

## PAPER – 2 : STRATEGIC FINANCIAL MANAGEMENT

Question No.1 is compulsory.

Candidates are also required to answer any **five** out of the remaining **six** questions.

Working notes should form part of the respective answer.

### Question 1.

- (a) TXL Ltd. expecting a price of ₹ 242 per share one year hence, if dividend is not declared. the price per share after one year will be ₹ 204/- per share, if dividend is declared. The applicable price earnings ratio to the risk class, to which TXL Ltd. belongs, is 10. The company requires an investment of ₹ 1 crore next year to meet its expansion plans. TXL Ltd. generated a net income of ₹ 1,07,40,000. The number of outstanding shares is 1,00,000.

You are, as per Modigliani and Miller (MM) approach, required to calculate:

- (i) The amount of proposed dividend
- (ii) The current price per share
- (iii) The number of new equity shares to be issued, if TXL Ltd., declares the dividend.

**(5 Marks)**

- (b) M/S Enterprise, an Asset management Company (AMC) on 1.04.2016 has floated a scheme "Dividend Plan". Mr. X, an investor, has invested in the scheme. Dividend is given in the form of units. The details (except the issue price) are as follows:

Date	Dividend (%)	NAV
1.04.2016		?
31.03.2018	20	48
31.03.2019	25	50
31.03.2020	30	45
31.03.2021*	-	49
Initial Investment (₹)	₹ 18,40,000	
Average Profit (₹) over 5 years	₹ 54,576	

\* In the Question Paper printed as 31.0.2021

You are required to calculate the issue price of the scheme as on 01.04.2016 to ascertain the capital appreciation. Assume face value of units as ₹ 10/-

**(5 Marks)**

- (c) B International Ltd. (BIL) has purchased 5 years 15.28% convertible debentures on 1.04.2021. The convertible debentures will mature on 31.03.2026. Each debenture can be converted into 20 equity shares of face value of ₹ 1 at any point of time but before

maturity. Debentures will be redeemed at ₹ 100 on maturity.

The required rate of return of BIL is 10% per annum on a 5-year security.

The Reputed, a consultant has projected the following price behaviour of the shares:

Period		Price Range (₹)		
From	To	Passive	Most likely	Optimistic
1.04.2021	31.12.2022	4	4.5	5
1.01.2023	30.06.2025	4.5	6.5	7
1.07.2025	31.03.2026	3.5	5	5.5

BIL, as a matter of policy, rounds up the amount.

You are required to calculate.

(a) The break-even price at which the debentures can be converted

(b) The ideal period in which BIL shall convert and dispose of the shares

Given:

PVIF (10%, 5) 0.6209

PVIFA (10%, 5) 3.7908

(5 Marks)

(d) X Limited proposes to acquire Y Limited. The relevant financial details of the two firms prior to the merger announcement are as follows:

Particulars	X Ltd	Y Ltd.
Market price per share	₹ 80	₹ 40
No. of outstanding shares	10 Lakhs	5 lakhs

The merger is expected to generate gains with a present value of ₹ 120 Lakhs. The X Ltd. will issue 1 share of it for 2 shares of Y Ltd.

You are required to find out the true cost of merger for X Ltd.

(5 Marks)

**Answer**

(a) (i) The amount proposed dividend

Price Without Dividend	₹ 242
Price with Dividend	₹ 204
The amount of proposed dividend	<u>₹ 38</u>

(ii) Current price per Share

$$\text{If Dividend is paid} = \frac{1}{1.10} (\text{Rs. } 38 + \text{Rs. } 204) = ₹ 220$$

$$\text{If Dividend is not paid} = \frac{1}{1.10} (\text{Rs. } 242) = ₹ 220$$

(iii) No. of new equity shares to be issued if dividend is declared.

Amount to be raised from issue of new shares

$$= ₹ 1,00,00,000 - [ ₹ 1,07,40,000 - ₹ 38 \times 1,00,000 ]$$

$$= ₹ 1,00,00,000 - [ ₹ 1,07,40,000 - 38,00,000 ]$$

$$= ₹ 1,00,00,000 - [ ₹ 69,40,000 ]$$

$$= ₹ 30,60,000$$

$$\text{No. of additional shares to be issued} = \frac{30,60,000}{204} = 15000 \text{ shares}$$

(b)

