high-yielding and disease-resistant seeds for increasing agricultural productivity. The company requires additional funds amounting ₹ 100 lakh to finance its business expansion plan. The expected earnings before interest and taxes after this additional investment will be ₹ 76 lakh. The applicable corporate income tax rate is 30%.

The company has two alternatives for raising this additional fund:

Particulars	*Plan - I*	*Plan – II*
Equity shares of ₹ 10 each to be issued at a premium of ₹ 15 per share	*30%*	*10%*
13% Debentures of ₹ 100 each to be issued at par	*70%*	*50%*
7.15% Preference Shares of ₹10 each to be issued at par	*-*	*40%*

You are required to answer the following questions 1 to 5:

	Plan I	Plan II
EBIT	760000	760000
less - Int	136000	110000
	(45000 + 91000)	(45000 + 65000)
EBT	624000	650000
less - Tax	187200	195000
EAT	436800	455000
less - PD	—	28600
EAES	436800	426400
÷ No. of shares	112000	104000
	(100000 + 12000)	(100000 + 4000)
EPS	3.9	4.1
PE ratio	12	15
MPS	46.80	61.50

1. *What would be the Earnings Per Share (EPS) of the company in Plan-I and Plan-II?*

   (A) ₹ 4.37 and ₹4.26

   (B) ₹ 3.36 and ₹ 3.88

   (C) ₹ 3.90 and ₹ 4.10

   (D) ₹ 4.25 and ₹ 4.50

2. *What would be the Market Price per Share (MPS) of the company if Price Earnings Ratio (PE ratio) in Plan-1 is 12 times and Plan-II is 15 times?*

(A) ₹ 46.80 and ₹ 61.50

(B) ₹ 40.32 and ₹ 58.20

(C) ₹ 51.00 and ₹ 67.50

(D) ₹ 52.44 and ₹ 63.90

3. *What would be the financial Break Even Point (BEP) in Plan-I and Plan-II?*

(A) ₹ 13,75,000 and ₹ 15,10,000

(B) ₹ 13,70,000 and ₹ 15,00,000

(C) ₹ 13,65,000 and ₹ 15,15,000

(D) ₹ 13,60,000 and ₹ 15,08,571

Plan I

Interest $\frac{PD}{(1-t)}$

$1360000 - \frac{0}{(1-t)}$

$= 1360000$

Plan II

Interest + $\frac{PD}{(1-t)}$

$1100000 + \frac{28600}{(1-0.30)}$

$1100000 + 408571$

$= 1508571$

4. *What would be the indifference point between Plan-1 and Plan-11?*

(A) ₹ 34,33,333

(B) ₹ 34,40,000

(C) ₹ 35,15,000

(D) ₹ 35,22,222

$$\frac{(EBIT - Interest)(1-t) - PD}{No.\ of\ shares} = \frac{(EBIT - Interest)(1-t)}{No.\ of\ shares} - PD$$

$$\frac{(x - 1360)(1 - 0.30) - 0}{1120} = \frac{(x - 1100)(1 - 0.30)}{1040} - 286$$

$$\frac{0.70x - 952}{1120} = \frac{0.70x - 770}{1040} - 286$$

$$\frac{0.70x - 952}{1120} = \frac{0.70x - 1054}{1040}$$

$$728x - 990080 = 784x - 1182720$$

$$-56x = -192640$$

$$\therefore x = 3440$$

$$\text{i.e } 3440\,000$$

5. *What would be the Earnings Per Share (EPS) in Plan-1 and Plan-II at the indifference point as calculated by you above?*

(A) ₹ 1.30 and ₹ 1.30

(B) ₹ 1.65 and ₹ 1.75

(C) ₹ 1.50 and ₹ 1.50

(D) ₹ 1.80 and ₹ 1.90

ILLUSTRATION 9

XYZ Ltd. is planning to introduce a new product with a project life of 8 years. Initial equipment cost will be ₹ 3.5 crores. Additional equipment costing ₹ 25,00,000 will be purchased at the end of the third year from the cash inflow of this year. At the end of 8 years, the original equipment will have no resale value, but additional equipment can be sold for ₹ 2,50,000. A working capital of ₹ 40,00,000 will be needed and it will be released at the end of eighth year. The project will be financed with sufficient amount of equity capital.

The sales volumes over eight years have been estimated as follows:

Year	1	2	3	4 – 5	6 – 8
Units per year	72,000	1,08,000	2,60,000	2,70,000	1,80,000

A sales price of ₹ 240 per unit is expected and variable expenses will amount to 60% of sales revenue. Fixed cash operating costs will amount ₹ 36,00,000 per year. The loss of any year will be set off from the profits of subsequent two years. The company is subject to 30 per cent tax rate and considers 12 per cent to be an appropriate after-tax cost of capital for this project. The company follows straight line method of depreciation.

CALCULATE the net present value of the project and advise the management to take appropriate decision.

