

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 question No.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) The following information is available in respect of Hypothetical Ltd: Dividend per share (D) at dividend payout ratio of 20% = ₹2. As per Gordon's model, equity capitalisation rate is 15% (at D/P ratio of 20%). Company earns ₹10 on every ₹100 invested. Determine the value of its shares (as per Gordon's approach).
- (a) 66.66
(b) 10
(c) 28.57
(d) 20
- (ii) Akbar is bearish about the index. Spot Nifty stands at ₹1,250. He decides to buy two three-month Nifty put option contract (each contract has a market lot of 200) with a strike price of ₹1,275 at a premium of ₹40. Three months later, the index closes at ₹1,225. Compute his pay off on the position.
- (a) ₹2,500
(b) ₹4,000
(c) ₹8,000
(d) ₹1,315
- (iii) On March 1, a call option on the Nifty with a strike price of ₹1,300 is available for trading. Expiration date is 31st March. Compute 't' that is used in the BS formula.
- (a) 0.08
(b) 1
(c) 0.8
(d) 0.04
- (iv) A company's quoted share price as at present is ₹50 (face value ₹10). The company pays a dividend of ₹5. per share and the growth rate expected was 10% p.a. You are required to calculate Company's cost of equity capital
- (a) 5%
(b) 21%
(c) 25%
(d) 30%

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- (v) The required rate of return on the stock of A Ltd. is 15% and it has paid a dividend is ₹ 2.75 for the year 2007-2008. If the stock is currently available at a price of ₹ 52, What is the implied growth rate in dividend?
- (a) 10%
 - (b) 12.5%
 - (c) 3.33%
 - (d) 9.22%
- (vi) X sold one January Nifty futures contract for ₹2,69,000, on January 15. For this he had to pay an initial margin of ₹21,250 to his broker. Each Nifty futures contract is for the delivery of 200 Nifties. On January 25, the index closed at ₹1,390. How much profit/loss did he make?
- (a) Profit of ₹9,000
 - (b) Loss of ₹1,110
 - (c) Loss of ₹9,000
 - (d) Profit of ₹1,110
- (vii) What is the fair value of one month futures if the spot value of Nifty is ₹1,150. The money can be invested at 14% p.a. and Nifty gives a dividend yield of 4% p.a.
- (a) ₹1,159
 - (b) ₹974.57
 - (c) ₹1,008
 - (d) ₹1,105.76
- (viii) Spot rate of Euro in New York is US\$ 1.2800 and of the Rupee is US\$0.0163. What will be the price of Euro in India?
- (a) ₹0.0208
 - (b) ₹78.527
 - (c) €78.527
 - (d) €0.0208
- (ix) From the following rates, determine ₹/Canadian \$ exchange rate:
₹/US\$: ₹61.5642/61.8358
Canadian \$/US\$: 1.0949/1.0959
- (a) ₹56.4247–₹56.2281
 - (b) ₹56.2281–₹56.4247
 - (c) ₹56.4762–₹56.1768
 - (d) ₹56.1768–₹56.4762
- (x) Operating exposure to exchange risk is _____ if the price elasticity of demand of the goods/services the firm deals in is low.
- (a) More
 - (b) Less
 - (c) Equal
 - (d) Zero

Section – B

Answer any five questions.

[16×5= 80]

