PAPER – 6: FINANCIAL MANAGEMENT AND STRATEGIC MANAGEMENT

SECTION A: FINANCIAL MANAGEMENT

*Question No. **1** is compulsory.*

*Attempt any **two** questions out of the remaining **three** questions.*

In case, any candidate answers extra question(s)/ sub-question(s) over and above the required number, then only the requisite number of questions first answered in the answer book shall be valued and subsequent extra question(s) answered shall be ignored.

Working notes should form part of the answer.

Question 1

(a) Theme Ltd provides you the following information:

12.5 % Debt	*₹ 45,00,000*
Debt to Equity ratio	*1.5 : 1*
Return on Shareholder's fund	*54%*
Operating Ratio	*85%*
Ratio of operating expenses to Cost of Goods sold	*2 : 6*
Tax rate	*25%*
Fixed Assets	*₹ 39,00,000*
Current Ratio	*1.8 : 1*

You are required to calculate:

(i) Interest Coverage Ratio

(ii) Gross Profit Ratio

(iii) Current Assets

(b) Alpha Limited has provided following information:

Equity Share Capital	*25,000 Shares @ ₹ 100 per Share*
15% Debentures	*10,000 Debentures@ ₹ 750/- per Debenture*
Sales	*50 Lakhs units@ ₹ 20 per unit*
Variable Cost	*₹ 12.50 per unit*
Fixed Costs	*₹ 175.00 Lakhs*

Due to recent policy changes and entry of foreign competitors in the sector, Alpha Limited expects the sales may decline by 15-20%, However, selling price and other costs will remain the same. Corporate Taxes will continue@20%.

You are required to calculate the decrease in Earnings per share, Degree of Operating Leverage and Financial Leverage separately if sales are declined by (i) 15%; and (ii) 20%;

(c) Following is the sales information in respect of Bright Ltd:

Annual Sales (90 % on credit)	*₹ 7,50,00,000*
Credit period	*45 days*
Average Collection period	*70 days*
Bad debts	*0.75%*
Credit administration cost (out of which 2/5th is avoidable)	*₹ 18,60,000*

A factor firm has offered to manage the company's debtors on a non-recourse basis at a service charge of 2%. Factor agrees to grant advance against debtors at in interest rate of 14% after withholding 20% as reserve. Payment period guaranteed by factor is 45 days. The cost of capital of the company is 12.5%. One time redundancy payment of ₹ 50,000 is required to be made to factor.

Calculate the effective cost of factoring to the company. (Assume 360 days in a year)

Answer

(a) Working Notes:

Debt = ₹ 45,00,000

Interest = ₹ 45,00,000 x 12.5%= 5,62,500

Debt to Equity = 1.5:1 = $\frac{\text{Total Debt}}{\text{Shareholders' Equity}}$

Equity = ₹ 30,00,000

Return of Shareholder's funds = 54% = $\frac{\text{Net Profit after taxes}}{\text{Equity shareholders' fund}} \times 100$

Profit after tax (PAT) = 54% x Equity = ₹16,20,000

Profit before tax (PBT)(1-25%) = Profit after tax

= ₹16,20,000/75% = ₹21,60,000

Earning before interest and tax (EBIT) = PBT + Interest

= ₹21,60,000 + ₹ 5,62,500

= ₹27,22,500

(i) Interest Coverage Ratio = EBIT/Interest

= ₹27,22,500/₹5,62,500

= 4.84 Times

(ii) Operating Profit Ratio = 1 - Operating Ratio

= 1 – 0.85 = 0.15 or 15%

0.15 = $\frac{\text{Operating Profit}}{\text{Sales}} \times 100$

Sales = EBIT or Operating Profit /0.15

= ₹ 27,22,500 / 0.15

= ₹ 1,81,50,000

Operating ratio = $\frac{\text{Operating expenses}}{\text{Cost of goods sold (COGS)}}$ = 2 : 6 = 1 : 3

Operating expenses = 1/3COGS

Operating cost = Sales – Operating profit

= ₹ 1,81,50,000 - ₹ 27,22,500

= ₹ 1,54,27,500

₹ 1,54,27,500	= COGS + Operating expenses
₹ 1,54,27,500	= COGS + 1/3COGS
COGS	= ₹ 1,15,70,625
Gross profit	= Sales – COGS
	= 1,81,50,000 – 1,15,70,625
	= ₹ 65,79,375
Gross Profit ratio	$= \frac{\text{Gross Profit}}{\text{Sales}} \times 100$
	= 65,79,375/1,81,50,000
	= 0.3625 or 36.25%

Gross profit and sales can be calculated in alternative way also. However, there will be no change in GP ratio i.e 36.25%

(iii) Current Ratio	$= \frac{\text{Current Assets}}{\text{Current Liabilities}}$
	= 1.8
Current Assets	= 1.8 Current Liabilities

Total of Balance sheet liability = Equity + Debt + Current Liabilities

=30,00,000+45,00,000+CL ....(2)

Total Balance sheet asset	= Fixed Assets + Current Assets
	= 39 lakhs + CA= 39 + 1.8CL.......(3)

Equating 2 and 3,

75,00,000 + CL	= 39,00,000 + 1.8CL
0.8CL	= 36,00,000
CL	=₹ 45,00,000
Current Assets	= 1.8 CL **=** 1.8 x 45 lakhs= ₹ **81,00,000**