The PV factors at 12% are

Year	1	2	3	4	5	6	7	8
PV Factor	0.893	0.797	0.712	0.636	0.567	0.507	0.452	0.404

STATEMENT SHOWING NPV				
YEAR	PARTICULARS	CASH FLOW	PVF AT 12%	DCF
0	INITIAL CASH OUTFLOW	-350	1	-350
0	WORKING CAPITAL	-40	1	-40
1	CFAT	33.12	0.893	29.58
2	CFAT	63.69	0.797	50.76
3	CFAT	162.645	0.712	115.80
3	ADDITIONAL CASH OUTFLOW	-25	0.712	-17.8
4 TO 5	CFAT	170.715	1.203	205.37
6 TO 8	CFAT	110.235	1.363	150.25
8	SV OF ADDITIONAL EQUIPMENT	2.5	0.404	1.01
8	RELEASE OF WORKING CAPITAL	40	0.404	16.16
			NPV	161.13

WN 1 - CALCULATION OF ANNUAL CFAT (AMOUNT IN LAKHS)

SR.NO	PARTICULARS	YEAR				
		1	2	3	4 TO 5	6 TO 8
A	Units Sold	0.72	1.08	2.60	2.70	1.80
B	Sales (A*240)	172.8	259.2	624	648	432
C	Less - VC (60% of A)	103.68	155.52	374.4	388.8	259.2
D	Less - FC	36	36	36	36	36
E	Less - Dep	43.75	43.75	43.75	48.25	48.25
F	Profit (B-C-D-E)	-10.63	23.93	169.85	174.95	88.55
G	Tax at 30%	0	3.99	50.955	52.485	26.565
H	Profit After Tax (F-G)	-10.63	19.94	118.895	122.465	61.985
I	Cash Inflow (H+E)	33.12	63.69	162.645	170.715	110.235

Ascertainment of Depreciation per year

Depreciation on original Equipment $= \frac{\text{Cost} - \text{Scrap value}}{\text{life}}$

$= \frac{350 - 0}{8}$

$= 43.75$ lakhs.

Depreciation on additional Equipment $= \frac{\text{Cost} - \text{Scrap value}}{\text{life}}$

$= \frac{25 - 2.50}{5}$

$= 4.5$ lakhs.

ILLUSTRATION 10

A hospital is considering to purchase a diagnostic machine costing ₹ 80,000. The projected life of the machine is 8 years and has an expected salvage value of ₹ 6,000 at the end of 8 years. The annual operating cost of the machine is ₹ 7,500. It is expected to generate revenues of ₹ 40,000 per year for eight years. Presently, the hospital is outsourcing the diagnostic work and is earning commission income of ₹ 12,000 per annum.

Consider tax rate of 30% and Discounting Rate as 10%.

Advise:

Whether it would be profitable for the hospital to purchase the machine?

Give your recommendation as per Net Present Value method and Present Value Index method under below mentioned two situations:

(i) If Commission income of ₹ 12,000 p.a. is before taxes.

(ii) If Commission income of ₹ 12,000 p.a. is net of taxes.

Given:

t	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
PVIF (t, 10%)	*0.909*	*0.826*	*0.751*	*0.683*	*0.621*	*0.564*	*0.513*	*0.467*

STATEMENT SHOWING NPV OF PROJECT
(CASE i)

YEAR	CASH FLOW	PRESENT VALUE FACTOR AT 10%	DISCOUNTED CASH FLOW
0	(80000)	1.00	(80000)
1 To 8	17125	5.334	91345
8	6000	0.467	2802
NPV			**14147**

PI = NPV + Cash outflow / Cash Outflow

PI = 14147 + 80000 / 80000

PI = 1.18

STATEMENT SHOWING NPV OF PROJECT (CASE ii)

YEAR	CASH FLOW	PRESENT VALUE FACTOR AT 10%	DISCOUNTED CASH FLOW
0	(80000)	1.00	(80000)
1 To 8	13525	5.334	72142
8	6000	0.467	2802
NPV			**(5056)**

PI = NPV + Cash outflow / Cash Outflow

PI = (5056) + 80000 / 80000

PI = 0.94

Recommendation: The hospital may consider purchasing of diagnostic machine in situation (i) where commission income is 12,000 before tax as NPV is positive and PI is also greater than 1. Contrary to situation (i), in situation (ii) where the commission income is net of tax, the recommendation is reversed to not purchase the machine as NPV is negative and PI is also less than 1.

STATEMENT SHOWING COMPUTATION OF CFAT

SR.NO	PARTICULARS	Commission Income before Taxes	Commission Income After Taxes
A	Revenue Per Annum	40000	40000
B	Less : Operating Expenses	7500	7500
C	Less : Depreciation (80000-6000/8)	9250	9250
D	Profit Before Tax	**23250**	**23250**
E	Less : Tax @30%	6975	6975
F	Earning After Tax	**16275**	**16275**
G	Add : Depreciation	9250	9250
H	Cash Inflow After Tax	**25525**	**25525**
I	Less : Loss of Commission due to Puchase	8400	12000
J	Net CFAT	**17125**	**13525**

ILLUSTRATION 11

Linty is a small-sized firm manufacturing company. Its manufacturing plant is situated in Chattisgarh. Currently, company is labour oriented due to which there is less production, delay in deliveries and more defects in production. The management of the company is considering the proposal to purchase a new automatic machine which will carry out some operations which are at present performed by manual labour. There are two alternative models of the machine that are available in the market. Machine TMT 1 and TMT 2. If machine is replaced, it would provide labor saving and reduce the defects as well. It is expected to have to have an economic life of 10 years for both the models. The following details are collected:

	Machine	
	TMT 1 (₹)	TMT 2 (₹)
Cost of Machine	45,00,000	50,00,000
Estimated saving in direct wages per annum	15,00,000	20,00,000
Estimated saving in scrap per annum	5,00,000	6,00,000
Estimated additional cost of indirect material per annum	2,00,000	2,00,000
Estimated additional cost of indirect labour per annum	1,50,000	1,80,000
Estimated additional cost of repairs and maintenance per annum	4,00,000	8,00,000

Depreciation is charged using straight line method over the useful life. Company is in 35 percent tax bracket and expected rate of return may be 15 percent.