Particulars	₹
(a) Amount invested by Mr. X	18,40,000
(b) Gains during 5 year [ ₹54,576 × 5]	2,72,880
(c) Value of investment as on 31/3/21 (a) + (b)	21,12,880
(d) NAV as on 31.03.21	₹ 49 per unit
(e) Total Number of units as on 31.03.21	₹ 43,120 units

Let us assume  $N_1$  be the no. of units on 31.03.2020 then

$$= \frac{₹ 10 \times N_1 \times 0.30}{45} + N_1 = 43,120$$

$$\frac{N_1}{15} + N_1 = 43,120$$

$$N_1 = 40,425$$

Now let us assume  $N_2$  be number of units on 31.03.19, then

$$\frac{₹ 10 \times N_2 \times 0.25}{50} + N_2 = 40,425$$

$$\frac{N_2}{20} + N_2 = 40,425$$

$$N_2 = 38,500$$

Now let us assume  $N_3$  be number of units on 31.03.18, then

$$\frac{\text{₹ } 10 \times N_3 \times 0.20}{48} + N_3 = 38,500$$

$$\frac{N_3}{24} + N_3 = 38,500$$

$$N_3 = 36,960$$

$$\text{NAV as on 1.04.16} = \frac{18,40,000}{36,960} = \text{₹ } 49.78$$

Thus, issue price of unit is ₹ 49.78

- (c) (i) The Break-even price at which Debenture can be converted shall be equivalent to Present Value of stream of cash flows from holding debenture till maturity and it shall be computed as follows:

$$\text{PV} = \text{₹ } 15.28 \times \text{PVIFA} (10\%, 5) + \text{₹ } 100 \times \text{PVIF} (10\%, 5)$$

$$= \text{₹ } 15.28 \times 3.7908 + \text{₹ } 100 \times 0.6209$$

$$= \text{₹ } 57.92 + \text{₹ } 62.09 = \text{₹ } 120.01 \text{ say ₹ } 120$$

$$\text{Thus, Break Even price} = \frac{\text{₹ } 120}{\text{₹ } 20} = \text{₹ } 6/- \text{ per share}$$

- (ii) The ideal period in which BIL should convert and dispose of share will be 01.01.23 to 30.06.25 as during this period the market price of share is most likely to exceed its Break-even price.

- (d) Shareholders of Y Ltd. will get 2.50 lakh shares of X Ltd, so they will get:

$$= \frac{2.50 \text{ lakh}}{10 \text{ lakh} + 2.50 \text{ lakh}} = 20\% \text{ of Shares X Ltd.}$$

The value of X Ltd. after merger will be

$$= \text{₹ } 80 \times 10 \text{ lakh} + \text{₹ } 40 \times 5 \text{ lakh} + \text{₹ } 120 \text{ Lakh}$$

$$= \text{₹ } 800 \text{ Lakh} + 200 \text{ Lakh} + \text{₹ } 120 \text{ Lakh} = \text{₹ } 1120 \text{ lakh.}$$

True Cost of Merger will be:

$$(\text{₹ } 1120 \times 20\%) \text{ ₹ } 224 \text{ lakh} - \text{₹ } 200 \text{ lakh} = \text{₹ } 24 \text{ lakh}$$

**Question 2**

- (a) XL Ltd. has issued callable 10% bonds with 30 years maturity. The issue size is ₹ 1 crore with a face value of ₹ 1,000 per bond. The bonds have been issued at a discount of 1.2% on the face value of the bonds in the year 2011. The call option is available to XL Ltd. at the end of 10 years and 20 years from the time of the issue of the bond. the floatation cost was ₹ 1,50,000.

In the year 2021 XL Ltd, has an opportunity to issue 8% bonds at par with 20 years maturity worth ₹ 1 crore with a face value of ₹ 1,000 per bond. The old bonds will be retired with the proceeds of the proposed issue. The floatation cost of the present issue will be ₹ 3,00,000

There will be an overlapping interest for a period of three months during the course of the present issue.

Post tax cost of debt for XL Ltd. is 7% p.a.

The applicable tax bracket is 30%

You are required to advise XL Ltd., whether it can proceed with the proposal.

Given: PVIFA (7%,20) = 10.594

**(12 Marks)**

- (b) Fragrance Ltd. has reported a Net Operating Profit after Tax (NOPAT) to Capital Employed as 2.5% plus Weighted Average Cost of Capital (WACC) for the year 31<sup>st</sup> March 2021. Economic Value added is ₹ 4 crore as on 31<sup>st</sup> March 2021.

