

**Paper – 14: Strategic Financial Management**

## Paper – 14 - Strategic Financial Management

Full Marks: 100

Time allowed: 3 hours

### Section A - Investment Decisions [25 marks]

Answer any two questions from Section A

1. A Ltd. has just installed Machine – B at a cost of ₹ 2,00,000. The machine has a five year life with no residual value. The annual volume of production is estimated at 1,50,000 units, which can be sold at ₹ 6 per unit. Annual operating costs are estimated at ₹ 2,00,000 (excluding depreciation) at this output level. Fixed costs are estimated at ₹ 3 per unit for the same level of production.

A Ltd. has just come across another model called Machine – C capable of giving the same output at an annual operating cost of ₹1,80,000 (exclusive of depreciation). There will be no change in fixed costs. Capital cost of this machine is ₹ 2,50,000 and the estimated life is for five years with nil residual value.

The company has an offer for sale of Machine – B at ₹ 1,00,000. But the cost of dismantling and removal will amount to ₹ 30,000. As the company has not yet commenced operations, it wants to sell Machine – B and purchase Machine –C.

A Ltd. will be a zero-tax company for seven years in view of several incentives and allowances available.

The cost of capital may be assumed at 14%. P.V. factors for five years are as follows:

Year	P.V. Factors
1	0.877
2	0.769
3	0.675
4	0.592
5	0.519

- (i) Advise whether the company should opt for the replacement.
- (ii) Will there be any change in your view, if Machine-B has not been installed but the company is in the process of selecting one or the other machine?

Support your view with necessary workings.

[12.5]

2. X Ltd. is in the business of manufacturing bearings. Some more product lines are being planned to be added to the existing system. The machinery required may be bought or may be taken on lease. The cost of machine is ₹ 40,00,000 having a useful life of 5 years with the salvage value of ₹ 8,00,000. The full purchase value of machine can be financed by 20% loan repayable in five equal instalments falling due at the end of each year. Alternatively, the machine can be procured on a 5 years lease, year-end lease rentals being ₹ 12,00,000 per annum. The Company follows the written down value method of depreciation at the rate of 25%. Company's tax rate is 35 per cent and cost of capital is 16 per cent:

- i) Advise the company which option it should choose – lease or borrow.
- ii) Assess the proposal from the lessor's point of view examining whether leasing the machine is financially viable at 15% cost of capital (Detailed working notes should be given. Calculations can be rounded off to ₹ lakhs).

[12.5]

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3. A firm has an investment proposal, requiring an outlay of ₹ 80,000. The investment proposal is expected to have two years economic life with no salvage value. In year 1, there is a 0.4 probability that cash inflow after tax will be ₹ 50,000 and 0.6 probability that cash inflow after tax will be ₹ 60,000. The probability assigned to cash inflow after tax for the year 2 are as follows:

The cash inflow year 1	₹ 50,000	₹60,000
The cash inflow year 2	Probability	Probability
	₹24,000 0.2	₹ 40,000 0.4
	₹ 32,000 0.3	₹ 50,000 0.5
	₹ 44,000 0.5	₹ 60,000 0.1

The firm uses a 8% discount rate for this type of investment.

Required:

- Construct a decision tree for the proposed investment project and calculate the expected net present value (NPV).
- What net present value will the project yield, if worst outcome is realized? What is the probability of occurrence of this NPV?
- What will be the best outcome and the probability of that occurrence?
- Will the project be accepted?

(Note: 8% discount factor 1 year 0.9259; 2 year 0.8573)

**[12.5]**

### Section B [20 marks]

#### Answer any two questions from Section B

4. (a) Define Non-Banking Financial Company (NBFC). What are the differences between banks & NBFCs.
- (b) Write short note on Objectives of Commodity Futures. **[5+5]**
5. What do you understand by book building? What are the advantages and disadvantages. **[10]**
6. X Inc. is considering a new plan in Netherlands. the plan will cost 26 million Guilders. Incremental cash flows are expected to be 3 Million Guilders per year for the first 3 years. 4 Million Guilders for the next 3, 5 Million Guilders in Years 7 to 9, and 6 million guilders in years 10 through 19, after which the project will terminate with no residual value. The present exchange rate is 1.90 guilders per dollar. The required rate of return on repatriated dollar is 16%.
- (a) if the exchange rate states at 1.90, what is the project NPV?
- (b) if the guider appreciates to 1.84 for years 1 - 3, to 1.78 for years 4-6, 1.72 for years 7-9, and to 1.65 for years 10- 19, what happens to the NPV? **[6+4]**

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## Section C [ 25 marks]

### Answer any two questions from Section C

7. (a) Define Security Analysis? What are the factors considered in company analysis?  
(b) A Ltd., and B Ltd., has the following risk and return estimates

$R_A$	$R_B$	$\sigma_A$	$\sigma_B$	(Correlation coefficient) = $r_{AB}$
20%	22%	18%	15%	-1.50

Calculate the proportion of investment in A Ltd., and B Ltd., to minimize the risk of Portfolio.

[5+7.5]

8. (a) The returns on Stock A and Market Portfolio for a period of 6 Years are as follows —

Year	Return on B (%)	Return on Market Portfolio
1	12	8
2	15	12
3	11	11
4	2	-4
5	19	11
6	-10	-2

You are required to determine —

- Characteristic line for Stock A
- The systematic and unsystematic risk of Stock A.

- (b) Write down the objectives of portfolio management?

[8.5+4]

9. (a) Distinguish between a Security Market Line (SML) and Characteristic Line

(b) Stock P has a Beta of 1.50 and a market expectation of 15% return. For Stock Q, it is 0.80 and 12.5% respectively. If the risk free rate is 6% and the market risk premium is 7%, evaluate whether these two stocks are priced correctly? If these two stocks to be regarded as correctly priced, what should the risk free rate and market risk premium be?

[4.5+8]

## Section D [30 marks]

### Answer all questions from Section D

10. What do you mean by liquidity risk? Explain the causes of Liquidity Risk. Why asset backed risk matters? [10]
11. The price of Compact Stock of a face value of ₹10 on 31<sup>st</sup> December, 2015 was ₹414 and the futures price on the same stock on the same date i.e., 31<sup>st</sup> December, 2015 for March, 2016 was ₹444.

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Other features of the contract and the related information are as follows.

- Time to expiration 3 months (0.25 year)
- Annual dividend on the stock of 30% payable before 31.3.2015.
- Borrowing Rate is 20 % p.a.

Based on the above information, calculate future price for Infosys stock on 31<sup>st</sup> December, 2015. Please also explain whether any arbitrage opportunity exists.

[10]

12. Mr. X established the following spread on the Alpha Corporation's stock:

- Purchased one 3-month call option with a premium of ₹20 and an exercise price of ₹550.
- Purchased one 3-month put option with a premium of ₹10 and an exercise price of ₹450.

Alpha Corporation's stock is currently selling at ₹500. Determine profit or loss, if the price of Alpha Corporation's:

- remains at ₹500 after 3 months.
- falls at ₹350 after 3 months.
- rises to ₹600.

Assume the size option is 100 shares of Alpha Corporation.

[10]