Being a finance manager of the company, you are required to evaluate the alternatives by answering the followings:

i. What is the annual saving from Machine TMT 1?

A. ₹ 5,20,000

B. ₹ 5,98,000

C. ₹ 9,70,000

D. ₹ 10,98,000

Saving 125000

WSI - Depn 45000

80000

WSC - Tax 35% 28000

52000

Add - Depn 45000

97000

ii. What is the annual saving from Machine TMT 2?

A. ₹ 5,20,000

B. ₹ 5,98,000

C. ₹ 9,70,000

D. ₹ 10,98,000

Saving 1420000

less - dep 500000

920000

less - Tax @ 35% 322000

598000

Add - dep 500000

1098000

iii. What is the payback period of Machine TMT 1 and TMT 2 Respectively?

A. 3.60 years and 4.60 years

B. 4.25 years and 4.42 years

C. 4.63 years and 4.55 years

D. 4.55 years and 4.42 years

$$\frac{4500000}{971000} = 4.63 \text{ yrs}$$

$$\frac{500000}{1098000} = 4.55 \text{ yrs}$$

iv. What is the Accounting (Average) Rate of Return of Machine TMT 1 and TMT 2 Respectively?

A. 20% and 22%

B. 23.11% and 23.92%

C. 22.21% and 23.11%

D. 23.92% and 22.21%

$\frac{520000}{2250000} \times 100$

$= 23.11\%$

$\frac{598000}{2500000} \times 100$

23.92%

v. What is the Profitability Index (PI) of Machine TMT 1 and TMT 2 Respectively?

A. 1.10 and 1.05

B. 0.98 and 1.01

C. 1.19 and 1.08

D. 1.08 and 1.10

$$\text{PI} = \frac{\text{NPV + outflow}}{\text{outflow}} = \frac{368430 + 450000}{450000} = 1.08 \simeq$$

$$\frac{\text{NPV + outflow}}{\text{outflow}} = \frac{510862 + 500000}{500000} = 1.10 \simeq$$

$$\text{NPV}_1 = (450000) + 97000 \times 5.019 = 368430$$

$$\text{NPV}_2 = (500000) + 109800 \times 5.019 = 510862$$

ILLUSTRATION 12

AB Engineering Ltd. belongs to a risk class for which the capitalization rate is 10%. It currently has outstanding 10,000 shares selling at ₹ 100 each. The firm is contemplating the declaration of a dividend of ₹ 5 share at the end of the current financial year. It expects to have a net income of ₹ 1,00,000 and has a proposal for making new investments of ₹ 2,00,000. CALCULATE the value of the firm when dividends (i) are not paid (ii) are paid.

CASE A

Value Of Firm When Dividends Are Not Paid

$$P_0 = \frac{P_1 + D_1}{1 + K_e}$$

$$100 = \frac{P_1 + 0}{1 + 0.10}$$

$$110 = P_1 + 0$$

$$P_1 = 110$$

No. of Shares to be Issued = Investment required / Issue price

Income available after Dividend

$$= \frac{200000 - 10000}{110}$$

$$= 909.09 \text{ shares}$$

$$\text{Value of firm} = \frac{\text{No. of shares outstanding at the Beginning} \times \text{Price} + \text{No of share Issued at end} - \text{Investment required} + \text{Earnings}}{1 + K_e}$$

$$= \frac{(1000 + 909.09) \times 110 - 200000 + 100000}{1 + 0.10}$$

$$= \frac{1200000 - 200000 + 100000}{1.10}$$

$= 700000$

CASE B

Value Of Firm When Dividends Are Paid

$$P_0 = \frac{P_1 + D_1}{1 + K_e}$$

$$100 = \frac{P_1 + 5}{1 + 0.10}$$

$$110 = P_1 + 5$$

$$\therefore P_1 = 105$$

$$\text{No. of shares to be Issued} = \frac{\text{Investment required} - \text{Earnings available after Paying Dividend}}{\text{Issue Price}}$$

$$= \frac{200000 - (100000 - 50000)}{105}$$

$$= \frac{200000 - 50000}{105}$$

$= 1428.57$ shares

Value of firm : $\left(\begin{array}{l}\text{No. of shares} \\ \text{at the} \\ \text{Beginning}\end{array} + \begin{array}{l}\text{No. of} \\ \text{shares} \\ \text{to be} \\ \text{issued}\end{array}\right) \times \begin{array}{l}\text{Price} \\ \text{at} \\ \text{end}\end{array}$

$- \underbrace{\text{Investment required} + \text{Earnings}}_{\text{1 + Ke}}$

$= \dfrac{(10000 + 1428.57) \times 105 - 20000}{1 + 0.10} + 10000$

$$= \frac{1200000 - 200000 + 100000}{1.10}$$

$$= 1000000$$

ILLUSTRATION 13

KGF Chemicals Ltd., a prominent player in the chemical industry, faces the challenge of determining its growth trajectory and dividend policy to maximize shareholder value. With expectations of significant growth in the near term and stabilization in the long run, the company must strategically manage its resources to align with investor expectations.

