

PAPER – 2 : STRATEGIC FINANCIAL MANAGEMENT

Question No.1 is compulsory.

Attempt any **five** out of the remaining **six** questions.

Wherever appropriate, suitable assumptions should be made and indicated in the answer by the candidate.

Working notes should form part of the answer.

Question 1

- (a) An importer customer of your bank wishes to book a forward contract with your bank on 3rd September for sale to him of SGD 5,00,000 to be delivered on 30th October.

The spot rates on 3rd September are USD 49.3700/3800 and USD/SGD 1.7058/68. The swap points are:

USD / ₹		USD/SGD	
Spot/September	0300/0400	1 st month forward	48/49
Spot/October	1100/1300	2 nd month forward	96/97
Spot/November	1900/2200	3 rd month forward	138/140
Spot/December	2700/3100		
Spot/January	3500/4000		

Calculate the rate to be quoted to the importer by assuming an exchange margin of paisa. **(5 Marks)**

- (b) KLM Ltd., is considering taking up one of the two projects-Project-K and Project-S. Both the projects having same life require equal investment of ₹ 80 lakhs each. Both are estimated to have almost the same yield. As the company is new to this type of business, the cash flow arising from the projects cannot be estimated with certainty. An attempt was therefore, made to use probability to analyse the pattern of cash flow from other projects during the first year of operations. This pattern is likely to continue during the life of these projects. The results of the analysis are as follows:

Project K		Project S	
Cash Flow (in ₹)	Probability	Cash Flow (in ₹)	Probability
11	0.10	09	0.10
13	0.20	13	0.25
15	0.40	17	0.30
17	0.20	21	0.25
19	0.10	25	0.10

Required:

- (i) Calculate variance, standard deviation and co-efficient of variance for both the projects.
- (ii) Which of the two projects is more risky? **(5 Marks)**
- (c) Constant Engineering Ltd. has developed a high tech product which has reduced the Carbon emission from the burning of the fossil fuel. The product is in high demand. The product has been patented and has a market value of ₹ 100 Crore, which is not recorded in the books. The Net Worth (NW) of Constant Engineering Ltd. is ₹ 200 Crore. Long term debt is ₹ 400 Crore. The product generates a revenue of ₹ 84 Crore. The rate on 365 days Government bond is 10 percent per annum. Bond portfolio generates a return of 12 percent per annum. The stock of the company moves in tandem with the market. Calculate Economic Value added of the company. **(5 Marks)**
- (d) The unit price of Equity Linked Savings Scheme (ELSS) of a mutual fund is ₹ 10/-. The public offer price (POP) of the unit is ₹ 10.204 and the redemption price is ₹ 9.80. Calculate:
- (i) Front-end Load
- (ii) Back end Load **(5 Marks)**

Answer**(a)**

USD/ ₹ on 3 rd September	49.3800
Swap Point for October	0.1300
	49.5100
Add: Exchange Margin	0.0500
	49.5600

USD/ SGD on 3 rd September	1.7058
Swap Point for 2 nd month Forward	0.0096
	1.7154

Cross Rate for SGD/ ₹ of 30th October

$$\begin{aligned}
 \text{USD/ ₹ selling rate} &= ₹ 49.5600 \\
 \text{SGD/ ₹ buying rate} &= \text{SGD } 1.7154 \\
 \text{SGD/ ₹ cross rate} &= ₹ 49.5600 / 1.7154 \\
 &= ₹ 28.8912
 \end{aligned}$$

(b) Calculation of Variance and Standard Deviation**Project K**

Expected Net Cash Flow

$$= (0.1 \times 11) + (0.20 \times 13) + (0.40 \times 15) + (0.20 \times 17) + (0.10 \times 19)$$

$$= 1.1 + 2.6 + 6 + 3.4 + 1.9 = 15$$

$$\sigma^2 = 0.10(11 - 15)^2 + 0.20(13 - 15)^2 + 0.40(15 - 15)^2 + 0.20(17 - 15)^2 + 0.10(19 - 15)^2$$

$$= 1.6 + 0.8 + 0 + 0.8 + 1.6 = 4.8$$

$$\sigma = \sqrt{4.8} = 2.19$$

Project S

Expected Net Cash Flow

$$= (0.10 \times 9) + (0.25 \times 13) + (0.30 \times 17) + (0.25 \times 21) + (0.10 \times 25)$$

$$= 0.9 + 3.25 + 5.1 + 5.25 + 2.5 = 17$$

$$\sigma^2 = 0.1(9-17)^2 + 0.25(13-17)^2 + 0.30(17-17)^2 + 0.25(21-17)^2 + 0.10(25-17)^2$$

$$= 6.4 + 4 + 0 + 4 + 6.4 = 20.8$$

$$\sigma = \sqrt{20.8} = 4.56$$

Calculation of Coefficient of Variation

$$\text{Coefficient of Variation} = \frac{\text{Standard Deviation}}{\text{Mean}}$$

$$\text{Project K} = \frac{2.19}{15} = 0.146$$

$$\text{Project S} = \frac{4.56}{17} = 0.268$$

Project S is riskier as it has higher Coefficient of Variation.