(b) Income Statement with required calculations

Particulars	**(₹)**	**(₹)**	**(₹)**
	Existing	**Sales declined by 15%**	**Sales declined by 20%**
Sales in units	50,00,000	42,50,000	40,00,000
Sales price per unit	20	20	20
Variable Cost per unit	(12.50)	(12.50)	(12.50)
Contribution per unit	7.5	7.5	7.5
Contribution	3,75,00,000	3,18,75,000	3,00,00,000
Fixed expenses	(1,75,00,000)	(1,75,00,000)	(1,75,00,000)
EBIT	2,00,00,000	1,43,75,000	1,25,00,000
Debenture Interest	(11,25,000)	(11,25,000)	(11,25,000)
EBT	1,88,75,000	1,32,50,000	1,13,75,000
Tax @ 20%	(37,75,000)	(26,50,000)	(22,75,000)
Profit after tax (PAT)	1,51,00,000	1,06,00,000	91,00,000
No. of shares	25,000	25,000	25,000
Earnings per share (EPS) $= \frac{\text{PAT}}{\text{No. of shares}}$	$\frac{₹1,51,00,000}{25,000}$ = ₹ 604	$\frac{₹1,06,00,000}{25,000}$ = ₹424	$\frac{₹91,00,000}{25,000}$ = ₹364
(i) Decrease in EPS		= ₹180 **Or** % Decrease in EPS $= \frac{180}{604} \times 100$ **= 29.80%**	= ₹240 **Or** % Decrease in EPS $= \frac{240}{604} \times 100$ **= 39.73%**
(ii) Operating leverage $= \frac{\text{Contribution}}{\text{EBIT}}$ Or		$= \frac{₹3,18,75,000}{₹1,43,75,000}$ **= 2.22** **Or** 28.125/15 =	$= \frac{₹3,00,00,000}{₹1,25,00,000}$ **= 2.40** **Or** 37.50/20 **1.875**

Degree of Operating leverage $= \frac{\text{Percentage change in EBIT}}{\text{Percentage change in sales}}$		**1.875**	
(iii) Financial Leverage $= \frac{\text{EBIT}}{\text{EBT}}$ Or Degree of Financial Leverage $= \frac{\text{Percentage change in EPS}}{\text{Percentage change in EBIT}}$		$= \frac{₹1,43,75,000}{₹1,32,50,000}$ **= 1.08** **Or** 29.80/28.125 **= 1.06**	$= \frac{₹1,25,00,000}{₹1,13,75,000}$ **= 1.10** **Or** 39.735/37.50 **= 1.06**

(c) Evaluation of Factoring Proposal

	Particulars	₹	₹
A.	**Savings due to factoring**		
	Bad Debts saved	0.75% x 7.5 crores x 90%	₹ 5,06,250
	Administration cost saved	18.6 lakhs x 2/5	₹ 7,44,000
	Interest saved due to reduction in average collection period	7.5 crores x 90% x (70-45)/ 360 x 12.5%	₹ 5,85,937.5
	Total		**₹ 18,36,187.5**
B.	**Costs of factoring:**		
	Service charge	7.5 crores x 90% x 2%	₹ 13,50,000
	Interest cost	₹ 1,15,171.875 x 360/45	₹ 9,21,375
	Redundancy Payment		₹ 50,000
	Total		**₹ 23.21,375**
C.	**Net Annual cost to the Firm: (A-B)**		**₹ 4,85,187.5**
	Rate of effective cost of factoring	₹ 4,85,187.5/ ₹ 64,66,078.125 x 100	**7.504%**

Advice: Since the rate of effective cost of factoring is less than the existing cost of capital, therefore, the proposal is acceptable.

Credit Sales = ₹ 7.5 crores x 90%	= ₹ 6,75,00,000
Average level of receivables = ₹ 6.75 crores x 45/360	= ₹ 84,37,500
Service charge = 2% of ₹ 84,37,500	₹ 1,68,750
Reserve = 20% of ₹ 84,37,500	₹ 16,87,500
Total (i)	₹ 18,56,250
Thus, the amount available for advance is	
Average level of receivables	₹ 84,37,500
Less: Total (i) from above	₹ 18,56,250
(ii)	₹ 65,81,250
Less: Interest @ 14% p.a. for 45 days	₹ 1,15,171.875
Net Amount of Advance available.	₹ 64,66,078.125

Note: Alternatively, if redundancy cost is taken as irrelevant for decision making, then Net Annual cost to the Firm will be ₹ 4,35,187.5 and Rate of effective cost of factoring will be ₹ 4,35,187.5/₹ 64,66,078.125 x 100 = 6.730%

If average level of receivables is considered for 70 days then the calculation can be done in following way:

Evaluation of Factoring Proposal

Credit Sales = ₹ 7.5 crores X 90%	= ₹ 6,75,00,000
Average level of receivables = ₹ 6.75 crores x 70/360	= ₹ 1,31,25,000
Service charge = 2% of ₹ 1,31,25,000	₹ 2,62,500
Reserve = 20% of ₹ 1,31,25,000	₹ 26,25,000
Total (i)	₹ 28,87,500
Thus, the amount available for advance is	
Average level of receivables	₹ 1,31,25,000
Less: Total (i) from above	₹ 28,87,500

(ii)	₹ 1,02,37,500
Less: Interest @ 14% p.a. for 45 days	₹ 1,79,156.25
Net Amount of Advance available.	₹ 1,00,58,343.75

Note 1: Accordingly, interest cost will be ₹ 14,33,250 cost of factoring will be ₹ 28,33,250. Therefore, Rate of effective cost of factoring is 9.913%

Note 2: Alternatively, if redundancy cost is taken as irrelevant for decision making, then Net Annual cost to the Firm will be ₹ 9,47,062.5 and Rate of effective cost of factoring will be ₹ 9,47,062.5/ ₹ 1,00,58,343.75 x 100 = 9.416%.

Advice: Since the rate of effective cost of factoring is less than the existing cost of capital, therefore, the proposal is acceptable.

Question 2

(a) The capital structure of Shine Ltd. as on 31.03.2024 is as under:

Particulars	***Amount (₹)***
Equity share capital off 10 each	*45,00,000*
15% Preference share capital of f 100 each	*36,00,000*
Retained earnings	*32,00,000*
13% Convertible Debenture off 100 each	*67,00,000*
11% Term Loan	*20,00,000*
Total	*2,00,00,000*

Additional information:

(A) Company issued 13% Convertible Debentures of ₹ 100 each on 01.04.2023 with a maturity period of 6 years. At maturity, the debenture holders will have an option to convert the debentures into equity shares of the company in the ratio of 1 : 4 (4 shares for each debenture). The market price of the equity share is ₹ 25 each as on 31.03.2024 and the growth rate of the share is 6% per annum.

(B) Preference stock, redeemable after eight years, is currently selling at ₹ 150 per share.