KGF Chemicals Ltd. is a leading manufacturer and supplier of specialty chemicals catering to diverse industries such as pharmaceuticals, agriculture, and manufacturing. Established with a commitment to innovation and quality, the company has garnered a strong market presence over the years.

The company is projected to experience robust growth at a rate of 14% per annum for the next four years. Subsequently, the growth rate is expected to stabilize at the national economy's rate of 7% indefinitely. This forecast reflects both the company's expansion plans and the broader economic landscape.

KGF Chemicals Ltd. paid a dividend of ₹ 2 per share last year (Do = 2). The management faces the crucial decision of balancing dividend payouts with reinvestment opportunities to sustain growth and meet shareholders' expectations. The dividend policy must strike a delicate balance between rewarding shareholders and retaining earnings for future investments.

The required rate of return on equity shares is 12%, indicating investors' expected return given the company's risk profile and market conditions. Management must carefully assess investment opportunities to ensure they meet or exceed this threshold, thereby generating value for shareholders over the long term.

In navigating the dynamic landscape of the chemical industry, KGF Chemicals Ltd. must adopt a proactive approach to managing growth and dividend policy. By aligning strategic decisions with investor expectations and market dynamics,

the company can position itself for sustainable success while maximizing shareholder value. Continual evaluation and adaptation will be essential to capitalize on growth opportunities and maintain competitiveness in the evolving marketplace.

You are required to answer the following on the basis of above information:

1. What is the expected dividend at the end of 4th Year?

(a) ₹ 2.1097

(b) ₹ 2.1483

(c) ₹ 2.9631

(d) ₹ 3.3779

2. What is the present value of Expected Dividends to be received in next four years?

(a) ₹ 11.2202

(b) ₹ 8.3655

(c) ₹ 9.8423

(d) ₹ 6.2176

2.28 × 0.893 = 2.0360

2.5992 × 0.797 = 2.0716

2.9631 × 0.712 = 2.1097

3.3779 × 0.436 = 2.1483

8.3656

3. Determine the Market Price of shares at the end of 4th Year?

(a) ₹ 72.28

(b) ₹ 67.55

(c) ₹ 50.67

(d) ₹ 77.34

$$\frac{3.6143}{0.12-0.07}$$

$$= 72.28$$

4. Determine the Present Value of Market Price of shares at the end of 4th Year?

(a) ₹ 49.18

(b) ₹ 32.22

(c) ₹ 45.79

(d) ₹ 42.96

make correction it should be 45.97

72.28×0.636

$= 45.97$

5. Calculate today's market price of the share.

(a) ₹ 59.03

(b) ₹ 54.33

(c) ₹ 57.01

(d) ₹ 57.54

ILLUSTRATION 14

Following information and ratios are given in respect of AQUA Ltd. for the year ended 31st March, 2023:

Current ratio	4.0
Acid test ratio	2.5
Inventory turnover ratio (based on sales)	6
Average collection period (days)	70
Earnings per share	₹ 3.5
Current liabilities	₹ 3,10,000
Total assets turnover ratio (based on sales)	0.96
Cash ratio	0.43
Proprietary ratio	0.48
Total equity dividend	₹ 1,75,000
Equity dividend coverage ratio	1.60

Assume 360 days in a year.

You are required to complete Balance Sheet as on 31st March, 2023.

Balance Sheet as on 31st March, 2023.

Liabilities	₹	Assets	₹
Equity share capital (₹10 per share)	XXX	Fixed assets	XXX
Reserves & surplus	XXX	Inventory	XXX
Long-term debt	XXX	Debtors	XXX
Current liabilities	3,10,000	Loans & advances	XXX
		Cash & bank	XXX
Total	XXX	Total	XXX

Balance Sheet

LIABILITIES	AMOUNT	ASSETS	AMOUNT
Equity share Capital	800000	Fixed Assets	1661250
Reserves & surplus	595000	Inventory	465000
long term Debt	1201250	Debtors	542500
Current Liabilities	310000	Loans & advances	99200
		Cash & Bank	133300
	2901250		2901250

Answers

1] Current ratio $= \frac{CA}{CL}$

$4 = \frac{CA}{31000}$

$\therefore CA = 1240000$

2] acid test ratio $= \frac{CA - \text{inventory}}{CL}$

$2.5 = \frac{1240000 - \text{inventory}}{31000}$

$775000 = 1240000 - \text{Inventory}$

$\therefore \text{Inventory} = 1240000 - 775000$

$= 465000$

(3) Inventory Turnover ratio $= \frac{\text{Sales}}{\text{Stock}}$

$6 = \frac{\text{Sales}}{465000}$

$\therefore \text{Sales} = 465000 \times 6$

$= 2790000$

4] Debtors = $\frac{\text{Sales}}{360} \times 70$

$= \frac{279000}{360} \times 70$

$= \$42500$

5] Total Assets Turnover ratio $= \frac{\text{Sales}}{\text{total assets}}$

$$0.96 = \frac{279000}{\text{Total assets}}$$

$$\therefore \text{Total assets} = \frac{279000}{0.96}$$

$$= 290625$$

6] $$\text{Cash ratio} = \frac{\text{Cash \& Bank Balance}}{\text{CL}}$$

$$0.43 = \frac{\text{Cash \& Bank Balance}}{310000}$$

$\therefore$ Cash & Bank Balance $= 310000 \times 0.43$

$= 133300$

7] Current Assets = Inventory + Recievables + Loans & advances + Cash & Bank Balance.

