



**FINAL EXAMINATION**  
**MODEL QUESTION PAPER**  
**PAPER – 14**

**SET - 1**  
**TERM – JUNE 2024**  
**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)**

**I. Choose the correct option:**

**[15 x 2 =30]**

- (i) The IRR of a project is 10%. If the annual cash flow after tax is ₹1,30,000 and project duration is 4 years, what is the initial investment in the project?
- (a) ₹4,10,000  
(b) ₹4,12,100  
(c) ₹3,90,000  
(d) ₹4,05,000
- (ii) Which of the following is/are not true regarding the risk adjusted investment appraisal techniques?
- i. In the certainty equivalent method, if there is high degree of correlation between the cashflows for the entire project life the certainty equivalent coefficient is taken as one for all the years.
- ii. In sensitivity analysis, the impact of the changes in one or more variables on the criterion of merit is studied.
- iii. Simulation does not produce an optimal solution but the user of the technique has to generate all possible combinations of conditions and constraints to choose the optimal solution.
- (a) Only (ii) above.  
(b) Only (iii) above.  
(c) Both (i) and (ii) above  
(d) Both (i) and (iii) above
- (iii) Given, expected value of profit without perfect information = ₹1,600 and expected value of perfect information = ₹300, then expected value of profit with perfect information will be \_\_\_\_.
- (a) ₹1,300  
(b) ₹1,900  
(c) ₹950  
(d) None of the above
- (iv) The type of lease that includes a third party, a lender, is called as which of the following?
- (a) Sale and lease back  
(b) Leveraged Lease  
(c) Direct leasing arrangement  
(d) Operating lease
- (v) The current price is ₹100, the required rate of return is 20% and the dividend paid ₹3.00 on a share of ₹10 face value. What is the expected growth rate?
- (a) 15%  
(b) 16%  
(c) 18%  
(d) 17%



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- (vi) In the bull market:
- (a) The stock prices are increasing
  - (b) Each peak is higher than the previous peak
  - (c) Each bottom is higher than the previous bottom
  - (d) Both (b) and (c)
- (vii) Mr. X expects 20% return from his investment. The dividend from the stock is ₹2.0 and the present price is ₹50. What should be the future price of the stock?
- (a) ₹56.39
  - (b) ₹58.00
  - (c) ₹60.00
  - (d) ₹62.30
- (viii) Yield to maturity is same as:
- (a) NPV
  - (b) IRR
  - (c) Geometric mean
  - (d) Both (b) and (c)
- (ix) If opening units 1,25,000 Units subscribe 2,00,000, Units redeem 50,000 then Closing units?
- (a) 3,25,000 units
  - (b) 2,75,000 units
  - (c) 3,75,000 units
  - (d) 2,50,000 units
- (x) A portfolio comprises two securities and the expected return on them is 12% and 16% respectively. Determine return of portfolio if first security constitutes 40% of total portfolio.
- (a) 12.4%
  - (b) 13.4%
  - (c) 14.4%
  - (d) 15.4%
- (xi) An investor buys 100 shares of a sugar mill at ₹210 per share and at the same time writes a September 250 call at a premium of ₹20 per share. If the expiration date price is ₹280, calculate the net gain/loss.
- (a) ₹20
  - (b) ₹40
  - (c) ₹60
  - (d) None of the above
- (xii) With respect to capital market theory, the average beta of all assets in the market is:
- (a) Less than 1.0.
  - (b) Equal to 1.0
  - (c) Greater than 1.0.
  - (d) None



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- (xiii) The United States Dollar is selling in India at ₹45.20. If the interest rate for a 6-months borrowing in India is 10% and the corresponding rate in USA is 4%, what would be the rate of forward premium/(discount)?
- (a) 5.93 %  
(b) 5.88 %  
(c) (5.17%)  
(d) (5.52%)
- (xiv) Plain vanilla interest rate swaps involved:
- (a) Fixed to fixed rate swap  
(b) Fixed to floating rate swap  
(c) Floating to floating rate swap  
(d) Currency swap
- (xv) The portfolio's risk premium is 12% and the standard deviation of market and the portfolio are 4 and 3, respectively. The fund's beta value is 1.5. The Treynor index is:
- (a) 3.0  
(b) 8.0  
(c) 4.0  
(d) 12

**SECTION – B**

**(Answer any 5 questions out of 7 questions given. Each question carries 14 marks.)**

**[5 x 14 = 70]**

2. (a) X Ltd. an existing profit-making company, is planning to introduce a new product with a projected life of 8 years. Initial equipment cost will be ₹120 lakhs and additional equipment costing ₹10 lakhs will be needed at the beginning of third year. At the end of the 8 years, the original equipment will have resale value equivalent to the cost of removal, but the additional equipment would be sold for ₹1 lakhs. Working Capital of ₹15 lakhs will be needed. The 100% capacity of the plant is of 4,00,000 units per annum, but the production and sales- volume expected are as under:

Year	Capacity in percentage
1	20
2	30
3-5	75
6-8	50

A sale price of ₹100 per unit with a profit-volume ratio of 60% is likely to be obtained. Fixed Operating Cash Cost are likely to be ₹16 lakhs per annum. In addition to this the advertisement expenditure will have to be incurred as under:

Year	1	2	3-5	6-8
Expenditure in ₹ lakhs each year	30	15	10	4

The company is subject to 40% tax, straight-line method of depreciation, (permissible for tax purposes also) and taking 15% as appropriate after-tax Cost of Capital, should the project be accepted? [7]



