FINAL EXAMINATION **SET - 1**

MODEL QUESTION PAPER **TERM – DECEMBER 2024**

PAPER – 14 **SYLLABUS 2022**

STRATEGIC FINANCIAL MANAGEMENT

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

The figures in the margin on the right side indicate full marks.

SECTION – A (Compulsory)

1. Choose the correct option: **[15 x 2 = 30]**

(i) The following information is available in case of an investment proposal:
NPV at discounting rate of 10% = ₹1,250 and NPV at discounting rate of 11% = (-) ₹200.
The IRR of the proposal is:
(a) 11.86%
(b) 9.87%
(c) 11.96%
(d) 10.86%

(ii) Coefficient of variation _____.
(a) Is an absolute measure of risk
(b) Is given by the product of mean expected return and standard deviation
(c) Is given by mean expected return by standard deviation
(d) Is a relative measure of risk

(iii) A certain mutual fund has a return of 17% with standard deviation of 3.5% and the sharpe ratio is 4. The risk free rate is _____.
(a) 3%
(b) 12.5%
(c) 4%
(d) 7.5%

(iv) The growth in book value per share shows the _____.
(a) Rise in the share price
(b) Increase in the physical assets of the firm
(c) Growth in reserve
(d) Increase in the net worth

(v) A stock with a dividend pay-out ratio of 45%, required rate of return is 15% and a constant growth rate of 10% will have a P/E ratio of _____.
(a) 3 times
(b) 9 times
(c) 8 times
(c) 7.5 times

(vi) A mutual Fund had a Net Asset Value (NAV) of ₹72 at the beginning of the year. During the year, a sum of ₹6 was distributed as Dividend besides ₹ 4 as Capital Gain distributions. At the end of the year, NAV was ₹ 84. Total return for the year is:
(a) 30.56%
(b) 31.56%

(c) 40.56%
(d) 41.56%

(vii) Bond volatility is inversely related to _____.
(a) Term to maturity
(b) Yield to maturity
(c) Coupon rate
(d) Both (b) and (c)

(viii) Covariance between a stock and a market index and variance of market index are 33.56 and 19.15 respectively. The Beta of stock is:
(a) 1.55
(b) 1.85
(c) 1.75
(d) 1.95

(ix) The following details relate to an investment proposal of XYZ Ltd. Investment outlay — ₹ 100 lakhs, Lease Rentals are payable at ₹180 per ₹1,000, Term of lease — 8 years , Cost of capital—12%. What is the present value of lease rentals, if lease rentals are payable at the end of the year? [Given PV factors at 12% for years (1-8) is 4.9676.
(a) ₹ 98,14,680
(b) ₹ 89,41,680
(c) ₹ 94,18,860
(d) ₹ 96,84,190

(x) A project had an equity beta of 1.4 and is to be financed by a combination of 25% Debt and 75% Equity. Assume Debt Beta as zero, R_f = 12% and R_m = 18%. Hence, the required rate of return of the project is _____.
(a) 18.3%
(b) 17.45%
(c) 16.72%
(d) 12.00%

(xi) This type of risk is avoidable through proper diversification _____.
(a) Portfolio risk
(b) Systematic risk
(c) Unsystematic risk
(d) Total risk

(xii) What should be the price of call, if value of a put ₹5, strike price ₹100, rate of interest 6% p.a. time period-2 months?

(a) ₹4
(b) ₹6
(c) ₹7
(d) ₹5

(xiii) Arbitrageur in a foreign exchange market _____.
(a) buys when the currency is low and sells when it is high
(b) buys and sells simultaneously the currency with a view to making riskless profit
(c) sells the currency when he has a receivable in future
(d) buys or sells to take advantage of market imperfections.

(xiv) Digital Finance Cube has _____ dimensions.
(a) Six
(b) Four
(c) Three
(d) Two

(xv) The 90 day interest rate is 1.85% in USA and 1.35% in the UK and the current spot exchange rate is $ 1.6/£. The 90-day forward rate is _____.
(a) $ 1.607893
(b) $ 1.901221
(c) $ 1.342132
(d) $ 1.652312

SECTION – B

(Answer any five questions out of seven questions given. Each question carries 14 marks.)

[5 x 14 = 70]

2. (a) Techtronics Ltd., an existing company, is considering a new project for manufacture of pocket video games involving a capital expenditure of ₹ 600 lakhs and working capital of ₹150 lakhs. The capacity of the plant is for an annual production of 12 lakh units and capacity utilisation during the 6-year working life of the projects expected to be as indicated below:

Year	Capacity Utilisation
1	33.33%
2	66.66%
3	90%
4-6	100%

The average price per unit of the product is expected to be ₹200 netting a contribution of 40%. Annual fixed costs, excluding depreciation, are estimated to be ₹480 lakhs per annum from the third year onwards; for the first and second year it would be ₹240 lakhs and ₹360 lakhs respectively. The average rate of depreciation for tax purposes is 33.33% on the capital assets. No other tax reliefs are anticipated. The rate of income-tax may be taken at 50%.

At the end of the third year, an additional investment of ₹100 lakhs would be required for working capital. The company, without taking into account the effects of financial leverage, has targeted for a rate of return of 15%. You are required to analyse whether the proposal is viable, giving your working notes and analysis.