1240000 = 465000 + 542500 + Loans & advances + 133300

∴ Loans & advances = 99200

8] Fixed Assets = Total assets - Current Assets

= 2906250 - 1240000

= 1666250

9] Proprietary ratio = $\frac{\text{Prop. fund}}{\text{Total assets}}$

$0.48 = \frac{\text{Prop. fund}}{2906250}$

$\therefore$ Prop. fund = 1395000

10] Equity dividend coverage ratio = $\frac{EAES}{\text{Equity dividend}}$

$1.60 = \frac{EAES}{175000}$

$\therefore EAES = 280000$

11] $EPS = \frac{EAES}{\text{no. of eq. shares}}$

$$3.5 = \frac{280\,000}{\text{No. of Eq. shares}}$$

$$\therefore \text{No. of Eq. Shares} = 80\,000$$

12] Share Capital = 80000×10
$= 800\,000$

13] Reserves & Surplus = Prop. fund. − SC
$= 1395000 - 800000$
$= 595000$

14] long term debt = Total liabilities - Prop. fund - CL

= 2906250 - 1395000 - 310000

= 1201250.

ILLUSTRATION 15

From the following information and ratios, PREPARE the Balance sheet as at 31st March 2022 and Income statement for the year ended on that date for M/s Ganguly & Co -

Average Stock	₹10 lakh
Current Ratio	3:1
Acid Test Ratio	1:1
PBIT to PBT	2.2:1
Average Collection period (Assume 360 days in a year)	30 days
Stock Turnover Ratio (Use sales as turnover)	5 times
Fixed assets turnover ratio	0.8 times
Working Capital	₹10 lakh
Net profit Ratio	10%
Gross profit Ratio	40%
Operating expenses (excluding interest)	₹ 9 lakh
Long term loan interest	12%
Tax	Nil

Income Statement.

Sr. No	Particulars		Amt.
A	Sales		5,00,000
B	Less: Cogs	(5,00,000 × 60%)	3,00,000
C	Gross Profit		2,00,000
D	Less: Operating Exp		90,000
E	EBIT		1,10,000
F	Less: Interest	(BF)	60,000
G	EBT / EAT		50,000

Balance sheet.

Liabilities	Amt	Assets	Amt
Shareholder's funds (BF)	225000	Fixed Asset	£250000
long term Debt	500000	Current Asset	
Current Liabilities	50000	Stock 10000	
		Debtors 41667	
		Cash (BF) £3333 Bank £BF	150000
	775000		775000

Workings

1] WC = CA - CL

Let the CL be x ∴ CA shall be 3x

1000 = 3x - x

∴ 1000 = 2x

CL = x = 500

CA = 3x = 1500

2] Stock Turnover ratio (Based on sales) = $\frac{\text{Sales}}{\text{Stock}}$

5 = $\frac{\text{Sales}}{10000}$

$\therefore$ Sales = 50000

3] Debtors = $\frac{\text{Sales}}{360} \times 30$

$= \frac{5000000}{360} \times 30$

$= 416667$

4] FA Turnover ratio = $\frac{\text{Turnover}}{\text{FA}}$

$0.80 = \frac{500000}{\text{FA}}$

$\therefore$ FA = 500000 / 0.80

= 625000

5) Total Assets = total liabilities - CA + FA

= 1500000 + 625000

= 7750000

6) PBIT = $\frac{PBT}{1} \times 2.2$

= $\frac{500000}{1} \times 2.2$

= 1100000

7] long term loan :- Interest

rate of

Interest

$= \frac{600000}{12}$

$= 50000$

ILLUSTRATION 16

Aneja Limited, a newly formed company, has applied to a commercial bank for the first time for financing its working capital requirements. The following information is available about the projections for the current year:

Estimated level of activity: 1,04,000 completed units of production plus 4,000 units of work-in-progress. Based on the above activity, estimated cost per unit is:

Raw material	₹ 80 per unit
Direct wages	₹ 30 per unit
Overheads (exclusive of depreciation)	₹ 60 per unit
Total cost	₹ 170 per unit
Selling price	₹ 200 per unit

Raw materials in stock: Average 4 weeks consumption, work-in-progress (assume 50% completion stage in respect of conversion cost) (materials issued at the start of the processing).

Finished goods in stock	8,000 units
Credit allowed by suppliers	Average 4 weeks
Credit allowed to debtors/receivables	Average 8 weeks
Lag in payment of wages	Average 1.5 weeks

Cash at banks (for smooth operation) is expected to be ₹ 25,000.

Assume that production is carried on evenly throughout the year (52 weeks) and wages and overheads accrue similarly. All sales are on credit basis only.

You are required to CALCULATE the net working capital required.