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(b) Beta Ltd is considering the acquisition of a personal computer costing ₹50,000. The effective life of the computer is expected to be five years. The company plans to acquire the same either by borrowing ₹50,000 from its bankers at 15% interest p.a. or on lease. The company wishes to know the lease rentals to be paid annually, which match the loan option. The following further information is provided to you:

- a) The principal amount of loan will be paid in five annual equal instalments.
- b) Interest, lease rentals, principal repayment are to be paid on the last day of each year.
- c) The full cost of the computer will be written off over the effective life of computer on a straight-line basis and the same will be allowed for tax purposes
- d) The company's effective tax rate is 40% and the after-tax cost of capital is 9%
- e) The computer will be sold for ₹1,700 at the end of the 5th Year. The commission on such sales is 9% on the sale value.

You are required to compute the annual lease rentals payable by Beta Ltd, which will result in indifference to the loan option. [7]

3. (a) A company is considering two mutually exclusive projects X and Y. Project X costs ₹3,00,000 and Project Y ₹3,60,000. You have been given below the net present value, probability distribution for each project:

Project X		Project Y	
NPV Estimate (₹)	Probability	NPV Estimate (₹)	Probability
30,000	0.1	30,000	0.2
60,000	0.4	60,000	0.3
1,20,000	0.4	1,20,000	0.3
1,50,000	0.1	1,50,000	0.2

Compute the expected net present value of Projects X and Y.

- (i) Compute the risk attached to each project i.e., Standard Deviation of each probability distribution.
- (ii) Which project do you consider riskier and why?
- (iii) Compute the profitability index of each project. [7]

(b) The rates of return on the Security of company S and Market Portfolio for 10 periods are given below:

Year	1	2	3	4	5	6	7	8	9	10
Return on Security S (%)	20	22	25	21	18	-5	17	19	-7	20
Return on Market Portfolio	22	20	18	16	20	8	-6	5	6	11

- i. Compute the beta of Security S?
- ii. Determine the Characteristic Line for Security S?
- iii. Analyse the Systematic and Unsystematic Risk of Security S? [7]

4. (a) 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%. Find the value of the stock. [7]



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- (b) There are two mutual funds viz. X mutual fund and Y mutual fund. Each having closed-ended equity schemes. NAV as on 31-12-2022 of equity schemes of X mutual fund is ₹70.71 (consisting 99% equity and remaining cash balance) and that of Y mutual fund is ₹62.50 (consisting 96% equity and balance in cash).

Following is the other information:

Particulars	Equity Schemes	
	X Mutual Fund	Y Mutual Fund
Sharpe ratio	2	3.3
Treynor ratio	5	15
Standard deviation	11.25	5

There is no change in portfolios during the next months and annual average cost is ₹3 per unit for the schemes of both the mutual funds. For calculation, consider 12 months in a year and ignore number of days for particular month. Calculate NAV after one month if the market goes down by 5%. [7]

5. (a) Subho has invested in four securities M, N, O and P, the particulars of which are as follows —

Security	M	N	O	P
Amount Invested (₹)	1,25,000	1,50,000	80,000	1,45,000
Beta ( $\beta$ )	0.60	1.50	0.90	1.30

If RBI Bonds carries an interest rate of 8% and NIFTY yields 14%, compute the expected return on portfolio. If investment in Security O is replaced by investment in RBI Bonds, what corresponding change will be there in Portfolio Beta and expected return? [7]

- (b) Based on the data provided below, compute and compare the performance of the portfolios using the Jensen model of the differential return.

Portfolio	Realized Return on Portfolio (%)	Portfolio ( $\beta$ )
1	14.5	1.2
2	9.5	0.8
3	18.0	1.4

Return on market portfolio,  $R_m = 12\%$

Risk-free rate of interest = 6%

[7]

6. (a) Decide which position on the index future gives a speculator, a complete hedge against the following transitions:

- (i) The share of Yes Limited is going to rise. He has a long position on the cash market of ₹100 Lakhs on the Yes Limited. The beta of the Yes Limited is 1.25.
- (ii) The share of No Limited is going to depreciate. He has a short position on the cash market of ₹50 Lakhs on the No Limited. The beta of the No Limited is 0.90.
- (iii) The share of Fair Limited is going to stagnant. He has short position on the cash market of ₹40 Lakhs of the Fair Limited. The beta of the Fair Limited is 0.75.

[7]



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- (b) A put and a call option each have an expiration date 6 months hence and an exercise price ₹9. The interest rate for the 6 month period is 3 percent.
- (a) If the put has a market price of ₹2 and share is worth ₹10 per share, compute the value of the call.
- (b) If the put has a market price of ₹2 and the call ₹4. determine the value of the share per share.

If the call has a market value of ₹5 and market price of the share is ₹12 per share what is the value of the put? [7]

7. (a) 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

- (a) Determine the net exposure of each foreign currency in terms of Rupees.
- (b) Are any of the exposure positions off-setting to some extent? [7]

- (b) Following are the USD/INR spot and 3-month forward quotes available. Which currency is in forward premium or discount? Calculate the annualised forward premium or discount.  
Spot rate, USD/INR: ₹75.42/50  
3-month swap points: 20/30 [7]

8. **Short Notes on:**

- (a) Advantages of Digital Financial Services. [5]
- (b) Participatory Notes. [5]
- (c) Sale and Lease back. [4]