Terminal value for the fixed assets may be taken at 10% and for the current assets at 100%. Calculation may be rounded off to lakhs of rupees. For the purpose of your calculations, the recent amendments to tax laws with regard to balancing charge may be ignored. **[7]**

(b) HB Finance Ltd is considering to enter the computer leasing business. Mainframe computers can be 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 charged by the company in order to earn a 20 percent annual compounded rate 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 expenses are ₹ 20,000, and the tax rate is 35%. Calculate the yearly lease payment 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**.** **[7]**

3. **(a)** A firm has an investment proposal, requiring an outlay of ₹40,000. The investment proposal is expected to have 2 years' economic life with no salvage value. In year 1, there is a 0.4 probability that cash inflow after tax will be ₹25,000 and 0.6 probability that cash inflow after tax will be ₹30,000. The probabilities assigned to cash inflows after tax for the year 2 are as follows:

The Cash inflow year 1	₹25,000		₹30,000	
The Cash inflow year 2		Probability		Probability
	₹12,000	0.2	₹20,000	0.4
	₹16,000	0.3	₹25,000	0.5
	₹22,000	0.5	₹30,000	0.1

The firm uses a 12% discount rate for this type of investment.

(i) Construct a decision tree for the proposed investment project.

(ii) Compute the net present value that the project will yield if worst outcome is realized. Compute the probability of occurrence of this NPV.

(iii) Determine the best occurrence and the probability of that occurrence?

(iv) Analyse whether project be accepted? **[7]**

(b) For the first four years, India Incorporated is assumed to grow at a rate of 10%. After four years, the growth rate of dividend is assumed to decline linearly to 6 percent. After 7 years, it is assumed to grow at a rate of 6% infinitely. The next year dividend is ₹2.00 per share and the required rate of return is 14%. Calculate the value of the stock. **[7]**

4. (a) Akai Ltd's latest annual dividend of ₹1.25 a share was paid yesterday and maintained its historic 7% annual rate of growth. You plan to purchase the stock today because you believe that the dividend growth rate will increase to 8% for the next three years and the selling price of the stock will be ₹40.00 per share at the end of that time.

(i) Calculate how much should you be willing to pay for the share if you require a 12% return?

(ii) Compute the maximum price you should be willing to pay for the stock if you believe that the 8% growth rate can be maintained indefinitely and you require a 12% return?

(iii) If the 8% rate of growth is achieved, compute what will be the price at the end of year 3, assuming the conditions in part (ii)? **[7]**

(b) Mr. Z has invested in the three mutual funds 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	10.00
Dividend received up to 31/03/2023	6000	Nil	5000
NAV as on 31/03/2023	10.25	10.00	10.20
Effective yield p.a. as on 31/03/2023	9.66	11.66	24.15

Assume 1 year =365 days

Mr. Z has misplaced the documents of his investment. Help him in computing the original investment after ascertaining the following:

(i) Numbers of units in each scheme,

(ii) Total net present value,

(iii) Total yield,

(iv) Number of days of investment held. **[7]**

5. (a) From the following information, as certain the Market Price of Risk of the portfolio :

R_m	σ_m	R_f	σ_p
18%	6%	6%	8%
20%	8%	7%	4%
22%	9%	8%	12%

Also, determine the expected return for each of the above cases. **[7]**

(b) An investor is interested to construct a portfolio of securities M and N. He has collected the following information about the proposed investment:

	M	N
Expected return	20%	25%
σ	12%	16%

Co-efficient of Correlation (r) between M and N is 16. He wants to constitute only five portfolios of M and N as follows:

(i) All funds invested in M
(ii) 50% of funds in M and 50% in N.
(iii) 75% of funds in M and 25% in N.
(iv) 25% of funds in M and 75% in N.
(v) All funds invested in N.

You are required to calculate:

I. Expected return under different portfolios.
II. Risk factor associated with these portfolios.
III. Which portfolio is best from the view-point of risk?
IV. Which portfolio is best from the view-point of return? **[7]**

6. (a) A portfolio manager owns 3 stocks :

Stock	Share owned	Stock Price (₹)	Beta
1	2 Lakh	800	1.1
2	4 Lakh	600	1.2
3	6 Lakh	200	1.3

The spot Nifty Index is at ₹2,700 and futures price is ₹2,704. Use stock index future to analyse the following situation -

(i) Decrease the portfolio beta to 0.8 and
(ii) Increase the portfolio beta to 1.5. Assume the index factor is ₹100. Compute the number of contracts to be bought or sold of stock index futures **[7]**

(b) Given the following:

	Amount (₹)
Strike price	200
Current stock price	185
Risk free rate of interest	5% p.a

i. Calculate the theoretical minimum price of a European put option after 6 months.
ii. If European put option price is ₹5, then analyse how can an arbitrageur make profit. **[7]**

7. (a) A firm is contemplating import of a consignment from USA for a value of USD 10,000. It requires 90 days to make payment. Supplier has offered 60 days' interest–free credit and is willing to offer additional 30 days' credit at an interest rate of 6% per annum. (Consider 360 days p.a.)

The Bankers of the firm offer a 30 days loan at 9 % per annum and its quotes for foreign exchange are as follows:

Spot 1 USD = ₹ 46.00,

60 days forward rate for 1 USD = ₹ 46.20,

90 days forward rate for 1 USD = ₹ 46.35.

You are required to advice the firm as to whether it should—

(i) Pay the supplier in 60 days or

(ii) Avail the suppliers offer of 90 days' credit. **[7]**

(b) Exchange rate between Rupee and Swiss franc is ₹33/SFr at the reference period and the forward rate is found to be ₹33.40/SFr after 9 months. Nine-month interest rate on Rupee is 8% p.a. Recommend what should have been corresponding interest rate on Swiss franc. Justify that interest rate differential is equal to forward premium or discount. **[7]**

8. Short Notes on:

(a) Analyse Stable-coins and discuss their uses. **[5]**

(b) Discuss the different types of foreign bonds. **[5]**

(c) Discuss the objectives of Cross Border Leasing. **[4]**