(c) EVA = Income Earned – (Cost of Capital x Total Investment)**Total Investments**

	Amount (₹ Crore)
Net Worth	200.00
Long Term Debts	400.00
Patent Rights	100.00
Total	700.00

$$\begin{aligned}
 \text{WACC} \quad (k_o) &= k_e \times \frac{E}{E+D} + k_d \times \frac{D}{E+D} \\
 &= 12 \times \frac{300}{700} + 10 \times \frac{400}{700} \\
 &= 5.14\% + 5.71\% = 10.85\% \\
 \text{EVA} &= \text{Profit Earned} - \text{WACC} \times \text{Invested Capital} \\
 &= ₹ 84 \text{ crore} - 10.85\% \times ₹ 700 \text{ crore} \\
 &= ₹ 8.05 \text{ crore}
 \end{aligned}$$

(d) Public Offer Price = NAV/ (1 – Front end Load)

Public Offer Price: ₹ 10.204 and NAV: ₹ 10

Accordingly,

$$10.204 = 10/(1 - F)$$

$$F = 0.0199 \text{ say } 2\%$$

Redemption Price = NAV/ (1 – Back End Load)

$$₹ 9.80 = 10/ (1 - \text{Back End Load})$$

$$B = 0.0204 \text{ i.e. } 2.04\%$$

Alternative

$$(i) \text{ Front End Load} = \frac{10.204 - 10.00}{10.00} = 0.0204 \text{ or } 2.04\%$$

$$(ii) \text{ Exit Load} = \frac{10.00 - 9.80}{10.00} = 0.020 \text{ or } 2.00\%$$

Question 2

- (a) The following is the data related to 9% Fully convertible (into Equity Shares) debentures issued by Delta Ltd. at ₹1000.

Market Price of 9% Debenture ₹	1,000
Conversion Ratio (No. of shares)	25
Straight Value of 9% Debentures ₹	800
Market price of equity share on the date of conversion ₹	30
Expected Dividend per share ₹	1

Calculate:

- (a) Conversion value of Debenture;

- (b) Market Conversion Price;
- (c) Conversion Premium per share;
- (d) Ratio of Conversion Premium;
- (e) Premium over straight Value of Debenture;
- (f) Favourable Income Differential per share; and
- (g) Premium pay back period

(8 Marks)

- (b) Mr. Y has invested in the three mutual funds (MF) as per the following details:

Particulars	MF 'X'	MF 'Y'	MF 'Z'
Amount of Investment (₹)	2,00,000	4,00,000	2,00,000
Net Assets Value (NAV) at the time of purchase (₹)	10.30	10.10	10
Dividend Received up to 31.03.2018 (₹)	6,000	0	5,000
NAV as on 31.03.2018 (₹)	10.25	10	10.20
Effective Yield per annum as on 31.03.2018 (percent)	9.66	-11.66	24.15

Assume 1 Year = 365 days

Mr. Y has misplaced the documents of his investment. Help him in finding the date of his original investment after ascertaining the following:

- (i) Number of units in each scheme;
- (ii) Total NPV;
- (iii) Total Yield; and
- (iv) Number of days investment held.

(8 Marks)**Answer**

- (a) (a) Conversion Value of Debenture
 = Market Price of one Equity Share X Conversion Ratio
 = ₹ 30 X 25 = ₹ 750
- (b) Market Conversion Price
 = $\frac{\text{Market Price of Convertible Debenture}}{\text{Conversion Ratio}}$

$$\frac{1000}{25} = ₹ 40$$

- (c) Conversion Premium per share

Market Conversion Price – Market Price of Equity Share

$$= ₹ 40 - ₹ 30 = ₹ 10$$

- (d) Ratio of Conversion Premium

$$\frac{\text{Conversion premium per share}}{\text{Market Price of Equity Share}} = \frac{10}{30} \times 100 = 33.33\%$$

- (e) Premium over Straight Value of Debenture

$$\frac{\text{Market Price of Convertible Bond}}{\text{Straight Value of Bond}} - 1 = \frac{1000}{800} - 1 = 25\%$$

- (f) Favourable income differential per share

$$\frac{\text{Coupon Interest from Debenture} - \text{Conversion Ratio} \times \text{Dividend Per Share}}{\text{Conversion Ratio}}$$

$$\frac{90 - 25 \times 1}{25} = ₹ 2.6$$

- (g) Premium pay back period

$$\frac{\text{Conversion premium per share}}{\text{Favourable Income Differential Per Share}} = \frac{10}{2.6} = 3.85 \text{ years}$$

