Paper- 14: STRATEGIC FINANCIAL MANAGEMENT

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Full Marks: 100 **Time Allowed: 3 Hours**

This paper contains two sections **A** and **B**. **Section A** is compulsory and contains questionNo.1 for 20 marks. **Section B** contains question Nos. 2 to 8, each carrying 16 marks.

Answer any five questions from **Section B**.

Section – A [20 Marks]

1. Choose the correct option among four alternative answer. (1 mark for correct choice, 1 mark for justification.) [10×2= 20]

(i) If the risk free rate of interest (R_f) is 10%, and expected return on market portfolio (R_m) is 15%, ascertain expected return of the portfolio if portfolio beta is 0.30.

(a) 10.5%

(b) 11.5%

(c) 12.5%

(d) 13.5%

(ii) XYZ Limited borrows £15 Million of six months LIBOR + 10.00% for a period of 24 months. The company anticipates a rise in LIBOR, hence it proposes to buy a Cap Option from its Bankers at the strike rate of 8.00%. The lump sum premium is 1.00% for the entire reset periods and the fixed rate of interest is 7.00% per annum. The actual position of LIBOR during the forthcoming reset period is as under:

Reset Period	LIBOR
1	9.00%
2	9.50%
3	10.00%

You are required to show how far interest rate risk is hedged through Cap Option. v

For calculation, work out figures at each stage up to four decimal points and amount nearest to £. It should be part of working notes.

(a) £ 30,861

(b) £ 40,861

(c) £ 50,861

(d) £ 60,861

(iii) ABC Ltd. issued 9%, 5 year bonds of f 1,000/- each having a maturity of 3 years. The present rate of interest is 12% for one year tenure. It is expected that Forward rate of

interest for one year tenure is going to fall by 75 basis points and further by 50 basis points for every next year in further for the same tenure. This bond has a beta value of 1.02 and is more popular in the market due to less credit risk.

What will be the Intrinsic value of bond

(a) ₹ 832.00

(b) ₹ 582.68

(c) ₹ 798.28

(d) ₹ 942.48

(iv) The following data is available for a bond:

Face Value	**₹ 1,000**
Coupon Rate	**11%**
Years to Maturity	**6**
Redemption Value	**₹ 1,000**
Yield to Maturity	**15%**

(Round-off your answer to 3 decimals)

What will be the Current Market Price

(a) ₹634.48

(b) ₹734.48

(c) ₹834.48

(d) ₹934.48

(v) Mr. Dayal is interested in purchasing equity shares of ABC Ltd. which are currently selling at ₹ 600 each. He expects that price of share may go upto₹ 780 or may go down to ₹480 in three months.

What combination of share and option should Mr. Dayal select if he wants a perfect hedge?

(a) 0.50 share

(b) 0.70 share

(c) 0.90 share

(d) 1.00 share

(vi) A is an investor and having in its Portfolio Shares worth ₹1,20,00,000 at current price and Cash ₹10,00,000. The Beta (β) of Share Portfolio is 1.4.

What will be the current portfolio beta?

(a) 1.3025

(b) 1.2923

(c) 2.3025

(d) 2.2923

(vii) Mr. Paresh can earn a return of 16 per cent by investing in equity shares on his own. Now he is considering a recently announced equity based mutual fund scheme in which initial expenses are 5.7 per cent and annual recurring expenses are 1.7 per cent. How much should the mutual fund earn to provide Mr. Kiran a return of 16 per cent?

(a) 15.67%

(b) 16.67%

(c) 17.67%

(d) 18.67%

(viii) There are two projects, Project A & B. From the given data please. Suggest which project will be selected?

	Project A	Project B
Investment	5000000	7500000
Net Cash Inflow	6250000	9150000

K = 10%

(a) Project A

(b) Project B

(c) A & B both

(d) None of the above

(ix) Consider a 10 year, 12% coupon bond with a par value of ₹ 10,000. Assume that the required yield on this bond is 13%. Find out the value of the bond.

(a) ₹ 2,601.1

(b) ₹9461.2

(c) ₹4,601.1

(d) ₹5,601.1

(x) Government securities are free from

(a) Default risk

(b) Purchasing power risk

(c) Interest rate risk

(d) Re-Investment risk

Section - B

Answer *any five*questions. **[16×5= 80]**

2. (a) From the following information determine the optimal combination of projects assuming that the projects are divisible.

Project	Required Initial Investment (Rs.)	NPV at appropriate cost of capital (Rs.)
B_1	1,00,000	20,000
B_2	3,00,000	35,000
B_3	50,000	16,000
B_4	2,00,000	25,000
B_5	1,00,000	30,000

Total fund available is 3, 00,000. **8**

(b) The following table presents the proposed cash flows for projects M and N with their associated probabilities. Which project has a higher preference for acceptance?