2. (a) A company is trying to choose between two investment proposals A and B. Project A has a standard deviation of ₹6,500 while Project B has a standard deviation of ₹7,200. The finance manager wishes to know which investment to choose, given each of the following combinations of the expected values:
- Project A and Project B both have expected net present value of ₹15,000.
 - Project A has expected NPV of ₹18,000 while for Project B it is ₹22,000. [6]
- (b) A company is trying to decide whether to invest in a new project. Two mutually exclusive projects are available, each requiring an investment of ₹3,00,000. Project A is expected to generate cash inflows of ₹2,00,000 per year in the next 2 years. It is estimated that the cash inflows associated with project B would either be ₹1,80,000, or ₹2,20,000 (each with 0.5 probability of occurrence) next year. If ₹1,80,000 is received in the first year, the cash inflow for the second year is likely to be ₹1,50,000 (probability of 0.3), ₹1,80,000 (probability of 0.4) and ₹2,00,000 (probability of 0.3). In case the first year's cash inflow is ₹2,20,000, the second year's likely cash inflow would be ₹1,80,000 and ₹2,70,000 (each with 0.3 probability), and ₹2,20,000 (probability 0.4).
- The firm uses a 14 per cent minimum required rate of return for deciding whether to invest in projects comparable in risk to the ones under consideration.
- Calculate the risk adjusted expected NPV for projects A and B.
 - Identify the best and the worst possible outcomes for B.
 - Which of the projects, if any, would you recommend? Why? [10]
3. (a) A mutual fund has a NAV of ₹8.50 at the beginning of the year. At the end of the year NAV increases to ₹9.10. Meanwhile fund distributes ₹0.90 as dividend and ₹0.75 as capital gains.
- What is the fund's return during the year?
 - Assuming that the investor had 200 units and also assuming that the distributions been re-invested at an average NAV of ₹8.75, what is the return? [8]
- (b) Mr. X on 1.7.2000, during the initial offer of some Mutual Fund invested in 10,000 units having face value of ₹10 for each unit. On 31.3.2001, the dividend operated by the MF was 10% and Mr. X found that his annualized yield was 153.33%. On 31.12.2002, 20% dividend was given. On 31.3.2003 Mr. X redeemed all his balance of 11,296.11 units when his annualised yield was 73.52%. What are the NAVs as on 31.3.2001, 31.12.2002 and 31.3.2003? [8]
4. (a) X Limited just declared a dividend of ₹14 per share. Mr. B is planning to purchase the share of X Limited, anticipating increase in growth rate from 8% to 9%, which

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will continue for three years. He also expects the market price of this share to be ₹360 after three years. You are required to determine:

- (i) the maximum amount Mr. B should pay for shares, if he requires a rate of return of 13% per annum,
- (ii) the maximum price Mr. B will be willing to pay for share, if he is of the opinion that the 9% growth can be maintained indefinitely and 13% is his rate of return per annum,
- (iii) the price of share at the end of three years, if 9% growth rate is achieved and assuming other conditions remaining same as in (i) above.

Calculate rupee amount up to two decimal points.

	Year-1	Year-2	Year-3
PVIF @ 9%	1.090	1.188	1.295
PVIF @ 13%	1.130	1.277	1.443
PVIF @ 13%	0.885	0.783	0.693

[8]

- (b)** In the context of CAPM, what is the expected return of security X if it has the following characteristics and if the following holds for the market portfolio?

Standard Deviation, security X	0.20
Standard Deviation, Market Portfolio	0.15
Expected Return, Market Portfolio	0.13
Correlation between possible returns for security X and the market portfolio	0.80
Risk free Rate	0.07

- (i) What would happen to the required return if the standard deviation for the security were higher?
- (ii) What would happen if the correlation coefficient were less?
- (iii) What is the functional relationship between the required return for a security and market risk?

[8]

5. **(a)** A particular stock sells for ₹27. A call option on this stock is available with a strike price of ₹28 and an expiration date in four months. If the risk-free rate equals 6% and the standard deviation of the stock's return is 40%, what is the price of the call option? Next, recalculate your answer assuming that the market price of the stock is ₹28. How much does the option price change in rupee terms? How much does it change in percentage terms? Use Black Scholes Model.

[8]

- (b)** A portfolio manager controls ₹50 Crores in equity stock. In anticipation of a stock market decline, the decision is made to hedge the portfolio using the index futures contract with each contract of 250 units. The portfolio's beta is 1.20, and the current value of the index futures contract selected is 238.50.