Statement Showing Requirement of Working Capital

Sr.No	Particulars	Calculation	Amount
1)	Current Assets		
1	Raw material holding	$\frac{(104000+4000)\times 80}{52\text{ weeks}} \times 4$ weeks	664615
2	WIP holding	4000 units (80+15+30)	500000
3	FG holding	8000 units × 170	1360000
4	Debtors	$\frac{96000\text{ units}\times 170}{52\text{ weeks}} \times 8$ weeks	2510769
5	Cash	Given	25000

	Total A		5060384.
B	Current Liabilities		
1	Sundry creditors	$\frac{930415}{52 \text{ weeks}} \times 4$ weeks.	715740
2	Wages	$\frac{(104000 \times 30) + (4000 \times 15) \times 1.5}{52 \text{ weeks}} \times 1.5$ weeks	91731
	Total B		807471
C	INC required (A-B)		4252913

NOTE:- In the Absence of Information Debtors are Valued at Cost of Sales.

1.1.1N Ascertainment of Purchase:

Raw material consumed = Opening stock + Purchases − closing stock

$(1040000 + 400) \times 80 = 0 + \text{Purchases} - 664615$

$8640000 = 0 + \text{Purchases} - 664615$

$\therefore$ Purchases $= 8640000 + 664615$

$= 9304615$

ILLUSTRATION 17

Anna Ltd. is a company engaged in toy manufacturing. While growing through the financial statements of the company, the CEO is the view that company should start preparing the projected financial statements so that decision can made on timely basis to maintain the growth and liquidity of the Anna Ltd. Following financial information is available in respect of the company:

(a) Issued share capital 15,00,000

7.5% Debentures 10,00,000

Fixed Assets at cost 12,50,000

(b) The expected ratios to selling price are

Raw materials	50%	7·50
Labour	15%	2·25
Overheads	20%	3
Profit	15%	

(c) Raw materials are kept in store for an average of 2 months.

(d) Finished goods remain in stock for an average period of 2 months.

(e) Production during the previous year was 3,00,000 units and it is planned to maintain the rate in the current year also.

(f) Each unit of production is expected to remain in process for a month.

(g) Credit allowed to customers is one month and given by suppliers is two months.

(h) Selling price is ₹ 15 per unit.

(i) Production and sales cycle of the company remains constant throughout the year

Being a finance manager of the company, you are being asked to answer the following requirements of the CEO:

1. Calculate the amount blocked in inventories of raw material and finished goods.

(a) ₹ 3,18,750 and ₹ 3,75,000

(b) ₹ 3,75,000 and ₹ 6,37,500

(c) ₹ 3,75,000 and ₹ 3,75,000

(d) ₹ 4,25,000 and ₹ 6,75,000

$$RM = \frac{(300000 \times 7.50)}{12} \times 2 = 375000$$

$$FG = \frac{(300000 \times 12.75)}{12} \times 2 = 637500$$

2. Calculate the amount blocked in work in progress stock.

(a) ₹ 3,75,000

(b) ₹ 4,75,000

(c) ₹ 3,18,750

(d) ₹ 5,25,750

$$\frac{300000 \times (15 \times 85\%)}{12} \times 1$$

$$= \frac{30000 \times 12.75}{12} \times 1$$

$$= 318750$$

3. Calculate the amount blocked in debtors at sales price and amount of creditors.

(a) ₹ 3,18,000 and ₹ 3,18,000

(b) ₹ 3,75,000 and ₹ 3,75,000

(c) ₹ 6,00,000 and ₹ 3,75,000

(d) ₹ 6,75,000 and 4,25,000

$$\text{Debtors} = \frac{3000000 \times 15}{12} \times 1$$

$$= 375000$$

$$\text{Creditors} = \frac{3000000 \times 15}{12} \times 2$$

$$= 375000$$

4. Calculate the net working capital requirement.

(a) ₹ 13,75,000

(b) ₹ 10,75,650

(c) ₹ 6,75,000

(d) ₹ 13,31,250

RM 375000

WIP 318750

FG 637500

DRJ 375000

1706250

CRJ 375000

375000

Net 1331250

5. Calculate the amount of projected net profit.

(a) ₹ 5,00,000

(b) ₹ 6,75,000

(c) ₹ 6,00,000

(d) ₹ 4,75,000

Gross profit (300000 × 2.25) 675000

less - Interest 75000

Net 600000

ILLUSTRATION 18

Slow Payers are regular customers of Goods Dealers Ltd. and have approached the sellers for extension of credit facility for enabling them to purchase goods. On an analysis of past performance and on the basis of information supplied, the following pattern of payment schedule emerges in regard to Slow Payers:

Pattern of Payment Schedule	
At the end of 30 days	15% of the bill
At the end of 60 days	34% of the bill
At the end of 90 days	30% of the bill
At the end of 100 days	20% of the bill
Non-recovery	1% of the bill

Slow Payers want to enter into a firm commitment for purchase of goods of ₹ 15 lakhs in 2020-21, deliveries to be made in equal quantities on the first day of each quarter in the calendar year. The price per unit of commodity is ₹ 150 on which a profit of ₹ 5 per unit is expected to be made. It is anticipated

by Goods Dealers Ltd., that taking up of this contract would mean an extra recurring expenditure of ₹ 5,000 per annum. If the opportunity cost of funds in the hands of Goods Dealers is 24% per annum, would you as the finance manager of the seller recommend the grant of credit to Slow Payers? ANALYSE. Workings should form part of your answer. Assume year of 365 days.

Statement Showing Evaluation of Proposed credit Policy

A	Sales	1500000
B	Cost of Sales [145/150 × 1500000]	1450000
C	Profit (A-B)	50000
D	Bad debts [1500000 × 1%]	15000
E	Collection Expenses	5000
F	Opportunity Cost [W.N.]	68787
G	Net Benefit [C-D-E-F]	(38787)

Note

Investment in Receivables in based on total Cost.