(C) *The prevailing default-risk free interest rate on 10-year GOI treasury bonds is 6%. The average market risk premium is 8% and the Beta (β) of the company is 1.54.*

Corporate tax rate is 25% and rate of personal income tax is 20%.

You are required to calculate the cost of:

(i) *Equity Share Capital*

(ii) *Preference Share Capital*

(iii) *Convertible Debenture*

(iv) *Retained Earnings*

(v) *Term Loan*

(b) *Following data is available in respect of Levered and Unlevered companies having same business risk:*

Capital employed = ₹ 2,00,000, EBIT = ₹ 25,000 and Ke = 12.5%

Sources	***Levered Company (₹)***	***Unlevered Company (₹)***
Debt (@8%)	*75,000*	*Nil*
Equity	*1,25,000*	*2,00,000*

An investor is holding 12% shares in levered company. Calculate the increase in annual earnings of investor if he switches over his holding from Levered to Unlevered company.

Answer

(a) (i) Cost of Equity Share capital

As per CAPM Model K_e = $R_f + ß (R_m - R_f)$

Rf = 6%

B = 1.54

Rm-Rf = 8%

Ke = 6% + 1.54(8%)

Ke = **18.32%**

(ii) Cost of Preference Share capital

n	=	8
Net Proceeds (NP)	=	150
Redemption Value (RV)	=	100
Preference Dividend (PD)	=	15

$$K_p = \frac{PD + \frac{(RV - NP)}{n}}{\frac{(RV + NP)}{2}}$$

$$K_p = \frac{15 + \left(\frac{100 - 150}{8}\right)}{\left(\frac{100 + 150}{2}\right)}$$

K_p = **7%**

Alternatively, if we take NP as 100 and RV as 100, then solution can be done in the following way:

Cost of Preference Share capital

n	=	8
Net Proceeds (NP)	=	100
Redemption Value (RV)	=	150
Preference Dividend (PD)	=	15

$$K_p = \frac{PD + \frac{(RV - NP)}{n}}{\frac{(RV + NP)}{2}}$$

$$K_p = \frac{15 + \left(\frac{150 - 100}{8}\right)}{\left(\frac{150 + 100}{2}\right)}$$

K_p = **17%**

(iii) Cost of convertible debenture

Cash Redemption Value (RV)	= 100
Share Redemption Value (RV):	
Value of share after 5 years	= 25 x $(1.06)^5$ = 33.46
Share Redemption Value (RV)	= 33.46 X 4=133.82

Therefore, investor will choose share redemption.

Redemption Value (RV)	= 133.82
Net Proceeds (NP)	= 100
n	= 5
Interest (I)	= 13
Tax (t)	= 25%

$$K_d = \frac{I(1-t)+\frac{(RV-NP)}{n}}{\frac{(RV+NP)}{2}}$$

$$= \frac{13(1-0.25)+\frac{(133.82-100)}{5}}{\frac{(133.82+100)}{2}}$$

K_d = **14.13%**

(iv) Cost of Retained Earnings

$K_r = K_e\ (1-t_p)$ = 18.32 % x (1-0.20) = **14.66%**

We can also take cost of equity as cost of retained earnings,

Accordingly, $K_r = K_e$ = **18.32%**

(v) Cost of Term Loan

= 11% x (1-0.25) = **8.25%**

(b) 1. Valuation of firms

Particulars	**Levered Firm (₹)**	**Unlevered Firm (₹)**
EBIT	25,000	25,000
Less: Interest on debt (8% × ₹ 75,000)	6,000	Nil
Earnings available to Equity shareholders	19,000	25,000
K_e	12.5%	12.5%
Value of Equity (S) (Earnings available to Equity shareholders/ K_e)	1,52,000	2,00,000
Debt (D)	75,000	Nil
Value of Firm (V) = S + D	2,27,000	2,00,000

Value of Levered company is more than that of unlevered company. Therefore, investor will sell his shares in levered company and buy shares in unlevered company. To maintain the level of risk he will borrow proportionate amount and invest that amount also in shares of unlevered company.

2. Investment & Borrowings

	₹
Sell shares in Levered company (₹ 1,52,000 x 12%)	18,240
Borrow money (₹ 75,000 x 12%)	9,000
Buy shares in Unlevered company	27,240

3. Change in Return

	₹
Income from shares in Unlevered company	
(₹ 27,240 x 12.5%)	3,405
Less: Interest on loan (₹ 9,000 x 8%)	720
Net Income from unlevered firm	2,685
Less: Income from Levered firm (₹ 18,240 x 12.5%)	2,280
Incremental Income due to arbitrage	405

Solution can also be done in the following way:

Valuation of firms

Particulars	Levered Firm (₹)	Unlevered Firm (₹)
EBIT	25,000	25,000
Less: Interest on debt (8% × ₹ 75,000)	6,000	Nil
Earnings available to Equity shareholders	19,000	25,000
K_e	12.5%	12.5%
Value of Equity (S) (Earnings available to Equity shareholders/ K_e)	1,52,000	2,00,000
Debt (D)	75,000	Nil
Value of Firm (V) = S + D	2,27,000	2,00,000

Value of Levered company is more than that of unlevered company. Therefore, investor will sell his shares in levered company and buy shares in unlevered company.

Arbitrage Process:

If investor have 12% shares of levered company, value of investment in equity shares is 12% of ₹ 1,52,000 i.e. ₹ 18,240 and return will be 12% of ₹19,000 = ₹ 2,280.

Alternate Strategy will be:

Sell 12% shares of levered firm for ₹ 18,240 and borrow 12% of levered firm's debt i.e. ₹ 9,000 (12% of ₹ 75,000) and invest the money i.e. 12% in unlevered firm's stock:

Total resources /Money investor have = ₹ 18,240 + ₹ 9,000 = ₹ 27,240 and investor invest 12% of ₹ 2,00,000 = ₹ 24,000

Surplus cash available with investor is = ₹ 27,240 – ₹ 24,000 = ₹ 3,240

Investor return = 12% EBIT of unlevered firm – Interest to be paid on borrowed funds

i.e. = 12% of ₹ 25,000 – 8% of ₹ 9,000 = ₹ 3,000 – ₹ 720 = ₹ 2,280

Now, return remains the same i.e. ₹ 2,280 which investor is getting from levered company before investing in unlevered company but still have ₹ 3,240 excess money available with investor. Hence, investor is better off by doing arbitrage.

