

PAPER 2- MANAGEMENT ACCOUNTING AND FINANCIAL ANALYSIS
NOVEMBER, 1999

Answer all Questions
 Working notes should form part of the answer.

Question 1

- (a) ABC Company Ltd., has been producing a chemical product by using machine Z for the last two years. Now the management of the company is thinking to replace this machine either by X and Y machine. The following details are furnished to you:

(14 Marks)

	Z	X	Y
Book value (Rs.)	1,00,000	--	--
Resale value now (Rs.)	1,10,000	--	--
Purchase price (Rs.)	--	1,80,000	2,00,000
Annual fixed costs (including depreciation) (Rs.)	92,000	1,08,000	1,32,000
Variable including costs (including labour) per unit (Rs.)	3	1.5	2.5
Production per hour (unit)	8	8	12

You are also provided with the following details:

Selling price per unit	Rs.20
Cost of material per unit	Rs.10
Annual operating hours	2,000
Working life of each of the three machines (as from now)	5 years

Salvage value of machines Z Rs. 10,000, X Rs.15,000, Y Rs.18,000

The company charges depreciation using straight line method. It is anticipated that an additional cost of Rs.8,000 per annum would be incurred on special advertising to sell the extra output of machine Y. Assume tax rate of 50% and cost of capital 10%. The present value of Re.1 to be received at the end of the year at 10% is as under:

Year	1	2	3	4	5
Present value	.909	.826	.751	.683	.621

Required : Using NPV method, you are required to analyze the feasibility of the proposal and make recommendation.

- (b) The Globe Manufacturing Company Ltd., is considering an investment in one of the two mutually exclusive proposals – Projects X and Y, which require cash outlays of Rs.3,40,000 and Rs.3,30,000 respectively. The certainly –equivalent (C.E) approach is used in incorporating risk in capital budgeting decisions. The current yield on government bond is 8% and this be used as the riskless rate. The expected net cash flows and their certainty – equivalents are as follows:

	Project X		Project Y	
Year end	Cash flow Rs.	C.E	Cash flow Rs.	C.E
1	1,80,000	.8	1,80,000	.9
2	2,00,000	.7	1,80,000	.8
3	2,00,000	.5	2,00,000	.7

Present value factors of Re.1 discounted at 8% at the end of year 1,2 and 3 are .926, .857 and .794 respectively. Required :

- Which project should be accepted?
- If risk adjusted discount rate method is used, which project would be analyzed with a higher rate?

Question 2

(a)

- i. If fixed costs are Rs.4,000, variable costs Rs.32,000 and break-even point Rs.20,000, find out: **(4 Marks)**
1. Profit volume ratio
 2. sale
 3. Net profit
 4. Margin of safety
- ii. If fixed costs are Rs.24,000, ,margin of safety Rs.40,000 and break-even point Rs.80,000, find out: **(4 Marks)**
1. Sales
 2. Profit – volume ratio
 3. Net profit
 4. Variable costs.
- (b) The Modern Chemicals Ltd., requires Rs.25,00,000 for a new plant. This plant is expected to yield earnings before interest and taxes of Rs.5,00,000. while deciding about the financial plan, the company considers the objective of maximizing earnings per share. It has three alternatives to finance the project – by raising debt of Rs.2,50,000 or Rs.10,00,000 or Rs.15,00,000 and the balance, in each case, by issuing equity shares. The company's share is currently selling at Rs.150, but is expected to decline to Rs.125 in case the funds are borrowed in excess of Rs.10,00,000. The funds can be borrowed at the rate of 10% over Rs.10,00,000. The tax rate applicable to the company is 50%. Which form of financing should the company choose? **(7 Marks)**
- (c) Explain as to how the wealth maximization objective is superior to the profit maximization objective. **(5 Marks)**

Question 3

- (a) Radiance Garments Ltd., manufactures readymade garments and sells them on credit basis through a network of dealers. Its present sale is Rs.60 lakhs per annum with 20 days credit period. The company is contemplating an increase in the credit period with a view to increasing sales. Present variable costs are 70% of sales and the total fixed costs Rs.8 lakh per annum. The company expects pre-tax return on investment @ 25%. Some other details are given as under: **(10 Marks)**

Proposed credit policy	Average collection period (days)	Expected Annual sales (Rs. lakh)
I	30	65
II	40	70
III	50	74
IV	60	75

Required: Which credit policy should the company adopt? Present your answer in a tabular form. Assume 360 – day a year. Calculations should be made upto two digits after decimal.