(b) (i) Number of Units in each Scheme

MF 'X'	$\frac{₹ 2,00,000}{₹ 10.30}$	= 19,417.48
MF 'Y'	$\frac{₹ 4,00,000}{₹ 10.10}$	= 39,603.96
MF 'Z'	$\frac{₹ 2,00,000}{₹ 10.00}$	= 20,000.00

(ii) Total NAV on 31.03.2018

MF 'X'	= 19,417.48 x ₹ 10.25	₹ 1,99,029.17
MF 'Y'	= 39,603.96 x ₹ 10.00	₹ 3,96,039.60
MF 'Z'	= 20,000.00 x ₹ 10.20	₹ 2,04,000.00
Total		₹ 7,99,068.77

(iii) Total Yield

	Capital Yield	Dividend Yield	Total
MF 'X'	₹ 1,99,029.17 - ₹ 2,00,000 = - ₹ 970.83	₹ 6,000	₹ 5,029.17
MF 'Y'	₹ 3,96,039.60 - ₹ 4,00,000 = - ₹ 3,960.40	Nil	- ₹ 3,960.40
MF 'Z'	₹ 2,04,000 - ₹ 2,00,000 = ₹ 4,000	₹ 5,000	₹ 9,000.00
Total			₹ 10,068.77

$$\text{Total Yield} = \frac{₹ 10,068.77}{₹ 8,00,000} \times 100 = 1.2586\%$$

(iv) No. of Days Investment Held

	MF 'X'	MF 'Y'	MF 'Z'
Let No. of days be	X	Y	Z
Initial Investment (₹)	2,00,000	4,00,000	2,00,000
Yield (₹)	5,029.17	-3,960.40	9,000.00
Yield (%)	2.5146	-0.9901	4.5
Period of Holding (Days)	$\frac{2.5146}{9.66} \times 365$ = 95 Days	$\frac{-0.9901}{-11.66} \times 365$ = 31 Days	$\frac{4.5}{24.15} \times 365$ = 68 Days

Date of Original Investment

26.12.17

28.02.18

22.01.18

Question 3

- (a) Y has to remit USD \$1,00,000 for his son's education on 4th April 2018. Accordingly, he has booked a forward contract with his bank on 4th January @ 63.8775. The Bank has covered its position in the market @ ₹ 63.7575.

The exchange rates for USD \$ in the interbank market on 4th April and 14th April were:

	4 th April ₹	14 th April ₹
Spot USD 1=	63.2775/63.2975	63.1575/63.1975
Spot/April*	63.3975/63.4275	63.2775/63.3275
May	63.5275/63.5675	63.4075/63.7650
June	63.7775/63.8250	63.6575/63.7275
July	64.0700/64.1325	63.9575/64.0675

Exchange margin of 0.10 percent and interest outlay of funds @ 12 percent are applicable. The remitter, due to rescheduling of the semester, has requested on 14th April 2018 for extension of contract with due date on 14th June 2018.

Rates must be rounded to 4 decimal place in multiples of 0.0025.

Calculate:

- (i) Cancellation Rate;
- (ii) Amount Payable on \$ 100,000;
- (iii) Swap loss;
- (iv) Interest on outlay of funds, if any;
- (v) New Contract Rate; and
- (vi) Total Cost

(8 Marks)

*In Question paper, this month and consecutive months were mistakenly printed as previous months.

- (b) R Ltd., is considering a factoring proposal on the basis of the following data for the next year.

Particulars	Inhouse Management	Factoring Proposal
Estimated Sales (₹ In lakhs)	540	
Receivables (percent of sales)	12	
Administration Cost (₹ In Lakhs)	1.25	
Bad Debts (₹ In lakhs)	5.25	
Receivable collection period (days)		30
Factor Reserve (percent)		20
Bank Prime Lending Rate (BPLR) per cent	8	

R Ltd., is able to get variable overdraft interest rate at BPLR. Factor charges a premium of 4.6 percent over BPLR on the advances made to R Ltd.

Assume 365 days in a year.

You are required to calculate the viability of the factoring proposal.

(8 Marks)

Answer

- (a) (i) **Cancellation Rate:**

The forward sale contract shall be cancelled at Spot TT Purchase for \$ prevailing on the date of cancellation as follows:

\$/ ₹ Market Buying Rate	₹ 63.1575
Less: Exchange Margin @ 0.10%	₹ 0.0632
	₹ 63.0943

Rounded off to

₹ 63.0950

(ii) Amount payable on \$ 1,00,000

Bank sells \$1,00,000 @ ₹ 63.8775	₹ 63,87,750
Bank buys \$1,00,000 @ ₹ 63.0950	₹ 63,09,500
Amount payable by customer	₹ 78,250

(iii) Swap Loss

On 4th April, the bank does a swap sale of \$ at market buying rate of ₹ 63.2775 and forward purchase for April at market selling rate of ₹ 63.4275.