Question 3

(a) *HCP Ltd. is a leading manufacturer of railway parts for passenger coaches and freight wagons. Due to high wastage of material and quality issues in production, the General Manager of the company is considering the replacement of machine A with a new CNC machine B. Machine A has a book value of ₹ 4,80,000 and remaining economic life is 6 years. It could be sold now at ₹ 1,80,000 and zero salvage value at the end of sixth year. The purchase price of Machine B is ₹ 24,00,000 with economic life of 6 years. It will require ₹ 1,40,000 for installation and ₹ 60,000 for testing. Subsidy of 15% on the purchase price of the machine B will be received from Government at the end of 1st year. Salvage value at the end of sixth year will be ₹ 3,20,000.*

The General manager estimates that the annual savings due to installation of machine B include a reduction of three skilled workers with annual salaries of ₹ 1,68,000 each, ₹ 4,80,000 from reduced wastage of materials and defectives and ₹ 3,50,000 from loss in sales due to delay in execution of purchase orders. Operation of Machine B will require the services of a trained technician with annual salary of t 3,90,000 and annual operation and maintenance cost will increase by ₹ 1,54,000. The company's tax rate is 30% and it's required rate of return is 14%. The company follows straight line method of depreciation. Ignore tax savings on loss due to sale of existing machine.

The present value factors at 14% are:

Years	***0***	***1***	***2***	***3***	***4***	***5***	***6***
PV Factor	*1*	*0.877*	*0.769*	*0.675*	*0.592*	*0.519*	*0.456*

Required:

(i) *Calculate the Net Present Value and Profitability Index and advise the company for replacement decision.*

(ii) *Also calculate the discounted pay-back period.*

(b) *Vista Limited's retained earnings per share for the year ending 31.03.2023 being 40% is ₹3.60 per share. Company is foreseeing a growth rate of 10% per annum in the next two years. After that the growth rate is expected to stabilize at 8% per annum. Company will maintain its existing pay-out ratio. If the investor's required rate of return is 15%, Calculate the intrinsic value per share as of date using Dividend Discount model.*

Answer

(a) Calculation of Net Initial Cash Outflows:

Particulars	**₹**
Cost of new machine	24,00,000
Less: Sale proceeds of existing machine	(1,80,000)
Add: Installation	1,40,000
Add: Testing	60,000
Less: Subsidy from government (15% of 24,00,000) x 0.877	**(3,15,720)**
Net initial cash outflows	**21,04,280**

Calculation of Incremental Depreciation

Particulars	**₹**
Depreciation on existing machine (4,80,000/6) **(i)**	80,000
Depreciation base of New Machine	
Cost of new machine	24,00,000
Add: Installation	1,40,000
Add: Testing	60,000
Less: Subsidy from government	(3,60,000)
Less: Salvage value at the end of 6^{th} year	(3,20,000)
Depreciation base of New Machine	**19,20,000**
Depreciation on New Machine (19,20,000/6) **(ii)**	3,20,000
Incremental depreciation [(ii) – (i)]	2,40,000

Computation of Annual Operating Cash flow after tax (CFAT)

Particulars	Amount (₹)	Amount (₹)
Savings in cost		
Cost of 3 skilled workers (₹1,68,000 x 3)	5,04,000	
Reduced wastage of material	4,80,000	
Saving in loss of sales	3,50,000	
Total		13,34,000
Less: Increase in cost		
Salary to trained technician	3,90,000	
Increase in annual operation and maintenance cost	1,54,000	
Total		(5,44,000)
Incremental Saving before tax and depreciation		7,90,000
Less: Incremental Depreciation		(2,40,000)
Incremental PBT		5,50,000
Less: Tax @30%		(1,65,000)
PAT		3,85,000
Add: Depreciation		2,40,000
Incremental CFAT		6,25,000

Calculation of NPV

Particulars	Year	Net Cashflow (₹)	PVF @ 14%	PV (₹)
Net initial cash outflows	0	(24,20,000)	1	(21,04,280)
Incremental CFAT	1 to 6	6,25,000	3.888	24,30,000
Salvage Value of New Machine	6	3,20,000	0.456	1,45,920

PV of inflows				25,75,920
Net Present Value				**4,71,640**

$$\text{Profitability Index} = \frac{\text{Sum of discounted cash inflows}}{\text{Initial cash outlay or Total discounted cash outflow (as the case may)}}$$

= 25,75,920/21,04,280= **1.224**

Advise: Since the NPV is positive and PI is greater than 1, the company should replace the machine

Computation of Discounted Payback Period

Year	Cashflow	PVF @ 14%	PV of CFs (₹)	Cumulative PV (₹)
1	6,25,000	0.877	5,48,125	5,48,125
2	6,25,000	0.769	4,80,625	10,28,750
3	6,25,000	0.675	4,21,875	14,50,625
4	6,25,000	0.592	3,70,000	18,20,625
5	6,25,000	0.519	3,24,375	21,45,000
6	9,45,000	0.456	4,30,920	25,75,920

Discounted Payback Period

$$= 4 + \frac{21,04,280 - 18,20,625}{3,24,375}$$

= 4.87 years

If we take subsidy in cash inflow of 1st year, then solution can also be done in the following way:

Calculation of Net Initial Cash Outflows:

Particulars	**₹**
Cost of new machine	24,00,000
Less: Sale proceeds of existing machine	(1,80,000)
Add: Installation	1,40,000
Add: Testing	60,000
Net initial cash outflows	**24,20,000**

Note: However, Incremental Depreciation and CFAT will remain same.