You are required to calculate

- (i) The amount of Capital Employed  
 (ii) NOPAT, if WACC is 10%

**(4 Marks)**

**Answer**

- (a) **NPV for bond refunding**

Particulars	₹
PV of annual cash flow savings (W.N. 2) (1,41,800 × PVIFA 20%,) i.e. 10.594	15,02,229
Less: Initial investment (W.N. 1)	4,21,000
<b>NPV</b>	<b>10,81,229</b>

**Recommendation:** Refunding of bonds is recommended as NPV is positive.

**Working Notes:**

- (1) **Initial investment:**

(a) Floatation cost 3,00,000

(b) Overlapping interest		
Before tax ( $0.10 \times 3/12 \times 1$ crore)	2,50,000	
Less tax @ 30%	<u>75,000</u>	1,75,000
(c) Tax saving on unamortised discount on old bond		
$20/30 \times 1,20,000 \times 0.30$		(24,000)
(d) Tax savings from unamortised floatation		
Cost of old bond $20/30 \times 1,50,000 \times 0.30$		<u>(30,000)</u>
		<u>4,21,000</u>

**(2) Annual cash flow savings:**

(a) <i>Old bond</i>		
(i) Interest cost ( $0.10 \times 1$ crore)	10,00,000	
Less tax @ 30%	<u>3,00,000</u>	7,00,000
(ii) Tax savings from amortisation of discount		
$1,20,000/30 \times 0.30$		(1200)
(iii) Tax savings from amortisation of floatation cost		
$1,50,000/30 \times 0.30$		<u>(1500)</u>
Annual after tax cost payment under old Bond (a)		<u>6,97,300</u>

(b) <i>New bond</i>		
(i) Interest cost before tax ( $0.08 \times 1$ crore)	8,00,000	
Less tax @ 30%	<u>2,40,000</u>	5,60,000
After tax interest		
(ii) Tax savings from amortisation of floatation cost		
$(0.30 \times 3,00,000/20)$		<u>(4,500)</u>
Annual after tax payment under new Bond (b)		<u>5,55,500</u>
Annual Cash Flow Saving (a) – (b)		1,41,800

- (b) (i)  $EVA = NOPAT - WACC \times \text{Capital Employed}$   
 $\text{₹ 4 Crore} = NOPAT - WACC \times \text{Capital Employed}$   
 $\text{₹ 4 Crore} = [WACC + 0.025] \text{Capital Employed} - WACC \times \text{Capital Employed}$   
 $\text{₹ 4 Crore} = \text{Capital Employed} [0.025]$   
Capital Employed = Rs 160 Crore
- (ii) NOPAT if WACC is 10%  
 $\text{₹ 4 Crore} = NOPAT - 0.10 \times \text{₹ 160 crore}$   
NOPAT = ₹ 20 crore

**Question 3.**

- (a) Strong Ltd., (SL), an all equity financed, conglomerate is in need to borrow ₹ 2,000 crore to finance expansion of its crore current operations. However, SL is susceptible to raise the amount from the market. The CFO has suggested for divesting one of the two non-prime units to reduce the overall borrowings from the market. The following data, after internal due diligence, has been placed for consideration of the Board:

(₹ in cores)

<b>Particulars</b>	<b>Unit</b>	<b>Unit 2</b>
Reported Profit After Tax	147	140
Extra Ordinary Gains	16	8
Extra Ordinary Losses	20	12
Expected Profit from the launch of the new product	56	12
Price Earnings Ratio	10	12.5
Corporate Tax Rate (%)	30	30

You are required to advise the Borad on the following:

- (i) The price at which the units can be divested,  
(ii) The unit which can be divested so as to minimise the borrowings from the market and  
(iv) The amount of borrowing. **(10 Marks)**
- (b) A future contract on BSE Index with 4 months maturity is used to hedge the value of the portfolio over the next 3 months. One future contract for delivery is 50 times of the index.

The following information is available:

Value of the portfolio	₹ 1,16,00,000
BSE Sensex on 1 <sup>st</sup> January 2022 (Anticipated on 1 <sup>st</sup> September 2021)	58580
BSE Sensex on 1 <sup>st</sup> January 2022 (Anticipated on 1 <sup>st</sup> December 2021)	56641.25
Dividend Yield of Index	6% p.a.
181 days' treasury bills offers a rate of interest	9% p.a.
Beta of the portfolio	1.5

You are required to calculate

- (i) The present value of the Sensex as on 1<sup>st</sup> September 2021  
 (ii) Turned out value of the Sensex as on 1<sup>st</sup> December 2021  
 (iii) The number of contracts to hedge the portfolio.