Bank buys at	₹ 63.4275
Bank sells at	₹ 63.2775
Amount payable by customer	₹ 0.1500

Swap Loss for \$ 1,00,000 in ₹ = ₹ 15,000

(iv) Interest on Outlay of Funds

On 4th April, the bank receives delivery under cover contract at ₹ 63.7575 and sell spot at ₹ 63.2775.

Bank buys at	₹ 63.7575
Bank sells at	₹ 63.2775
Amount payable by customer	₹ 0.4800

Outlay for \$ 1,00,000 in ₹ 48,000

Interest on ₹ 48,000 @ 12% for 10 days ₹ 158

(v) New Contract Rate

The contract will be extended at current rate

\$/ ₹ Market forward selling Rate for June	₹ 63.7275
Add: Exchange Margin @ 0.10%	₹ 0.0637
	₹ 63.7912

Rounded off to ₹ 63.7900

(vi) Total Cost

Cancellation Charges	₹ 78,250.00
Swap Loss	₹ 15,000.00
Interest	₹ 158.00
	₹ 93,408.00

(b) Working Notes**(i) Reduction in Trade Receivable under Factoring Agreement**

Current Trade Receivable 12% of 540	64.80
Revised Receivable (540 x 30/365)	<u>44.38</u>
	<u>20.42</u>

Calculation of Benefit with Recourse Factoring

Finance cost saving = 20.42 x 0.08	1.6336
Administration Cost Saving	<u>1.2500</u>
Total Saving	2.8836
Less: Additional Interest in Advance (44.38 x 0.80 x 4.6%)	<u>1.6332</u>
	<u>1.2504</u>

Yes. Factoring proposal should be accepted

Alternative Solution for Non-Recourse Factoring

Finance Cost Saving = 20.42 x 0.08	1.6336
Administration Cost Saving	1.2500
Bad Debt Saving	<u>5.2500</u>
Total Benefit	8.1336
Less: Additional Interest on Advance (44.38 x 0.80 x 4.6%)	<u>1.6332</u>
	<u>6.5004</u>

Decision: It is viable to accept the factoring proposal.

Question 4

(a) As an investment manager, you are given the following information:

Particulars	Initial price (₹)	Dividend (₹)	Market price of the dividends (₹)	Beta (Risk factor)
A. Equity Shares :				
Manufacturing Ltd.	30	2	55	0.8
Pharma Ltd.	40	2	65	0.7
Auto Ltd.	50	2	140	0.5

B. Government of India Bonds	1005	140	1010	0.99
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By assuming risk free return as 16%, Calculate:

- (i) Expected rate of return on the portfolio (aggregate) of investor;
 - (ii) Expected rate of return of portfolio in each above stated share/ bond using Capital Asset Pricing Model (CAPM); and
 - (iii) Average Rate of Return. **(8 Marks)**
- (b) CBZ limited belongs to a risk class for which the approved capitalization rate is 10%. It currently has outstanding 6,000 shares selling at ₹100/- each. The firm is planning for declaration of dividend of ₹ 6/- per share at the end of the current financial year. The company expects to have a net income of ₹ 60,000/- and has a proposal to make new investments of ₹1,50,000/-. As under the M-M hypothesis the payment of dividend doesn't affect the value of the firm, calculate price of share at the end of financial year, no. of shares to be issued and value of firm separately in the following situations :
- (i) When dividends are paid and
 - (ii) When dividends are not paid. **(8 Marks)**

Answer

(a) (i) Expected rate of return

	Total Investments	Dividends	Capital Gains
Manufacturing Ltd.	30	2	25
Pharma Ltd.	40	2	25
Auto Ltd.	50	2	90
GOI Bonds	<u>1005</u>	<u>140</u>	<u>5</u>
	<u>1,125</u>	<u>146</u>	<u>145</u>

$$\text{Expected Return on market portfolio} = \frac{146 + 145}{1125} = 25.87\%$$

(ii) CAPM = $E(R_p) = R_F + \beta [E(R_M) - R_F]$

Manufacturing Ltd. Ltd	$16 + 0.8 [25.87 - 16] =$	$16 + 7.90 =$	23.90%
Pharma Ltd.	$16 + 0.7 [25.87 - 16] =$	$16 + 6.91 =$	22.91%
Auto Ltd.	$16 + 0.5 [25.87 - 16] =$	$16 + 4.93 =$	20.93%
GOI Bonds	$16 + 0.99 [25.87 - 16] =$	$16 + 9.77 =$	25.77%