	Project M		Project N	
Possibilities	Cash flow (₹ lakhs)	Probability (₹ lakhs)	Cash flow (₹ lakhs)	Probability (₹ lakhs)
1	21,000	0.10	36,000	0.10
2	24,000	0.20	24,000	0.10
3	27,000	0.30	18,000	0.10
4	30,000	0.20	12,000	0.20
5	33,000	0.20	6,000	0.50

8

3. (a) Ram invested in a Mutual Fund when the Net Asset Value was ₹12.65. 60 Days later the Asset Value per unit of the fund was ₹12.25. In the meantime, Ram had received a cash dividend of ₹0.50 and a Capital Gain distribution of ₹0.30. Compute the monthly return. **6**

(b) A Mutual Fund having 200 units has shown in NAV of ₹8.75 and ₹9.45 at the beginning and at the end of the year respectively.

The Mutual Fund has given two options:

(a) Pay ₹0.75 per unit as dividend and ₹0.60 per unit as a capital gain, or

(b) These distributions are to be reinvested at an average NAV of ₹8.65 per unit.

What difference it would make in terms of return available and which option is preferable? **10**

4. (a) An investor has two portfolios known to be on minimum variance set for a population of three securities R, S and T having the weights mentioned below:

	WR	WS	WT
Portfolio X	0.30	0.40	0.30
Portfolio Y	0.20	0.50	0.30

It is supposed that there are no restrictions on short sales.

(i) What would be the weight for each stock for a portfolio constructed by investing ₹6,000 in Portfolio X and ₹4,000 in Portfolio Y?

(ii) Suppose the investor invests ₹5,000 out of ₹10,000 in Security R. How he will allocate the balance between security S and T to ensure that his portfolio is on minimum variance set? 10

(b) MNP Ltd. has declared and paid annual dividend of ₹ 4 per share. It is expected to grow @20% for the next two years and 10% thereafter. The required rate of return of equity investors is 15%. Compute the current price at which equity shares should sell.

Note: Present Value Interest Factor (PVIF) @ 15%:

For year 1 = 0.8696;

For year 2 = 0.7561 6

5. (a) Consider Amit, a portfolio manager managing a portfolio (beta 1.5) whose current market value of ₹ 67.50 Crores. It is expected that the markets are likely to correct downwards and hedging needs to be adopted using NIFTY index futures. Currently index futures are quoted at 4500 with each contract underlies 100 units. Examine a situation when markets correct 10% down and also a possibility market trend upwards by 10% against the belief of Amit. Assume that Amit hedged 100% of his portfolio. 10

(b) The February Pepper future traded at 16.80, the February 18.00 call at 0.45 and the February 18.00 put at 0.58. Both are options on the February future. Find out whether any arbitrage opportunity exists. 6

6. (a) A Laptop Bag is priced at $ 105.00 at New York. The same bag is priced at ₹ 4,250 in Mumbai. Determine Exchange Rate in Mumbai.

(i) If, over the next one year, price of the bag increases by 7% in Mumbai and by 4% in New York, determine the price of the bag at Mumbai and-New York? Also determine the exchange rate prevailing at New York for ₹ 100.

(ii) Determine the appreciation or depreciation in ₹ in one year from now. 8

(b) Following are the details of cash inflows and outflows in foreign currency denominations of M Co., an Indian export firm, which have no foreign subsidiaries —

Currency	Inflow	Outflow	Spot rate	Forward rate
US $	4,00,00,000	2,00,00,000	48.01	48.82
French Franc (F Fr)	2,00,00,000	80,00,000	7.45	8.12
UK £	3,00,00,000	2,00,00,000	75.57	75.98
Japanese Yen	1,50,00,000	2,50,00,000	3.20	2.40

(i) Determine the net exposure of each foreign currency in terms of Rupees.

(ii) Are any of the exposure positions off-setting to some extent? 8

7. (a) HB Finance Ltd is considering to enter the computer leasing business. Mainframe computers canbe purchased for ₹2,00,000 each and, in turn, be leased out at ₹50,000 per year for 8 years with the initial payment occurring at the end of first year. You may ignore taxes and depreciation.

(i) Estimate the annual before tax expenses and internal rate of return (IRR) for the company.

(ii) What should be the yearly lease payment chargedby the company in order to earn a 20 percent annual compoundedrate of return before expenses and taxes?

(iii) Assume that the firm uses the straight-line method of depreciation, there is no salvage value, the annual expensesare ₹20,000, and the tax rateis 35%. Calculate the yearly leasepayment in order to enable the firm to earn 20 percent after tax annual compound rate of return.

(iv) Further, assume that computer has a resale value of ₹40,000. Determine the revised lease rental to enable the firm to earn 20 per cent. 10

(b) On the basis of the following information, compute covariance between the returns on a pair of securities according to the Sharpe single-index model:

Beta for stock A = 1.183

Beta for stock B = 1.021

Beta for stock C = 2.322

The variance of the market portfolio = 20.91 6

8. Write short note on (*any four*) **4×4=16**

(a) Currency swaps

(b) The RBI's Regulatory Role

(c) Relationship between Correlation and Diversification

(d) Global Depository Receipt

(e) Swaption