

**PAPER 2: MANAGEMENT ACCOUNTING AND FINANCIAL ANALYSIS
MAY 2004**

Question No. 1 is compulsory. Answer any Four Questions from the rest. Figures in the margin indicate marks allotted to each question. Working notes should form part of the answer.

Question 1

- (a) What sort of investor normally view the variance (or Standard Deviation) of an individual security's return as the security's proper measure of risk? **(3 Marks)**
- (b) What sort of investor rationally views the beta of a security as the security's proper measure of risk? In answering the question, explain the concept of beta. **(7 Marks)**
- (c) A&Co., is contemplating whether to replace an existing machine or to spend money on overhauling it. A & Co., currently pays no taxes. The replacement machine costs Rs.9,000 now and requires maintenance of Rs.10,000 at the end of every year for eight years. At the end of eight years it would have a salvage value of Rs.20,000 and would be sold. The existing machine requires increasing amounts of maintenance each year and its salvage value falls each year as follows:

Year	Maintenance (Rs.)	Salvage (Rs.)
Present	0	40,000
1	10,000	25,000
2	20,000	15,000
3	30,000	10,000
4	40,000	0

The opportunity cost of capital for A & Co., is 15%

Required:

When should the company replace the machine?

[Note: Present value of an annuity of Re.1 per period for 8 years at interest rate of 15%; 4.4873; present value of Re.1 to be received after 8 years at interest rate of 15% ; 0.3269] **(10 Marks)**

Question 2

- (a) Explain briefly Capital Rationing .
- (b) A firm has an investment proposal, requiring an outlay of Rs. 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 Rs.50,000 and 0.6 probability that cash inflow after tax will be Rs.60,000. The probability assigned to cash inflow after tax for the year 2 are as follows:

The cash inflow year 1	Rs.50,000	Rs.60,000
The cash inflow year 2	Probability	Probability
	Rs.24,000 0.2	Rs.40,000 0.4
	Rs.32,000 0.3	Rs.50,000 0.5
	Rs.44,000 0.6	Rs.60,000 0.1

The firm uses a 10% discount rate for this type of investment.

Required:

- (i) Construct A Decision Tree For The Proposed Investment Project And Calculate The Expected Net Present Value (NPV)
- (ii) What Net Present Value Will Be Project Yield, If Worst Outcome Is Released? What Is The Probability Of Occurrence Of This NPV?
- (iii) What Will Be The Best And The Probability Of That Occurrence?
- (iv) Will The Project Be Accepted?

[Note: 10% discount factor 1 year 0.909; 2 year 0.826]

(16 Marks)

Question 3

(a) The following data relates to ABC Ltd.,’s share prices:

(6 Marks)

Current price per share Rs. 180

Price per share in the futures market – 6 months Rs.195

It is possible to borrow money in the market for securities transactions at the rate of 12% per annum.

Required:

- (i) Calculate the theoretical minimum price of a 6 month forward contract
- (ii) Explain if any arbitraging opportunities exist.

(b) Following is the data regarding six securities:

(8 Marks)

	U	V	W	X	Y	Z
Return (%)	10	10	15	5	11	10
Risk (5) (standard deviation)	5	6	13	5	6	7

- (i) Which of three securities will be selected?
- (ii) Assuming perfect correlation, analyze whether it is preferable to invest 80% in security U and 20% security W or to invest 100% in Y.

(c) Explain what is meant by “Debt Securitisation”

(6 Marks)

Question 4

(a) There is a 9% 5 year bond issue in the market. The issue price is Rs.90 and the redemption price Rs.105. for an investor with marginal income tax rate of 30% and capital gains tax rate of 10% (Assuming no indexation). What is the post-tax yield to maturity?

(5 Marks)

(b) The United States Dollar is selling in India at Rs.45.50. If the interest rate for a 6 month borrowing in India is 8% per annum and the corresponding rate in U/s. is 2%.

(9 Marks)

- (i) Do you expect United States Dollar to be at a premium or at discount in the Indian forward market.
- (ii) What is the expected 6 month forward rate for United States Dollar in India; and
- (iii) What is the rate of forward premium or discount?

(c) Explain briefly the Net Asset Value (NAV) of a Mutual Fund Scheme.

(4 Marks)

(d) Explain briefly “Call Money” in the context of financial market.

(2 Marks)

Question 5

Your company is considering to acquire an additional computer to supplement its time share computer services to his clients. It has two options:

(20 Marks)

- (i) To purchases the computer for Rs.22 lakhs.
- (ii) To lease the computer for three years from a leasing company for Rs.5 lakhs as annual lease rent plus 10% of gross time share service revenue. The agreement also requires an additional payment of Rs.6 lakhs at the end of third year. Lease rents are payable at the year end, and the computer reverts to the lessor after the contract period.

The company estimates that the computer under review will be worth Rs.10 lakhs at the end of third year.

Forest Revenues are:

Year	1	2	3
Amount (Rs. In lakhs)	22.5	25	27.5

Annual operating costs excluding depreciation / lease rent of computer are estimated at Rs.9 lakhs with an additional Rs.1 lakh for start up and training costs at the beginning of the first year. These cost are to be borne by the lessee. Your company will borrow at 16% interest to finance the acquisition of the computer. Repayments are to be made according to the following schedule:

Year end	1	2	3
Principal (Rs.'000)	500	850	850
Interest (Rs.'000)	352	272	136

The company uses straight line method (SLM) to depreciate its assets and pays 50% tax on its income. The management approaches you to advice. Which alternative would be recommended and why?

Note: The PV factor at 8% and 16% rates of discount are:

Year	1	2	3
8%	0.926	0.857	0.794
16%	0.862	0.743	0.641

Question 6

- (a) ABC Ltd., is intending to acquire XYZ Ltd., by merger and the following information is available in respect of the companies: **(8 Marks)**

	ABC Ltd.,	XYZ Ltd.,
Number of equity shares	10,00,00	6,00,000
Earnings after tax (Rs.)	50,00,000	18,00,000
Market value per share (Rs.)	42	28
Required:		

- What is the present EPS of both the companies?
 - If the proposed merger takes place, what would be the new earning per share for ABC Ltd., ? Assume that the merger takes place by exchange of equity shares and the exchange ratio is based on the current market price.
 - What should be exchange ratio, if XYZ Ltd., wants to ensure the earnings to members as before the merger takes place?
- (b) Write short notes on the following: **(2×6=12 Marks)**
- Global Depository Receipts, and
 - Stock Lending Scheme.