(6 Marks)

**Answer**

- (a) (i) Price at which units can be Divested

(₹ Crore)

Particulars	Unit I	Unit II
Reported Profit after Tax (a)	147	140
Reported profit before Tax [(a) /0.70]	210	200
Less: Extra Ordinary Gains	16	8
Add: Extra Ordinary Losses	20	12
	214	204
Profit from New Product	56	12
Profit before Tax	270	216
Less : Tax @ 30%	81	64.80
Future Maintainable Profit after Tax (b)	189	151.20
PE Ratio	10	12.5
Relevant Capitalization Factor (1/PE Ratio) (c)	10%	8%
Price of Unit [(b) / (c)]	1890	1890

- (ii) The unit I can be divested as it has lower PE Ratio.  
 (iii) The amount of borrowing ₹ 2000 crore – ₹ 1890 crore = ₹ 110 crore  
 (b) (i) Let X be the present value of the Sensex as the 1<sup>st</sup> September, 2021

$$58,580 = X + X [ 9\% - 6\% ] \times \frac{4}{12}$$

$$58,580 = X + \frac{X}{100}$$

$$X = 58,000$$

Thus, the present value of Sensex as on 1<sup>st</sup> September 2021 is 58,000



- (ii) Let turned out value of Sensex on 1<sup>st</sup> Dec. 2021 is Y, then

$$56,641.25 = Y + Y [ 9\% - 6\% ] \times \frac{1}{12}$$

$$56,641.25 = Y + \frac{Y}{400}$$

$$Y = 56,500$$

Thus, turned out value of Sensex on 1<sup>st</sup> December 2021 is 56,500

- (iii) No. of Contract to the Hedge Portfolio =  $\frac{₹1,16,00,000 \times 1.50}{58,580 \times 50} = 5.95$  Say 6 Contracts

#### Question 4.

- (a) *Humata Ltd., a Japanese Corporation, has sold goods today to Peacock Ltd., an Indian company for an amount of JPY 74 Lakhs. The payment will be due in three months from the date of invoice. At today's spot rate, it is equivalent to INR 50 Lakhs. It is anticipated that the INR will decline by 10% over the 3-months period and in order to protect the Yen payments, Peacock decides to take appropriate action in the foreign exchange market. The 3-months forward rate is presently quoted at JPY/INR 1.44*

*You are required to calculate:*

- (i) *The expected loss to the importer and*  
 (ii) *Impact of hedging by a forward contract*

**(8 Marks)**

- (b) *There are two Mutual Funds viz., A and B each having close ended equity schemes.*

*Net Asset Value (NAV) per unit as on 31<sup>st</sup> December 2020 of equity schemes of A is ₹ 80.10 (consisting 98% equity and remaining cash balance) and that of B is ₹ 64.60 (consisting 97% equity and balance in cash).*

*Other information is as follows:*

<b><u>Particulars of Equity Schemes</u></b>	<b>A</b>	<b>B</b>
Sharpe Ratio	2.50	3.20
Treynor Ratio	15	15
Standard Deviation	8.50	5.00

*There is no change in portfolios during the next month and annual average cost is ₹ 3.00 per unit for the schemes of both the Mutual Funds.*

*Assume 30 days in a month, and compute up to two decimal points only.*

You are required to calculate the expected NAV per unit after a month for the schemes of both the Mutual Funds, if the share market goes down by 4% within a month. **(8 Marks)**

**Answer**

(a) Spot rate of ₹ 1 against yen = JPY 74 lakh/ ₹ 50 lakh = JPY 1.48

3 months forward rate of Re. 1 against JPY = JPY 1.44

Anticipated decline in Exchange rate = 10%.

Expected spot rate after 3 months = JPY 1.48 – 10% of 1.48 = JPY 1.48 – JPY 0.15  
= JPY 1.33 per rupee

	₹ (in Lakhs)
Present cost of JPY 74 Lakhs	50.00
Cost after 3 months: JPY 74Lakhs/ JPY 1.33	<u>55.64</u>
Expected exchange loss	<u>5.64</u>
If the expected exchange rate risk is hedged by a Forward contract:	
Present cost	50.00
Cost after 3 months if forward contract is taken JPY 74 lakh / JPY 1.44	<u>51.39</u>
Expected loss	<u>1.39</u>

**Suggestion:** If the exchange rate risk is not covered with forward contract, the expected exchange loss is ₹ 5.64 Lakhs. This could be reduced to ₹ 1.39 Lakhs if it is covered with Forward contract. Hence, taking forward contract is suggested.