(iii) Average Return of Portfolio

$$\frac{23.90 + 22.91 + 20.93 + 25.77}{4} = \frac{93.51}{4} = 23.38\%$$

Alternatively,

$$\frac{0.8 + 0.7 + 0.5 + 0.99}{4} = \frac{2.99}{4} = 0.7475$$

$$16 + 0.7475(25.87 - 16)$$

$$16 + 7.38 = 23.38\%$$

(b) A When dividend is paid

(a) Price per share at the end of year 1

$$100 = \frac{1}{1.10} (\text{₹ } 6 + P_1)$$

$$110 = \text{₹ } 6 + P_1$$

$$P_1 = 104$$

(b) Amount required to be raised from issue of new shares

$$\text{₹ } 1,50,000 - (\text{₹ } 60,000 - \text{₹ } 36,000)$$

$$= \text{₹ } 1,26,000$$

(c) Number of additional shares to be issued

$$= \frac{1,26,000}{104} = 1,211.54 \text{ shares or say } 1212 \text{ shares}$$

(d) Value of CBZ Ltd.

$$(\text{Number of shares} \times \text{Expected Price per share})$$

$$\text{i.e., } (6,000 + 1,212) \times \text{₹ } 104 = \text{₹ } 750048$$

B When dividend is not paid

(a) Price per share at the end of year 1

$$100 = \frac{P_1}{1.10}$$

$$P_1 = 110$$

(b) Amount required to be raised from issue of new shares

$$\text{₹ } 1,50,000 - \text{₹ } 60,000 = \text{₹ } 90,000$$

(c) Number of additional shares to be issued

$$= \frac{90,000}{110} = 818.18 \text{ shares or say 818 shares.}$$

- (d) Value of CBZ Ltd.,
 $(6,000 + 818) \times ₹ 110$
 $= ₹ 7,49,980$

Thus, as per M.M. approach the value of firm in both situations will be the same.

Question 5

- (a) *Front Leasing Ltd. is in the business of providing automobiles on wet lease to Corporate Clients. The company is considering a new model of battery run Tesla car for which a good number of enquiries is received. The cost of the vehicle is ₹ 25 lakhs. Its operating, maintenance and insurance costs are expected to be ₹ 5 lakh in the first year. Thereafter it will be subject to inflation annually @ 6 percent in the second and third year and @ 4 percent during fourth to sixth year. The useful life of the vehicle is six years. The net salvage value of the vehicle at the end of six year will be ₹10 lakh. Depreciation for Tax purposes will be 40 percent under Written Down Value (WDV) method. Marginal tax rate applicable is 35 percent. Its cost of capital 8 percent.*

You are required to calculate the minimum annual lease rental that the company should quote. Assume that the cost of negotiation and lease administration is nil.

PVIF @ 8 percent is 0.926, 0.857, 0.794, 0.735, 0.681 and 0.630 **(8 Marks)**

- (b) *Intel Ltd., promoted by a Trans National Company, is listed on the stock exchange.*

The value of the floating stock is ₹ 45 crores. The Market Price per Share (MPS) is ₹ 150.

The capitalisation rate is 20 percent.

The promoters holding is to be restricted to 75 per cent as per the norms of listing requirement. The Board of Directors have decided to fall in line to restrict the Promoters' holding to 75 percent by issuing Bonus Shares to minority shareholders while maintaining the same Price Earnings Ratio (P/E).

You are required to calculate:

- (i) *Bonus Ratio;*
 (ii) *MPS after issue of Bonus Shares; and*
 (iii) *Free float Market capitalisation after issue of Bonus Shares* **(8 Marks)**

Answer

- (a) In order to find out the annual rent, the cash flow from the asset must be evaluated as follows:

Year	Depreciation	Insurance (1)	Total	Tax Shield (2)	Net Outflow (1) – (2)
1	10,00,000	5,00,000	15,00,000	5,25,000	(25,000)
2	6,00,000	5,30,000	11,30,000	3,95,500	1,34,500
3	3,60,000	5,61,800	9,21,800	3,22,630	2,39,170
4	2,16,000	5,84,272	8,00,272	2,80,095	3,04,177
5	1,29,600	6,07,643	7,37,243	2,58,035	3,49,608
6	77,760	6,31,949	7,09,709	2,48,398	3,83,551

Computation of NPV

Year	Cash Flow	PVF@8%	PV
0	25,00,000	1	25,00,000
1	(25,000)	0.926	(23,150)
2	1,34,500	0.857	1,15,267
3	2,39,170	0.794	1,89,901
4	3,04,177	0.735	2,23,570
5	3,49,608	0.681	2,38,083
6	3,83,551	0.630	2,41,637
6	6,90,824*	0.630	(4,35,219)
		NPV	30,50,089