Conclusion

As Net Benefit is negative it is advised to good dealers Ltd to not to enter into an agreement with slow Payers for extension of credit facility

WN1 Computation of Opportunity cost.

Investment in receivables = 1450000 + 5000 = 1455000

Credit Period	% of payment	Amount Invested	Calculation of Opportunity Cost	Opp. Cost
30	15%	218250	218250/365 × 30 × 24%	4305
60	34%	494700	494700/365 × 60 × 24%	19517
90	30%	436500	436500/365 × 90 × 24%	25831
100	20%	291000	291000/365 × 100 × 24%	19134
			Total	68787

ILLUSTRATION 19

NV Industries Ltd. is a manufacturing industry which manages its accounts receivables internally by its sales and credit department. It supplies small articles to different industries. The total sales ledger of the company stands at ₹ 200 lakhs of which 80% is credit sales. The company has a credit policy of 2/40, net 120. Past experience of the company has been that on average out of the total, 50% of customers avail of discount and the balance of the receivables are collected on average in 120 days. The finance controller estimated, bad debt losses are around 1% of credit sales.

With escalating cost associated with the in-house management of the debtors coupled with the need to unburden the management with the task so as to focus on sales promotion, the CFO is examining the possibility of outsourcing its factoring service for managing its receivables. Currently, the firm spends about ₹ 2,40,000 per annum to administer its credit sales. These are avoidable

as a factoring firm is prepared to buy the firm's receivables. The main elements of the proposal are : (i) It will charge 2% commission (ii) It will pay advance against receivables to the firm at an interest rate of 18% after withholding 10% as reserve.

Also, company has option to take long term loan at 15% interest or may take bank finance for working capital at 14% interest.

You were also present at the meeting; being a financial consultant, the CFO has asked you to be ready with the following questions:

Consider year as 360 days.

1. What is average level of receivables of the company?

(a) ₹ 53,33,333

(b) ₹ 35,55,556

(c) ₹ 44,44,444

(d) ₹ 71,11,111

$$ACP = 40 \times 0.50 + 120 \times 0.50$$

$$= 20 + 60$$

$$= 80$$

$$\frac{2000000 \times 80}{360} \times 80$$

$$= \frac{16000000}{360} \times 80$$

$$= 355556$$

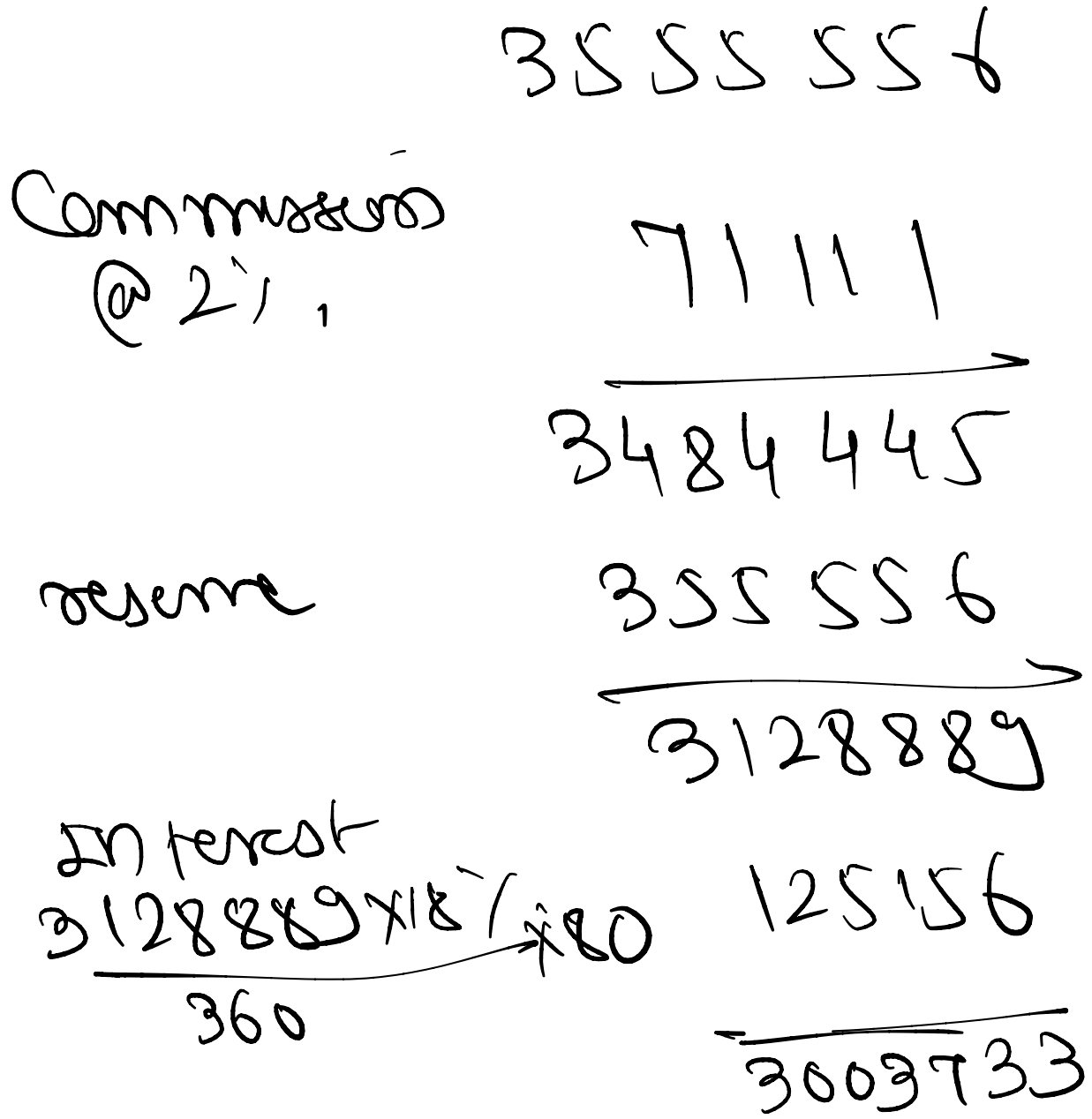
2. How much advance factor will pay against receivables?