**(b) Working Notes:**

(i) Decomposition of Funds in Equity and Cash Components

	A Mutual Fund	B Mutual Fund
NAV on 31.12.21	₹ 80.10	₹ 64.60
% of Equity	98%	97%
Equity element in NAV	₹ 78.50	₹ 62.66
Cash element in NAV	₹ 1.60	₹ 1.94

(ii) Calculation of Beta

(a) A Mutual Fund

$$\text{Sharpe Ratio} = 2.50 = \frac{E(R) - R_f}{\sigma_A} = \frac{E(R) - R_f}{8.50}$$

$$E(R) - R_f = 21.25$$

$$\text{Treynor Ratio} = 15 = \frac{E(R) - R_f}{\beta_A} = \frac{21.25}{\beta_A}$$

$$\beta_{AJ} = 21.25/15 = 1.42$$

(b) B Mutual Fund

$$\text{Sharpe Ratio} = 3.20 = \frac{E(R) - R_f}{\sigma_B} = \frac{E(R) - R_f}{5}$$

$$E(R) - R_f = 16$$

$$\text{Treynor Ratio} = 15 = \frac{E(R) - R_f}{\beta_B} = \frac{16}{\beta_B}$$

$$\beta_K = 16/15 = 1.07$$

(iii) Increase in the Value of Equity

	A Mutual Fund	B Mutual Fund
Market down by	4.00%	4.00%
Beta	1.42	1.07
Equity component goes down	5.68%	4.28%

(iv) Balance of Cash after 1 month

	A Mutual Fund	B Mutual Fund
Cash in Hand on 31.12.20	₹ 1.60	₹ 1.94
Less: Exp. Per month (₹ 3/12)	₹ 0.25	₹ 0.25
Balance after 1 month	₹ 1.35	₹ 1.69

**NAV after 1 month**

	A Mutual Fund	B Mutual Fund
Value of Equity after 1 month		
78.50 x (1 - 0.0568)	₹ 74.04	-
62.66 x (1 - 0.0428)	-	₹ 59.98
Cash Balance	₹ 1.35	₹ 1.69
	₹ 75.39	₹ 61.67

**Question 5**

- (a) XYZ Ltd. is considering to replace the existing computer system of their organization. Original cost of the system was ₹ 2,50,000 and it was installed 5 years ago. Current market value of the old system is ₹ 50,000. The life of the old system is 10 years. Present cost of the new system is ₹ 5,00,000 with estimated Salvage by value of ₹ 10,000/-.

The life of the new system is 5 years.

Estimated cost savings with the new computer system is ₹ 50,000 per year. Increase in sales with new system is assumed to be 10% per year based on original total sales of ₹ 10,00,000.

XYZ Ltd. follows straight-line method of depreciation. Cost of capital of the company is 12% whereas applicable income tax rate is 30%.

You are required to advise XYZ Lt. on acceptance of the replacement proposal.

Given  $PVIF(12\%, 5) = 0.567$ ;  $PVIFA(12\%, 5) = 3.605$ . **(8 Marks)**

- (b) Mr. Bright has purchased a residential flat for ₹ 36 lakhs in the year 2019. He had made a down payment of ₹ 12,88,500/- from his own funds. He had taken a housing loan for the balance amount from Liberal Bank at rate of 100 basis points over Bank's Prime Lending Rate (BPLR). The loan is repayable in equal annual instalments (EAI) payable at the end of each year over a period of six years.

The BPLR in the year 2019 was 7% p.a.

The Liberal Bank, after due consideration and with an objective to desist the customers to migrate to other banks to take the advantage of the falling interest rates, has decided to reduce the BPLR by 100 basis points in the year 2021.

Mr. Bright will also be one of the beneficiary among other borrowers of the bank for the remaining period of 4 years.

Liberal Bank rounds up all amounts and does not accept paisa.