* $10,00,000 - [10,00,000 - 1,16,640] \times 0.35$

The firm should have a total recovery of ₹ 30,50,089 through lease rentals. The annual lease rental after tax may be calculated as follows:

Lease Rental (after tax) = Total Recovery Amount/PVAF (8%,6)

= ₹ 30,50,089/4.623 = ₹ 6,59,764

Now, lease rental before tax = ₹ 6,59,764/0.65 = ₹ 10,15,022

- (b) 1. **No. of Bonus Shares to be issued:**

Free Float Capitalization = ₹ 45 crore

Market Price Per Share = ₹ 150

$$\begin{aligned}
 \text{Shares of Minority} &= \frac{\text{₹ 45 crore}}{\text{₹150}} = 30 \text{ lacs} \\
 \text{Minority Share Holding (100\% - 80\%*)} &= 20\% \\
 \text{Hence Total shares} &= \frac{30 \text{ lacs}}{0.20} = 150 \text{ lacs} \\
 \text{Promoters holding 80\%,} &= 120 \text{ lacs shares} \\
 \text{Shares remains the same, but holding \% to be taken as 75\%} & \\
 \text{Hence Total shares} &= \frac{120 \text{ lacs}}{0.75} = 160 \text{ lacs} \\
 \text{Shares of Minority} &= 160 \text{ lacs} - 120 \text{ lacs} = 40 \text{ lacs}
 \end{aligned}$$

Bonus 10 lacs for 30 lacs i.e. 1 shares for 3 shares held.

2. Market price after Bonus issue:

Let us compute PE with given k_e as follows:

$$PE = \frac{1}{k_e} = \frac{1}{0.20} = 5$$

Market Price Given = ₹ 150

Hence EPS will be (₹ 150/5) = ₹ 30

Total No. of shares before bonus issue = 150 lacs

Accordingly, Total PAT shall be (₹ 30 x 150 lacs) = ₹ 4500 lacs

Total No. of shares after bonus issue = 150 lacs + 10 lacs = 160 lacs

EPS after Bonus Issue = ₹ 4500 lacs / 160 lacs = ₹ 28.125

Market Price After Bonus Issue = ₹ 28.125 x 5 = ₹ 140.63

3. Free Float Capitalization after Bonus Issue

₹ 140.63 x 40 lacs = ₹ 5,625.20 lacs i.e. ₹ 56.252 crore

Note: Since the information regarding the promoters' holding is missing in the question, above solution is based on assumption of promoter's holding as 80%. However, student can assume any % other than 80% and solve the question accordingly.

Question 6

- (a) During the audit of the Weak Bank (W), RBI has suggested that the Bank should either merge with another bank or may close down. Strong Bank (S) has submitted a proposal of merger of Weak Bank with itself. The relevant information and Balance Sheets of both the companies are as under:

Particulars	Weak Bank (W)	Strong Bank (S)	Assigned Weights (%)
Gross NPA (%)	40	5	30
Capital Adequacy Ratio (CAR/Capital Risk Weight Asset Ratio)	5	16	28
Market price per Share (MPS)	12	96	32
Book value			10
Trading on Stock Exchange	Irregular	Frequent	

Balance Sheet**(₹ in Lakhs)**

Particulars	Weak Bank (W)	Strong Bank (S)
Paid up Share Capital (₹ 10 per share)	150	500
Reserves & Surplus	80	5,500
Deposits	4,000	44,000
Other Liabilities	890	2,500
Total Liabilities	5,120	52,500
Cash in Hand & with RBI	400	2,500
Balance with Other Banks		2,000
Investments	1,100	19,000
Advances	3,500	27,000
Other Assets	70	2,000
Preliminary Expenses	50	—
Total Assets	5,120	52,500

You are required to

- Calculate Swap ratio based on the above weights;
 - Ascertain the number of Shares to be issued to Weak Bank;
 - Prepare Balance Sheet after merger; and
 - Calculate CAR and Gross NPA of Strong Bank after merger. **(12 Marks)**
- (b) A bond is held for a period of 45 days. The current discount yield is 6 per cent per annum. It is expected that current yield will increase by 200 basis points and current market price will come down by ₹ 2.50.

Calculate:

- Face value of the Bond and
- Bond Equivalent Yield **(4 Marks)**

Answer**(a) (a) Swap Ratio**

Gross NPA	5:40	$5/40 \times 30\%$	0.0375
CAR	5:16	$5/16 \times 28\%$	0.0875
Market Price	12:96	$12/96 \times 32\%$	0.0400
Book Value Per Share	12:120	$12/120 \times 10\%$	0.0100
			0.1750

Thus for every share of Weak Bank, 0.1750 share of Strong Bank shall be issued.