Calculation of NPV

Particulars	Year	Net Cashflow (₹)	PVF @ 14%	PV (₹)
Net initial cash outflows	0	(24,20,000)	1	(24,20,000)
Subsidy	1	3,60,000	0.877	3,15,720
Incremental CFAT	1 to 6	6,25,000	3.888	24,30,000
Salvage Value of New Machine	6	3,20,000	0.456	1,45,920
PV of inflows				28,91,640
Net Present Value				**4,71,640**

$$\text{Profitability Index} = \frac{\text{Sum of discounted cash in flows}}{\text{Initial cash outlay or Total discounted cash outflow (as the case may)}}$$

= 28,91,640 /24,20,000 = **1.195**

Advise: Since the NPV is positive and PI is greater than 1, the company should replace the machine

Computation of Discounted Payback Period

Year	Cashflow	PVF @ 14%	PV of CFs (₹)	Cumulative PV (₹)
1	9,85,000	0.877	8,63,845	8,63,845
2	6,25,000	0.769	4,80,625	13,44,470
3	6,25,000	0.675	4,21,875	17,66,345
4	6,25,000	0.592	3,70,000	21,36,345
5	6,25,000	0.519	3,24,375	24,60,720
6	9,45,000	0.456	4,30,920	28,91,640

Discounted Payback Period

$$= 4 + \frac{24{,}20{,}000 - 21{,}36{,}345}{3{,}24{,}375}$$

= 4.87 years

(b) As per Dividend discount model, the price of share is calculated as follows:

Retained earning per share = ₹ 3.60

Dividend per share, $D_0 = \frac{₹\,3.60}{40\%} \times 60\% = ₹5.40$

$$P = \frac{D_1}{(1+K_e)^1} + \frac{D_2}{(1+K_e)^2} + \frac{D_3}{(K_e - g)} \times \frac{1}{(1+K_e)^2}$$

Where,

P = Price per share

K_e = Required rate of return on equity

g = Growth rate

$$P = \frac{5.4x1.1}{(1+0.15)^1} + \frac{5.94x1.1}{(1+0.15)^2} + \frac{6.534x1.08}{(0.15-0.08)} \times \frac{1}{(1+0.15)^2}$$

P= 5.17 + 4.94 + 76.23 = ₹86.33

Intrinsic value of share is ₹ 86.33

Question 4

(a) State with brief reasons whether the following statements are true or false:

(i) Maximising Market Price Per Share (MPS) as the financial objective which maximises the wealth of shareholders.

(ii) A combination of lower risk and higher return is known as risk return trade off and at this level of risk-return, profit is maximum.

(iii) Financial distress is a position when accounting profits of a firm are sufficient to meet its long-term obligations.

(iv) Angel investor is one who provides funds for start-up m exchange for an ownership/equity.

(b) ABC Ltd. is approaching the banks for financing its business activity. You are required to describe any four forms of bank credit for the consideration of the company.

(c) Discuss the relevance of Payback reciprocal in capital budgeting decisions.

OR

(c) Explain the features of crowd funding.

Answer

(a)

Statement	**True or False**	**Reason**
Maximising Market Price Per Share (MPS) as the financial objective which maximises the wealth of shareholders.	**True**	Maximizing MPS or Market value as the financial objective will ensure the maximizing shareholder's wealth.
A combination of lower risk and higher return is known as risk-return trade off and at this level of risk-return, profit is maximum.	**False**	There is a direct relationship between risk and profit. Higher the risk, higher is the possibility of profits. Stockholders expect greater returns from investments of higher risk and vice-versa.
Financial distress is a position when accounting profits of a firm are sufficient to meet its long-term obligations.	**False**	Financial distress is a position where Cash inflows of a firm are inadequate to meet all its current obligations.
Angel investor is one who provides funds for start-up in exchange for an ownership/equity.	**True**	Angel Financing is a form of an equity-financing where an angel investor provides capital for start-up or expansion, in exchange for an ownership/equity in the company.

(b) Some of the forms of bank credit are:

(i) Cash Credit: This facility will be given by the banker to the customers by giving certain amount of credit facility on continuous basis. The borrower will not be allowed to exceed the limits sanctioned by the bank.

(ii) Bank Overdraft: It is a short-term borrowing facility made available to the companies in case of urgent need of funds. The banks will impose limits on the amount they can lend. When the borrowed funds are no longer required they can quickly and easily be repaid. The banks issue overdrafts with a right to call them in at short notice.

(iii) Bills Discounting: The Company which sells goods on credit will normally draw a bill on the buyer who will accept it and sends it to the seller of goods. The seller, in turn discounts the bill with his banker. The banker will generally earmark the discounting bill limit.

(iv) Bills Acceptance: To obtain finance under this type of arrangement a company draws a bill of exchange on bank. The bank accepts the bill thereby promising to pay out the amount of the bill at some specified future date.

(v) Line of Credit: Line of Credit is a commitment by a bank to lend a certain amount of funds on demand specifying the maximum amount.

(vi) Letter of Credit: It is an arrangement by which the issuing bank on the instructions of a customer or on its own behalf undertakes to pay or accept or negotiate or authorizes another bank to do so against stipulated documents subject to compliance with specified terms and conditions.

(vii) Bank Guarantees: Bank guarantee is one of the facilities that the commercial banks extend on behalf of their clients in favour of third parties who will be the beneficiaries of the guarantees.

(viii) Short Term Loans: In a loan account, the entire advance is disbursed at one time either in cash or by transfer to the current account of the borrower. It is a single advance and given against securities like shares, government securities, life insurance policies and fixed deposit receipts, etc.

(ix) Clean Overdrafts: Request for clean advances are entertained only from parties which are financially sound and reputed for their integrity. The bank has to rely upon the personal security of the borrowers.

(x) Advances against goods: Goods are charged to the bank either by way of pledge or by way of hypothecation. Goods include all forms of movables which are offered to the bank as security.

(xi) Usance bills maturing at a future date or sight are discounted by the banks for approved parties. The borrower is paid the present worth and the bank collects the full amount on maturity.

(xii) Advance against documents of title to goods: A document becomes a document of title to goods when its possession is recognised by law or business custom as possession of the goods like bill of lading, dock warehouse keeper's certificate, railway receipt, etc. An advance against the pledge of such documents is an advance against the pledge of goods themselves.