You are required to calculate

- (i) The EAI payable from 2019 over a period of 6 years,
- (ii) The EAI payable from 2021 for the remaining period of 4 years after extending the benefit of reduction in BPLR and
- (iii) The last EAI, payable by Mr. Bright, if he continues to pay the original EAI (determined in 2019)

Given:  $PVIFA(8\%, 6) = 4.623$

$PVIFA(7\%, 4) = 3.387$

**(8 Marks)**

**Answer**

**(a) Working Notes:**

(i) Initial Outlay

Cost of new System	₹ 5,00,000
Less: Salvage value of existing system	₹ 50,000
Less: Tax Saving on STCL [1,25,000 -50,000]0.30	₹ 22,500
	₹ 4,27,500

(ii) Depreciation on New System

Cost of New System	₹ 5,00,000
Less : Salvage Value	₹ 10,000
	₹ 4,90,000
Tenure	5 years
Depreciation per year	₹ 98,000

(iii) Increase in Profit

Cost Saving	₹ 50,000
Increase in sales each year	₹ 1,00,000
Total increase in profit	₹ 1,50,000

(iv) Calculation of Annual Cash flow

Increase in Profit	₹ 1,50,000
Less: Increased Dep. (₹ 98,000 – ₹ 25,000)	₹ 73,000
	₹ 77,000
Tax @ 30%	₹ 23,100
	₹ 53,900
Add: Depreciation	₹ 73,000
Annual Cash flow	₹ 1,26,900

**NPV of Replacement Decision**

PV of Cash Flows (Annual) 1,26,900 × 3.605	₹ 4,57,474.50
PV of Salvage Value of New System 0.567x ₹ 10,000	₹ 5,670.00
	₹ 4,63,144.50
Less: Initial Outlay	₹ 4,27,500.00
	₹ 35,644.50

Since NPV is positive the computer system should be replaced.

(b) (i) EAI Payable from 2019

Cost of Flat	₹ 36,00,000
Less: Cash Down Payment	₹ 12,88,500
The amount payable in installment Price of the flat(A)	₹ 23,11,500
PVIFA (8%, 6) (B)	4.623
EAI payable form 2019 over a period of 6 year (A)/(B)	₹ 5,00,000

(ii) EAI payable from 2021 for the remaining period of 4 year

Year	Installment	Principle o/s	Interest @ 8%	Principal Repayment
1	₹ 5,00,000	₹ 23,11,500	₹ 1,84,920	₹ 3,15,080
2	₹ 5,00,000	₹ 19,96,420	₹ 1,59,714	₹ 3,40,286

**Balance of Principal payable from 2021 onward**

Total Amount Due	₹ 23,11,500
Principal Repaid upto 2020 [₹ 3,15,080 + ₹ 3,40,286]	₹ 6,55,366
	₹ 16,56,134
PVIFA (7%, 4)	3.387
Revised EAI from 2021 Onward	₹ 4,88,968

(iii) The installment payable if he continues to original installment

Year	Principle o/s	Interest @7%	Installment	Principle Repaid
2021	₹ 16,56,134	₹ 1,15,929	₹ 5,00,000	₹ 3,84,071
2022	₹ 12,72,063	₹ 89,044	₹ 5,00,000	₹ 4,10,956
2023	₹ 8,61,107	₹ 60,277	₹ 5,00,000	₹ 4,39,723
2024	₹ 4,21,384	₹ 29,497	₹ 4,50,881	-

Thus, the last EAI payable will be ₹ 4,50,881

**Question 6**

- (a) DK Ltd. is considering an investment proposal in Sri Lanka involving an initial investment of LKR 25 billion. The current spot exchange rate is INR/LKR 0.37. The risk free rate in India is 6% and the same in Sri Lanka is 5.02%. The project will generate a cash flow of LKR 5 billion in the first year. The cash flow will increase by LKR 1 billion each year for the next 4 years. The project will bind up on completion of 5 years with no salvage value. The required rate of return for the project is 8%

- (i) You are required to find out the investment worth of the project by  
 (1) Home Currency Approach  
 (2) Foreign Currency Approach
- (ii) Compare the outcome under both the approaches.

Given:

t	1	2	3	4	5
PVIF (8%, t)	0.92593	0.85734	0.79383	0.73503*	0.68058
PVIF (7%, t)	0.93457	0.87344	0.81630	0.76290	0.71299

\* In Question Paper it was mistakenly printed as 0.75503.