(a) ₹ 31,28,889

(b) ₹ 39,11,111

(c) ₹ 30,03,733

(d) ₹ 46,93,333



3. What is the annual cost of factoring to the company?

(a) ₹ 8,83,200

(b) ₹ 4,26,667

(c) ₹ 5,51,823

(d) ₹ 4,00,000

Commission

$\frac{71111}{80} \times 360$ 320000

Interest

$\frac{125156}{80} \times 360$ 563520

883520

4. What is the net cost to the company on taking factoring service?

(a) ₹ 4,00,000

(b) ₹ 4,26,667

(c) ₹ 3,50,000

(d) ₹ 4,83,200

Bad debts (16000)

admin cost (24000)

883200

(160000)

(240000)

483200

5. What is the effective cost of factoring on advance received?

(a) 16.09%

(b) 13.31%

(c) 12.78%

(d) 15.89%

$$\frac{\text{Net Cost}}{\text{Amt received}} \times 100$$

$$= \frac{483200}{3003733} \times 100$$

$$= 16.09\%$$

ILLUSTRATION 20

Slide Ltd. is preparing a cash flow forecast for the three months period from January to the end of March. The following sales volumes have been forecasted:

Months	December	January	February	March	April
Sales (units)	1,800	1,875	1,950	2,100	2,250

Selling price per unit is ₹ 600. Sales are all on one month credit. Production of goods for sale takes place one month before sales. Each unit produced requires two units of raw materials costing ₹ 150 per unit. No raw material inventory is held. Raw materials purchases are on one month credit. Variable overheads and wages equal to ₹ 100 per unit are incurred during production and paid in the month of production. The opening cash balance on 1st January is expected to be ₹ 35,000. A long term loan of ₹ 2,00,000 is expected to be received in the month of March. A machine costing ₹ 3,00,000 will be purchased in March.

(a) Prepare a cash budget for the months of January, February and March and calculate the cash balance at the end of each month in the three months period.

(b) Calculate the forecast current ratio at the end of the three months period.

Monthly Cash Budget From Jan to Mar 2020

SR.NO	PARTICULARS	Jan	Feb	March
A	Receipts			
1	Receipts From Debtors (WN -1)	1080000	1125000	1170000
2	Reciept of Bank Loan			200000
	Total (A)	1080000	1125000	1370000
B	Payments			
1	Payment for Purchases (WN -2)	562500	585000	630000
2	variable Overheads & Wages (WN-3)	195000	210000	225000
3	Purchase of Machinery			300000
	Total (B)	757500	795000	1155000
C	Opening Balance	35000	357500	687500
D	Surplus/(Deficit)	322500	330000	215000
E	Closing Balance	357500	687500	902500

WN - 1 Collection of Amount From Debtors

SR.NO	PARTICULARS	Dec	Jan	Feb	March
A	No. of Units Sold	1800	1875	1950	2100
B	Total Sales (A*600)	1080000	1125000	1170000	1260000
C	Amount Collected from Debtors (100% of Prev Month Sale)		1080000	1125000	1170000

WN - 2 Payment to Creditors

SR.NO	PARTICULARS	Dec	Jan	Feb	March
A	Quantity Produced of Next Month's Sale	1875	1950	2100	2250
B	Raw Material units Required (A*2)	3750	3900	4200	4500
C	Raw Material Cost (B*150)	562500	585000	630000	675000
D	Payment to Creditors (100% of Prev Month Purchase)		562500	585000	630000

WN - 3 Payment of Variable Overheads & Wages

SR.NO	PARTICULARS	Dec	Jan	Feb	March
A	Quantity Produced of Next Month's Sale	1875	1950	2100	2250
B	Total Variable Overheads (A*100) Paid in Same Month	187500	195000	210000	225000

Current ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$

$= \frac{\text{finished goods} + \text{Debtors} + \text{Cash}}{\text{Sundry creditors}}$

$= \frac{(\text{Raw material cost purchased in march} + \text{wages \& overheads} + (2100 \times 6\text{W}) \text{ of march}) + 902500}{(2250 \times 2 \times 150)}$

$$= \frac{\left[(2250 \times 2 \times 150) + 225000\right] + 1260000 + 902500}{675000}$$

$$= \frac{900000 + 1260000 + 902500}{675000}$$

$$= \frac{3062500}{675000}$$

$$= 4.54 \text{ tons}$$

THANK YOU