- (i) Calculate the number of futures contracts that should be bought or sold.
- (ii) Suppose that when the contracts are closed out, the portfolio has fallen in value to ₹42 Crores and that the index has fallen to 215.00. Calculate the gain or loss on the combined positions (stock portfolio and futures contracts).
- (iii) Why does the net gain or loss not exactly equal zero?

[8]

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6. (a) An Indian business house has decided to borrow US\$ for its New York subsidiary, and an American multinational has made up its mind to borrow Indian rupees for its Indian subsidiary. The amount required by the two companies is the same at the current exchange rate. The companies have been quoted the following interest rates:

	On rupee loan in India	On US\$ loan in America
Indian Company	9.0%	4.0%
American Company	9.5%	3.0%

Both the Indian business house and the American multinational carries out their banking operations through the same multinational bank. The multinational bank comes to know of the situation faced by the two companies and plans to design a swap. As the bank will be assuming all foreign exchange risk, it plans to receive total 50 basis points per annum and also plans to make the swap equally attractive to the two companies. What will the design of the swap be? **[10]**

- (b) An American importer has purchased goods worth euro 15,00,000. Payments are to be made after 6 months. The spot rate of Euro is US\$ 1.2800/€. The American importer expects depreciation of the dollar against the euro in the coming months. A New York bank gives the 6 month forward rate as US\$ 1.3381/€.

If the American importer makes use of the forward rate to hedge its currency, what is its loss or profit under following circumstances?

- (i) Spot price of euro after 6 months is US\$ 1.2800/€
- (ii) Spot price of euro after 6 months is US\$ 1.3962/€
- (iii) Spot price of euro after 6 months is US\$ 1.2000/€

[6]

7. (a) NBT Ltd is thinking of installing a computer. It is to decide whether the computer should be acquired on lease, or be purchased through borrowings at a 12 per cent rate of interest payable at the end of the each year. Principal is due for repayment after 10 years. The following data has been collected for the purpose:

Purchase of computer
Purchase price, ₹40,00,000
Annual maintenance, ₹50,000 (to be paid in advance every year)
Life of the computer, 10 years
Depreciation, 15 per cent per annum on written down value basis
Salvage value, ₹4,00,000
Leasing of computer:
Initial lease payment, ₹4,00,000
Lease rent, ₹7,00,000 (payable in advance every year for 10 years)
Maintenance expenses, to be borne by the lessor.

You are required to advise NBT Ltd as to whether it should purchase the computer or acquire its services on lease basis, assuming it does not pay tax. **[6]**

(b) A textile company belongs to a risk-class for which the appropriate P/E ratio is 10. It currently has 50,000 outstanding shares selling at ₹100 each. The firm is contemplating the declaration of ₹78 dividend at the end of the current fiscal year which has just started. Given the assumption of MM, answer the following questions.

- (i) What will the price of the share be at the end of the year: (a) if dividend is not declared, and (b) if it is declared?
- (ii) Assuming that the firm pays the dividend, has a net income (y) of ₹5,00,000 and makes new investments of ₹10,00,000 during the period, how many new shares must be issued?
- (iii) What will the value of the firm be: (a) if dividend is declared, and (b) if dividend is not declared?

[10]

8. Write short note on (any four)

4×4=16

- (a)** What are the similarities between the New Issue Market and the Share Market?
- (b)** Difference between Hedgers and Speculators?
- (c)** State the type of risk whether market risk or credit risk in each of the following independent situations:
 - (i) The risk that the interest rate may fluctuate.
 - (ii) A business does not pay an employee's earned wages when due.
 - (iii) The risk of fluctuations in foreign exchange rates.
 - (iv) The risk that commodity prices may change adversely.
 - (v) A business or consumer does not pay a trade invoice when due.
 - (vi) A government grants bankruptcy protection to an insolvent consumer or business.
 - (vii) The risk that stock prices or stock indices value and/or their implied volatility may change.
 - (viii) An insolvent insurance company does not pay a policy obligation.
- (d)** What are the major segments of Money market?
- (e)** What are the determinants of Foreign Exchange Rates?