(xiii) Advance against supply of bills: Advances against bills for supply of goods to government or semi-government departments against firm orders after acceptance of tender fall under this category. It is this debt that is assigned to the bank by endorsement of supply bills and executing irrevocable power of attorney in favour of the banks for receiving the amount of supply bills from the Government departments.

(c) Reciprocal of the payback would be a close approximation of the Internal Rate of Return if the life of the project is at least twice the payback period and the project generates equal amount of the annual cash inflows.

The payback reciprocal is a helpful tool for quick estimation of rate of return of a project provided its life is at least twice the payback period.

It may be calculated as follows:

Payback Reciprocal = Average annual cash flows/initial Investment

Or

Payback Reciprocal = 1 / payback period

OR

(c) Crowd funding: crowdfunding means raising money for an individual or organisation from a group of people to fund a project, typically via internet (social media and crowdfunding websites). It generally involves collecting funds from family, friends, strangers, corporates and many more in exchange of equity (known as Equity funding), loans (known as P2P lending) or nothing at all (i.e. donation). This source of funding also helps start-up to substantiate demand for their product before entering into production.

In the crowdfunding process, three parties are involved i.e. fund raiser, mediator and fund investor. The platforms (mediator) may also charge certain fees in the form of processing fee, transaction fee, etc. either as a fixed amount or a percentage or in combination of both.

SECTION – B: STRATEGIC MANAGEMENT

*Question paper comprises of **4** questions, Answer Question No. **5** which is compulsory and any **2** out of the remaining **3** questions.*

Question 5

(a) *BOYA Ltd. is a venture in the market present for a decade. Till, 2023, it was working on the values and vision of its founder while operating in limited area of operations.*

Growth opportunities exist for BOYA Ltd. Considering the changing environment, company is interested to leverage new skills in marketing, technology, product development and financial management. As a known fact, modifying one aspect might have a ripple effect on other elements. The company wants to understand various hard and soft elements interrelated with each other in the company and having a bearing on effective operational results.

As a strategist, you intend to prepare a questionnaire based on both types of elements by analyzing the organizational design. The response to the same will help in finding an answer to ensure effectiveness through the interaction of such elements.

Briefly discuss the strategic model you will use in the given situation. State the limitations of the model as well. ***(2 +3 = 5 Marks)***

(b) *Elvis Global is a famous OTT platform facing fierce competition from its competitors amid changing consumer preferences. This has made it difficult to retain customers as the existing television channels are also launching their own platforms. The company has appointed Raghav to lead the company forward as the sales & marketing manager. Raghav needs to design creative and innovative advertising campaigns to gain a competitive edge, engage the public and capture the market.*

Identify the strategic level that represents Raghav's role at Elvis Global. As a strategic advisor, highlight the various benefits of strategic management in overcoming different challenges to Raghav. ***(1 +4 = 5 Marks)***

(c) *Yash is planning to launch his new tech start-up. He is exploring different locations across the country to establish his company in the right business environment. One option is the city of Bengaluru, the silicon valley of India,* *with an engaging network of entrepreneurs, investors, advisors and mentors. Coupled with various subsidies for new ventures and tax benefits, Bengaluru might be an ideal choice for Yash to establish his company and increase the chances of success.*

Define the term Business Environment with respect to the above scenario. Explain the different ways in which the interaction of a business with its environment can be helpful in developing a successful strategy.

(1 +4 = 5 Marks)

Answer

(a) In addressing the strategic needs of BOYA Ltd., the **McKinsey 7S Model** is an effective tool to consider. This model focuses on the interaction of hard and soft elements within an organization, suggesting that modifying one aspect might have a ripple effect on the other elements to maintain an effective balance. The McKinsey 7S Model helps analyze the company's organizational design to achieve effectiveness through these interactions. The model categorizes the elements into 'hard' and 'soft' components:

The **Hard elements** are directly **controlled by the management.** The following elements are the hard elements in an organization.

- **Strategy:** the direction of the organization, a blueprint to build on a core competency and achieve competitive advantage to drive margins and lead the industry.
- **Structure:** depending on the availability of resources and the degree of centralisation or decentralization that the management desires, it choses from the available alternatives of organizational structures.
- **Systems:** the development of daily tasks, operations and teams to execute the goals and objectives in the most efficient and effective manner.

The **Soft elements** are difficult to define as they are more **governed by culture.** But these soft elements are equally important in determining an organization’s success as well as growth in the industry. The following are the soft elements in this model.

- **Shared Values:** The core values which get reflected within the organizational culture or influence the code of ethics of the management.
- **Style:** This depicts the leadership style and how it influences the strategic decisions of the organisation. It also revolves around people motivation and organizational delivery of goals.
- **Staff:** The talent pool of the organisation.
- **Skills:** The core competencies or the key skills of the employees play a vital role in defining the organizational success.

While the McKinsey 7S Model provides a structured approach to analysing organizational effectiveness, it has certain limitations:

- It ignores the importance of the external environment and depicts only the most crucial elements within the organization.
- The model does not clearly explain the concept of organizational effectiveness or performance.
- The model is considered to be more static and less flexible for decision making.
- It is generally criticized for missing out the real gaps in conceptualization and execution of strategy.

By applying the McKinsey 7S Model, BOYA Ltd. can gain a comprehensive understanding of how different elements within the organization interact and influence overall performance. The insights gathered from the questionnaire can guide strategic decisions to enhance growth and operational effectiveness.

(b) Raghav's role at Elvis Global represents the **Functional level** of strategy. As the sales and marketing manager, his responsibilities are focused on specific areas within the company, particularly on crafting and executing marketing and sales strategies that drive customer engagement and competitive positioning.

Benefits of Strategic Management for Raghav at Elvis Global

Strategic management can provide several benefits to Raghav in addressing the competitive and consumer challenges faced by Elvis Global:

- Strategic management helps Elvis Global define its goals and mission, providing clear **direction for future initiatives**. This ensures that all marketing efforts are aligned with the company's overall vision. It allows Raghav to **set realistic** and achievable **objectives** that support the company's **long-term goals**, ensuring that marketing strategies are both ambitious and attainable.