Calculation of Book Value Per Share

Particulars	Weak Bank (W)	Strong Bank (S)
Share Capital (₹ Lakhs)	150	500
Reserves & Surplus (₹ Lakhs)	80	5,500
	230	6,000
Less: Preliminary Expenses (₹ Lakhs)	50	--
Net Worth or Book Value (₹ Lakhs)	180	6,000
No. of Outstanding Shares (Lakhs)	15	50
Book Value Per Share (₹)	12	120

(b) No. of equity shares to be issued:

$$\frac{150}{10} \times 0.1750 = 2.625 \text{ lakh shares}$$

(c) **Balance Sheet after Merger**

Calculation of Capital Reserve

Book Value of Shares	₹ 180.00 lac
Less: Value of Shares issued	₹ 26.25 lac
Capital Reserve	₹ 153.75 lac

Balance Sheet

	₹ lac		₹ lac
Paid up Share Capital	526.25	Cash in Hand & RBI	2900.00
Reserves & Surplus	5500.00	Balance with other banks	2000.00
Capital Reserve	153.75	Investment	20100.00

Deposits	48000.00	Advances	30500.00
Other Liabilities	3390.00	Other Assets	2070.00
	57570.00		57570.00

(d) **Calculation CAR & Gross NPA % of Bank 'S' after merger**

$$\text{CAR / CRWAR} = \frac{\text{Total Capital}}{\text{Risky Weighted Assets}}$$

	Weak Bank	Strong Bank	Merged
	5%	16%	
Total Capital	₹ 180 lac	₹ 6000 lac	₹ 6180 lac
Risky Weighted Assets	₹ 3600 lac	₹ 37500 lac	₹ 41100 lac

$$\text{CAR} = \frac{6180}{41100} \times 100 = 15.04\%$$

$$\text{GNPA Ratio} = \frac{\text{Gross NPA}}{\text{Gross Advances}} \times 100$$

	Weak Bank	Strong Bank	Merged
GNPA (Given)	0.40	0.05	
	$0.40 = \frac{\text{GNPA}_R}{₹ 3500 \text{ lac}}$	$0.05 = \frac{\text{GNPA}_S}{₹ 27000 \text{ lac}}$	
Gross NPA	₹ 1400 lac	₹ 1350 lac	₹ 2750 lac

(b) (i) **Face Value of the Bond**

(a)	Current Market Price*	45 days	6	0.9925
(b)	Current Market Price*	45 days	8	0.9900
(c)	Difference in Price Per Unit (a) – (b)			0.0025
(d)	Difference in Price			₹ 2.50
(e)	Face Value of Bond (d)/ (c)			₹ 1,000
(f)	Current Market Price (a) x (e)		6	₹ 992.50
(g)	Current Market Price (b) x (e)		8	₹ 990.00

* $1 - [(\text{Discount Rate} / 100) \times (45/360)]$

(ii) Bond Equivalent Yield

At the rate of 6%	$\frac{1,000 - 992.50}{992.50} \times \frac{360}{45} \times 100^\dagger$	6.05
At the rate of 8%	$\frac{1,000 - 990.00}{990.00} \times \frac{360}{45} \times 100^\dagger$	8.08

Alternative Solution if 365 days a year are assumed

(i) Face Value of the Bond

			%	
(a)	Current Market Price*	45 days	6	0.9926
(b)	Current Market Price*	45 days	8	0.9901
(c)	Difference in Price Per Unit (a) – (b)			0.0025
(d)	Difference in Price			₹ 2.50
(e)	Face Value of Bond (d)/ (c)			₹ 1,000
(f)	Current Market Price (a) x (e)		6	₹ 992.60
(g)	Current Market Price (b) x (e)		8	₹ 990.10

* $1 - [(Discount\ Rate / 100) \times (45/365)]$

(ii) Bond Equivalent Yield

At the rate of 6%	$\frac{1,000 - 992.60}{992.60} \times \frac{365}{45} \times 100^\dagger$	6.05
At the rate of 8%	$\frac{1,000 - 990.10}{990.10} \times \frac{365}{45} \times 100^\dagger$	8.11

$$^\dagger \frac{FV - CV}{CV} \times \frac{365}{45} \times 100$$

Question 7

Write short notes on any **four** of the following:

- Interface of Financial Policy and Strategic Management.
- Nostro, Vostro and Loro Accounts.
- Distinguish between Credit Card and Debit Card.
- Instruments of International finance.
- Straddles and Strangles.

(4 x 4 = 16 Marks)

Answer**(a) Interface of Financial Policy and Strategic Management**

Financial policy of a company cannot be worked out in isolation of other functional policies. It has a wider appeal and closer link with the overall organizational performance and direction of growth.