(8 Marks)

- (b) LM, a lessor is engaged in the business of leasing equipment. The industry is highly competitive since there are large numbers of players. The lease rentals to be quoted by LM cannot have margin of error. BL, a lessee proposes to lease machinery on dry lease basis from LM. The following are the details of the machinery:

Particulars	
Cost of machinery including installation charges and GST	₹ 10,91,03,357.48
Useful life	5 years
Salvage value	10%
Rate on Depreciation (to be applied on WDV basis)	25%
Required Rate of Return	10%
Applicable Tax Rate	30%

You are required to calculate Break-even Lease Rental

T	1	2	3	4	5
PVIF (10%,t)	0.9091	0.8264	0.7513	0.6830	0.6209

(8 Marks)

**Answer**

- (a) Working Notes:

Calculation of Forward Exchange Rates

End of Year	₹	₹/KR
1	$0.37 \times \frac{1.06}{1.052}$	0.373

2	$0.373 \times \frac{1.06}{1.052}$	0.376
3	$0.376 \times \frac{1.06}{1.052}$	0.380
4	$0.379 \times \frac{1.06}{1.052}$	0.384
5.	$0.382 \times \frac{1.06}{1.052}$	0.388

### 1. Home Currency Approach

Year	Cash Flow Billion LKR	₹ / LKR	Cash flow Billion ₹	PVF @ 8%	PV Billion ₹
1	5	0.373	1.865	0.92593	1.7269
2	6	0.376	2.256	0.85734	1.9342
3	7	0.380	2.660	0.79383	2.1116
4	8	0.384	3.072	0.73503	2.2580
5	9	0.388	3.492	0.68058	2.3766
					10.4073
Less: Investment	25	0.37			9.2500
				NPV	1.1573

\* Alternatively if students have used the PVIF (8%, 4) as given in the question paper then answer NPV would be 1.2188 instead of 1.1573.

### 2. Foreign Currency Approach

$$(1 + 0.06) (1 + \text{Risk Premium}) = 1.08$$

$$1 + \text{Risk Premium} = 1.08/1.06 = 1.01887$$

$$\text{Therefore, Risk adjusted LKR Rate} = 1.01887 \times 1.0502 - 1 = 0.07$$

Calculation of NPV

Year	Cash Flow (Billion LKR)	PVF @ 7%	PV (Billion LKR)
1	5	0.93457	4.6729
2	6	0.87344	5.2406
3	7	0.81630	5.7141



4	8	0.76290	6.1032
5	9	0.71299	6.4169
			28.1477
Less: Investment			25.0000
NPV			3.1477

Thus, Rupee NPV of the Project = ₹ 0.37 × 3.1477 = ₹ 1.1646 billion

**Decision:** NPV is positive in the approach so, project will worth investment.

- (b) In order to find out the Break Even Lease rental, the cash flows from the equipment must be evaluated as follows:

Year	Depreciation (₹)	Tax Shield (₹)	Cash flow (₹)	PVF (10%)	PV (₹)
1	2,72,75,839	81,82,752	81,82,752	0.9091	74,38,940
2	2,04,56,880	61,37,064	61,37,064	0.8264	50,71,670
3	1,53,42,660	46,02,798	46,02,798	0.7513	34,58,082
4	1,15,06,995	34,52,099	34,52,099	0.6830	23,57,784
5	86,30,246	25,89,074	25,89,074	0.6209	16,07,556
5	1,49,80,401*	44,94,120	44,94,120	0.6209	27,90,399
5	Salvage Value	-	1,09,10,336	0.6209	67,74,228
Present Value of Inflows					2,94,98,659.00
Outflow					10,91,03,357.48
Net Present value					7,96,04,698.48

\* Short Term Capital Loss

The firm therefore, should have total recovery of ₹ 7,96,04,698.48 through the lease rentals. The annual lease rental after tax may be calculated as follows:

$$\begin{aligned} \text{Lease rental (after tax)} &= \text{Total recovery required} \div \text{PVIAF (10\%, 5)} \\ &= ₹ 7,96,04,698.48 \div 3.7907 \\ &= ₹ 2,10,00,000 \end{aligned}$$

$$\begin{aligned} \text{Now, the lease rental before tax} &= ₹ 2,10,00,000 \div 0.7 \\ &= ₹ 3,00,00,000 \end{aligned}$$

Therefore, the firm should charge a lease rental of ₹ 3,00,00,000 in order to earn a required rate of return of 10% after tax.