- Through strategic management, Raghav can **proactively shape the future** of Elvis Global rather than merely reacting to market changes. This allows the company to **anticipate trends and act accordingly**. A proactive approach enables Elvis Global to better manage environmental uncertainties and stay ahead of competitors, ensuring a more controlled and predictable business environment.

- Strategic management provides a robust **framework for making critical decisions** regarding marketing strategies, target markets, and resource allocation. This ensures that all major decisions are well-informed and strategically sound. It ensures **coherence and consistency in decision-making** across the organization, aligning marketing strategies with overall business objectives.

- Strategic management helps **identify and exploit new business opportunities**, allowing Raghav to craft **campaigns** that resonate **with** emerging **consumer preferences and market trends**. By recognizing and capitalizing on these opportunities, Elvis Global can differentiate itself from competitors and capture a larger market share.

- Strategic management **acts as a defence mechanism** against potential mistakes and pitfalls, helping Raghav avoid costly errors in marketing decisions and campaign execution. It provides a structured approach to identifying and mitigating risks, ensuring **more informed and safer decision-making.**

- Strategic management **enhances the longevity and sustainability** of Elvis Global by ensuring that marketing strategies are adaptable and resilient in a dynamic market. It helps the company **establish a clear and deliberate position** within the industry, ensuring sustained relevance and competitiveness.

- Strategic management enables the **development of core competencies** and competitive advantages that are crucial for the company's success. This includes building strong brand identity, innovative content offerings, and superior customer service. By focusing on these strengths, Raghav can ensure that **Elvis Global achieves sustainable growth** and **maintains its competitive edge** in the OTT market.

  Through strategic management, Raghav can effectively navigate the competitive challenges faced by Elvis Global. By providing clear direction, encouragement a proactive approach, guiding critical decisions, identifying new opportunities, defending against pitfalls, ensuring longevity, and developing core competencies, strategic management enables the company to achieve and sustain a competitive edge. This comprehensive approach will allow Raghav to design innovative advertising campaigns that engage the public, capture the market, and drive the company forward.

(c) Business Environment refers to all **external factors**, influences, or situations **that affect business decisions**, plans, and operations. In Yash's case, these factors include the dynamic and evolving conditions in Bengaluru, which impact the strategic decisions for his tech start-up.

Benefits of Interaction with the Business Environment

- **Determine Opportunities and Threats:** Interaction with the environment helps Yash **identify new consumer needs, emerging trends, and potential market opportunities.** This insight can guide the development of innovative products and services that meet market demands. Understanding changes in laws, social behaviors, and competitor actions enables Yash to anticipate and mitigate potential threats, ensuring the start-up remains resilient and adaptive.
- **Give Direction for Growth:** By analyzing the external environment, Yash can pinpoint areas for expansion and growth. Recognizing market trends and technological advancements allows him to **strategize effectively, ensuring the start-up scales successfully.**

Awareness of the changes around the business environment facilitates better planning and strategic decisions, aligning the start-up's goals with the market dynamics.

- **Continuous Learning:** Continuous interaction with the environment motivates Yash and his team to update their knowledge, understanding, and skills. Staying **informed about industry trends and advancements ensures the start-up remains competitive.** This ongoing learning process enhances the start-up's ability to adapt to changes, promoting innovation and responsiveness to market shifts.
- **Image Building:** Understanding and responding to environmental needs help the start-up build a positive image. For instance, adopting sustainable practices or **contributing to local initiatives can enhance the company's reputation.** Demonstrating sensitivity to the business environment shows that the start-up is responsible and community-focused, attracting customers and partners who value corporate social responsibility.
- **Meeting Competition:** Interaction with the environment allows Yash to analyze competitors' strategies and adapt accordingly. **Understanding competitors' strengths and weaknesses helps in crafting strategies that provide a competitive edge**. By leveraging insights from the environment, the start-up can position itself uniquely in the market, differentiating its offerings from those of competitors.

Question 6

(a) 'Innovation leads to unnecessary expenses that do not give as many returns.' Do you agree with the statement? Give reasons in support of your answer. ***(1 + 4 = 5 Marks)***

(b) Explain how organizations can effectively manage strategic uncertainties in a rapidly changing business environment. ***(5 Marks)***

Answer

(a) The statement "Innovation leads to unnecessary expenses that do not give as many returns" is often debated, but evidence strongly suggests that innovation is crucial for long-term business growth and success. I **disagree** with the statement for several reasons:

Innovation offers the following for a business to grow long term:

Helps to solve complex problems: A business strives to find opportunities in existing problems of the society, and it does so through planned innovation in areas of expertise. This guided innovation helps solve complex problems by developing customer centric sustainable solutions.

Increases productivity: Innovation leads to simplification and in most cases automation of existing tasks. Companies are willing to spend millions on increasing their productivity. Innovation, by automating repetitive tasks and simplifying the long chain of processes, adds to productivity of teams and thereby the organization as a whole.

Gives competitive advantage: Being ahead of competition is a need and businesses spend majority of their strategic time building solutions to achieve this advantage. The faster a business innovates, the farther it goes from its competitors reach. Innovative products need less marketing as they aim to provide added satisfaction to consumers, thus, creating a competitive advantage. Innovation not only helps retain its existing customers but helps acquire new ones with ease too.

(b) In managing strategic uncertainties in a rapidly changing business environment, organizations need to adopt proactive strategies to navigate unpredictability effectively. Here are several key approaches:

Flexibility: Organizations should build flexibility into their strategies to enable quick adaptation to change in the environment.

Diversification: Diversifying the organization's product portfolio, markets, and customer base can help reduce the impact of strategic uncertainty.

Monitoring and Scenario Planning: Regularly monitoring key indicators of change and conducting scenario planning exercises can help organizations anticipate and prepare for different future scenarios.

Building Resilience: Investing in building internal resilience is essential for weathering uncertainty. This includes strengthening operational processes, increasing financial flexibility, and improving risk management capabilities.

Collaboration and Partnerships: Collaborating with other organizations, suppliers, customers, and partners can provide access to additional resources, expertise, and market opportunities. Strategic partnerships enable organizations to pool resources, share risk, and leverage each other's strengths to navigate uncertainty more effectively.