- (b) The following is the capital structure of Simons Company Ltd., as on 31-12-1998: **(10 Marks)**

	Rs.
Equity shares : 10,000 shares of Rs.100 each	10,00,000
10% Preference Shares (of Rs.100 each)	4,00,000
12% Debentures	6,00,000
	<u>20,00,000</u>

The market price of the company's share is Rs.110 and it is expected that a dividend of Rs.10 per share would be declared for the year 1998. The dividend growth rate is 6%.

- i. If the company is in the 50% tax bracket, compute the weighted average cost of capital.

- ii. Assuming that in order to finance an expansion plan, the company intends to borrow a fund of Rs.10 lakh bearing 14% rate of interest, what will be the company's revised weighted average cost of capital? This financing decision is expected to increase dividends from Rs.10 to Rs.12 per share. However, the market price of equity share is expected to decline from Rs.110 to Rs.105 per share.

EITHER

Question 4

- (a) Mr. Satya Prasad, the President of the company was very happy with 1998 results since they exceeded the profit budget. All the same he wanted to know the relative contributions of manufacture and marketing departments to the overall company result. **(14 Marks)**

The company products can be grouped into two main lines of business: Electric Meters(EM) and Electronic Instruments(EI). Both EM and EI are industrial measuring instruments and perform similar functions. However, these products differ in their manufacturing technology, (EM is based on mechanical and electrical technology, whereas EI is based on microchip technology) and their use characteristics. EM and EI are substitute products in the same sense that a mechanical watch and digital watch are substitutes.

The income statement for the year 1998 and other additional information is given below:

Required :

- (i) Prepare a statement that you would like to present to Mr. Satya Prasad
- (ii) How would you make a case for a share in the company's bonus pool in respect of the following managers:

General Manager (EM), Marketing Manager(EM), Manufacturing Manager (EM), General Manager (EI), Marketing Manager(EI), and Manufacturing Manager (EI).

Income statement for the year 1998 (Rs.000)

	Budget	Actual
Sales	16,872	17,061
Cost of goods sold	9,668	9,865
Gross margin	7,204	7,196
Less: Other operating expenses:		
Marketing	1,856	1,440
R & D	1,480	932
Administration	1,340	1,674
Profit before taxes	2,528	3,150

Additional Information

	EM	EI
Selling price per unit		
Average selling price planned	Rs.40	Rs.80
1998 Actual	Rs.30	Rs.206
Variable Product Cost per unit		
Average standard manufacturing cost planned	Rs.20	Rs.50
1998 Actual	Rs.21	Rs.54
Volume information		
Units produced and sold- planned	1,24,800	66,000
1998 Actual	1,41,770	62,172
Total industry sales 1998 – Actual	Rs.440 lakhs	Rs.760 lakhs
Total industry variable product costs 1998 – Actual	Rs.160 lakhs	Rs.320 lakhs
Company's share of the market per cent of Physical units:		
Planned	10%	15%
Actual	16%	9%

Firm wide fixed expenses (Rs.000)	Planned	Actual
Manufacturing	3,872	3,530
Marketing	1,856	1,440
Administrative	1,340	1,674
R & D (Exclusively for Electronic Instruments)	1,480	932

(b) What is performance budgeting and what are its requisites?

(6 Marks)

OR

(a) A firm has an investment proposal, requiring an outlay of Rs.40,000. The investment proposal is expected to have 2 year's economic life with no salvage value. In year I, there is a 0.4 probability that cash inflow after tax will be Rs.25,000 and 0.3 probability that cash inflow after tax will be Rs.30,000. The probabilities assigned to cash inflows after tax for the year II are as follows:

The cash inflow year I	Rs.25,000	Rs.30,000
The cash inflow year II	Probability	Probability
	Rs.12,000	0.2
	Rs.16,000	0.3
	Rs.22,000	0.5
	Rs.20,000	0.4
	Rs.25,000	0.5
	Rs.30,000	0.1

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

Required :

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

(b) What net present value will the project yield if worst outcome is realized? What is the probability of occurrence of this NPV?

(c) What will be the best and the probability of that occurrence?

(d) Will the project be accepted?

(10% Discount Factor 1 Year 0.9090; 2 year 0.826)

(b) Do the profitability index and the N.P.V criterion of evaluating investment proposals lead to the same acceptance – rejection and ranking decisions ? In what situations will they give conflicting results?

(6 Marks)

Question 5

Write short notes on the following :

(4×5=20 Marks)

(a) Inter-relationship between investment, financing and dividend decisions.

(b) Financial forecasting techniques.

(c) Current cost accounting method adjusting financial statements.

(d) Basic principles of portfolio management.