**Question 7**

Answer any **four** of the following:

- (a) *The technique of optimizing cash flow movements and minimizing the total volume of inter-company fund flow with the combined efforts of the subsidiaries is the need of the hour. Discuss.*
- (b) *External Commercial Borrowings (ECBs) are becoming an important source of financing. Discuss briefly its different aspects.*
- (c) *Repo and Reverse Repo are important tools in the hands of Reserve Bank of India to manage liquidity. Discuss.*
- (d) *IPO through Stock Exchange On-line system, (e-IPO) platform is becoming important in raising the capital from the market. What are the records required to be maintained by various stake holders?*
- (e) *Key Decisions are imperative in financial strategies. Discuss. (4 x 4 = 16 Marks)*

**Answer**

- (a) Yes, to some extent this statement is correct especially in case of MNCs by optimizing cash flow movements with the combined efforts of the subsidiaries thereby reducing administrative and transaction costs resulting from currency conversion. There is a co-ordinated international interchange of materials, finished products and parts among the different units of MNC with many subsidiaries buying /selling from/to each other. This technique is called 'Netting' and it helps in minimising the total volume of inter-company fund flow.

Further advantages derived from netting system includes:

- (1) Reduces the number of cross-border transactions between subsidiaries thereby decreasing the overall administrative costs of such cash transfers
  - (2) Reduces the need for foreign exchange conversion and hence decreases transaction costs associated with foreign exchange conversion.
  - (3) Improves cash flow forecasting since net cash transfers are made at the end of each period
  - (4) Gives an accurate report and settles accounts through co-ordinated efforts among all subsidiaries
- (b) ECB include bank loans, supplier credit, securitized instruments, credit from export credit agencies and borrowings from multilateral financial institutions. These securitized instruments may be FRNs, FRBs etc. Indian corporate sector is permitted to raise finance through ECBs within the framework of the policies and procedures prescribed by the Central Government. Multilateral financial institutions like IFC, ADB, AFIC, CDC are providing such facilities while the ECB policy provides flexibility in borrowing consistent with maintenance of prudential limits for total external borrowings, its guiding principles

are to keep borrowing maturities long, costs low and encourage infrastructure/core and export sector financing which are crucial for overall growth of the economy. The government of India, from time to time changes the guidelines and limits for which the ECB alternative as a source of finance is pursued by the corporate sector. During past decade the government has streamlined the ECB policy and procedure to enable the Indian companies to have their better access to the international financial markets.

The government permits the ECB route for variety of purposes namely expansion of existing capacity as well as for fresh investment. But ECB can be raised through internationally recognized sources. There are caps and ceilings on ECBs so that macro economy goals are better achieved. Units in SEZ are permitted to use ECBs under a special window.

- (c) The term Repurchase Agreement (Repo) and Reverse Repurchase Agreement (Reverse Repo) refer to a type of transaction in which money market participant raises funds by selling securities and simultaneously agreeing to repurchase the same after a specified time generally at a specified price, which typically includes interest at an agreed upon rate. Such a transaction is called a Repo when viewed from the perspective of the seller of securities (the party acquiring funds) and Reverse Repo when described from the point of view of the supplier of funds.

Indian Repo market is governed by Reserve Bank of India. At present Repo is permitted between 64 players against Central and State Government Securities (including T-Bills) at Mumbai.

- (d) A company proposing to issue capital to public through the on-line system of the stock exchange for offer of securities has to comply with the additional requirements as given by SEBI. They are applicable to the fixed price issue as well as for the fixed price portion of the book-built issues. The issuing company would have the option to issue securities to public either through the on-line system of the stock exchange or through the existing banking channel. For E-IPO the company should enter into agreement with the stock-exchange(s) and the stock exchange would appoint SEBI registered stockbrokers of the stock exchange to accept applications.

The brokers and other intermediaries are required to maintain records of

- (a) orders received,
- (b) applications received,
- (c) details of allocation and allotment,
- (d) details of margin collected and refunded and
- (e) details of refund of application money.

- (e) The key decisions falling within the scope of financial strategy include the following:
1. *Financing decisions:* These decisions deal with the mode of financing or mix of equity capital and debt capital.
  2. *Investment decisions:* These decisions involve the profitable utilization of firm's funds especially in long-term projects (capital projects). Since the future benefits associated with such projects are not known with certainty, investment decisions necessarily involve risk. The projects are therefore evaluated in relation to their expected return and risk.
  3. *Dividend decisions:* These decisions determine the division of earnings between payments to shareholders and reinvestment in the company.
  4. *Portfolio decisions:* These decisions involve evaluation of investments based on their contribution to the aggregate performance of the entire corporation rather than on the isolated characteristics of the investments themselves.