Question 7

(a) *What are the key characteristics of business products that contribute to the overall competitiveness and dynamics of the market?* ***(5 Marks)***

(b) *'A company's mission statement is typically focused on its present business scope.' Explain the significance of a mission statement.* ***(5 Marks)***

Answer

(a) Businesses sell products. A product can be either a good or a service. It might be physical good or a service, an experience.

Following are the key characteristics of business products:

1. **Products are either tangible or intangible.** A tangible product can be handled, seen, and physically felt, such as a car, book, pen, table, mobile handset and so on. Alternatively, an intangible product is not a physical good, such as telecom services, banking, insurance, or repair services.

2. **Product has a price**. Businesses determine the cost of their products and charge a price for them. The dynamics of supply and demand influence the market price of an item or service. The market price is the price at which quantity provided equals quantity desired. The price that may be paid is determined by the market, the quality, the marketing, and the targeted group. In the present competitive world price is often given by the market and businesses have to work on costs to maintain profitability.

3. **Products have certain features that deliver satisfaction**. A product feature is a component of a product that satisfies a consumer need. Features determine product pricing, and businesses alter features

during the development process to optimize the user experience. Products should be able to provide value satisfaction to the customers for whom they are meant. Features of the product will distinguish it in terms of its function, design, quality and experience A customer's cumulative experience with a product from its purchase to the end of its useful life is an important component of a product feature.

4. **Product is pivotal for business**. The product is at the centre of business around which all strategic activities revolve. The product enables production, quality, sales, marketing, logistics and other business processes. Product is the driving force behind business activities.

5. **A product has a useful life**. Every product has a usable life after which it must be replaced, as well as a life cycle after which it is to be reinvented or may cease to exist. We have observed that fixed line telephone instruments have largely been replaced by mobile phones.

(b) A company's mission statement is typically focused on its present business scope **who we are and what we do**. Mission statements broadly describe an organization's present capability, customer focus, activities, and business make up. Mission for an organization is significant for the following reasons:

- It ensures **unanimity of purpose** within the organization.
- It develops a basis, or standard, for **allocating organizational resources.**
- It provides a basis for **innovating the use of the organisation's resources**
- It **establishes** a general tone or **organizational climate**, to suggest a business like operation.
- It serves as a **focal point** for those who can identify with the **organisation's purpose and direction**.
- It facilitates the **translation of objectives and goals into a work structure** involving the assignment of tasks to responsible elements within the organization.

- It specifies organizational purposes and the **translation of these purposes into goals** in such a way that cost, time, and performance parameters can be assessed and controlled.

Question 8

(a) *What are channels? Why is channel analysis important? Explain the different types of channels?* ***(1 + 1 + 3 = 5 Marks)***

(b) *Explain the concept of vertically integrated diversification. How is forward integration different from backward integration?* ***(5 Marks)***

OR

(b) *Recommend a tool to analyze the competitive position of various rival companies in the market and outline the step by step procedure for using the identified tool.* ***(5 Marks)***

Answer

(a) Channels represent the **distribution system** through which organizations distribute their products or provide services to customers. They play a pivotal role in reaching target markets, maximizing sales, and establishing competitive advantages.

Channel analysis is important when the business strategy is to scale up and expand beyond the current geographies and markets. When a business plans to grow to newer markets, they need to develop or leverage existing channels to get to new customers. Thus, analysis of channels that suit one's products and customers is of utmost importance.

There are typically three channels that should be considered: sales channel, product channel and service channel.

- **The sales channel** - These are the intermediaries involved in selling the product through each channel and ultimately to the end user. The key question is: Who needs to sell to whom for your product to be sold to your end user? **For example**, many fashion designers use agencies to sell their products to retail organizations, so that consumers can access them.
- **The product channel** - The product channel focuses on the series of intermediaries who physically handle the product on its path from its

producer to the end user. This is true of Australia Post, who delivers and distributes many online purchases between the seller and purchaser when using eBay and other online stores.

- **The service channel** - The service channel refers to the entities that provide necessary services to support the product, as it moves through the sales channel and after purchase by the end user. The service channel is an important consideration for products that are complex in terms of installation or customer assistance. **For example**, a Bosch dishwasher may be sold in a Bosch showroom, and then once sold it is installed by a Bosch contracted plumber.

(b) Vertically integrated diversification is a strategic approach in which a company expands its business operations into different stages of the production or distribution process within the same industry. This involves either forward integration or backward integration.

The key difference between forward and backward integration lies in the direction of expansion within the supply chain. **Forward integration moves towards the end consumer,** while **backward integration moves towards the source of raw materials or components.**

Forward integration allows companies to have **more control over distribution channels,** improve customer relationships, and capture a larger share of the value chain. In contrast, **backward integration helps** companies **secure a stable supply of inputs,** reduce dependency on suppliers, and potentially lower production costs.

Forward integration is often associated with activities such as retailing, marketing, and after-sales services, while backward integration is associated with activities such as manufacturing, sourcing, and procurement.

Both types of integration offer strategic advantages such as increased market power, cost efficiencies, and greater control over critical business processes. However, the decision to pursue forward or backward integration depends on factors such as industry dynamics, competitive landscape, and the company's core competencies and resources.

Or

A tool to identify the market positions of rival companies by grouping them into like positions is **Strategic Group Mapping.** A strategic group consists of those rival firms which have similar competitive approaches and positions in the market.

The procedure for constructing a strategic group map and deciding which firms belong in which strategic group are as follows:

1. Identify the competitive characteristics that differentiate firms in the industry typical variables that are price/quality range (high, medium, low); geographic coverage (local, regional, national, global); degree of vertical integration (none, partial, full); product-line breadth (wide, narrow); use of distribution channels (one, some, all); and degree of service offered (no-frills, limited, full).
2. Plot the firms on a two-variable map using pairs of these differentiating characteristics.
3. Assign firms that fall in about the same strategy space to the same strategic group.
4. Draw circles around each strategic group making the circles proportional to the size of the group's respective share of total industry sales revenues.