- Sources of finance and capital structure are the most important dimensions of a strategic plan. The need for fund mobilization to support the expansion activity of firm is utmost important for any business.
- Policy makers should decide on the capital structure to indicate the desired mix of equity capital and debt capital.
- Another important dimension of strategic management and financial policy interface is the investment and fund allocation decisions.

Dividend policy is yet another area for making financial policy decisions affecting the strategic performance of the company. A close interface is needed to frame the policy to be beneficial for all.

- (b) In interbank transactions, foreign exchange is transferred from one account to another account and from one centre to another centre. Therefore, the banks maintain three types of current accounts in order to facilitate quick transfer of funds in different currencies. These accounts are Nostro, Vostro and Loro accounts meaning “our”, “your” and “their”. A bank’s foreign currency account maintained by the bank in a foreign country and in the home currency of that country is known as Nostro Account or “our account with you”. For example, An Indian bank’s Swiss franc account with a bank in Switzerland. Vostro account is the local currency account maintained by a foreign bank/branch. It is also called “your account with us”. For example, Indian rupee account maintained by a bank in Switzerland with a bank in India. The Loro account is an account wherein a bank remits funds in foreign currency to another bank for credit to an account of a third bank.

(c) Difference between Credit Card and Debit Card

It’s the difference between “debit” and “credit.” Debit means “subtract.” When one uses a debit card, one is subtracting his money from his own bank account. Debit cards allow him spend only what is in his bank account. It is a quick transaction between the merchant and his personal bank account.

Credit is money made available by a bank or other financial institution, like a loan. The amount the issuer allows one to use is determined by his credit history, income, debts, and ability to pay. One may use the credit with the understanding that he will repay the amount, plus interest if he does not pay in full each month. He will receive a monthly statement detailing his charges and payment requirements.

The basic difference between the two is the fact that a credit card takes the form of a personal loan from the issuing bank to the consumer, while a debit card is more like a cheque, money is directly deducted from a person's bank account to pay for transaction.

Alternative Answer

Credit Card	Debit Card
(1) Operates on credit basis.	(1) Operates like cash or personal cheques.
(2) Purchase now pay later scheme.	(2) Purchase now pay now.
(3) Risk is limited to the credit limit sanctioned by the bank or may lower as per the terms and conditions.	(3) Risk is upto entire balance available in the bank account.
(4) 40-50 days interest free grace period is available in case there is no previous outstanding on the card.	(4) No such grace period. Amount is deducted instantly.
(5) Minimum 5% of the total outstanding is payable on the due date.	(5) Generally outstanding is not there.
(6) EMI's are available.	(6) Some banks have come out with EMI concept even when balance is not sufficient to finance the purchase.

(d) The various financial instruments dealt with in the international market are briefly described below:

- 1. Euro Bonds:** A Eurobond is an international bond that is denominated in a currency not native to the country where it is issued. Also called external bond e.g. A Yen floated in Germany; a yen bond issued in France.
- 2. Foreign Bonds:** These are debt instruments denominated in a currency which is foreign to the borrower and is denominated in a currency that is native to the country where it is issued. A British firm placing \$ denominated bonds in USA is said to be selling foreign bonds.
- 3. Fully Hedged Bonds:** In foreign bonds, the risk of currency fluctuations exists. Fully hedged bonds eliminate that risk by selling in forward markets the entire stream of interest and principal payments.
- 4. Floating Rate Notes:** These are debt instruments issued upto 7 years maturity. Interest rates are adjusted to reflect the prevailing exchange rates. They provide

cheaper money than fixed rate debt instruments; however, they suffer from inherent interest rate volatility risk.

5. **Euro Commercial Papers:** Euro Commercial Papers (ECPs) are short-term money market instruments. They are for maturities for less than a year. They are usually designated in US dollars.

(e) Straddles

An options strategy with which the investor holds a position in both a call and put with the same strike price and expiration date. Straddles are a good strategy to pursue if an investor believes that a stock's price will move significantly, but is unsure as to which direction. The stock price must move significantly if the investor is to make a profit. However, should only a small movement in price occur in either direction, the investor will experience a loss. As a result, a straddle is extremely risky to perform. Additionally, on stocks that are expected to jump, the market tends to price options at a higher premium, which ultimately reduces the expected payoff should the stock move significantly. This is a good strategy if speculators think there will be a large price movement in the near future but is unsure of which way that price movement will be. It has one common strike price.

Strangles

The strategy involves buying an out-of-the-money call and an out-of-the-money put option. A strangle is generally less expensive than a straddle as the contracts are purchased out of the money. Strangle is an unlimited profit, limited risk strategy that is taken when the options trader thinks that the underlying stock will experience significant volatility in the near term. It has two different strike prices.