

PAPER 2- MANAGEMENT ACCOUNTING AND FINANCIAL ANALYSIS
NOVEMBER, 2000

Answer any five questions

All working notes should form part of the answer.

Question 1

(a) What are the issues that need to be considered by an Indian investor and incorporated within the Net Present Value (NPV) model for the evaluation of foreign investment proposals? **(8Marks)**

(b) XYZ Ltd., has the following book value capital structure: **(12 Marks)**

Equity Capital (in shares of Rs.10 each, fully paid up – at par)	Rs.15 crores
11% preference capital (in shares of Rs.100 each, fully paid up –at part)	Rs.1 crore
Retained Earnings	Rs.20 crores
13.5% Debentures (of Rs.100 each)	Rs.10 crores
15% Term loans	Rs.12.5 Crores

The next expected dividend on equity shares per share is Rs.3.60: the dividend per share is expected to grow at the rate of 7%. The market price per share is Rs.40.

Preference stock, redeemable after ten years, is currently selling at Rs.75 per share.

Debenture stock, redeemable after ten years, is currently selling at Rs.75 per share.

Debenture, redeemable after six years, are selling at Rs.80 per debenture.

The income-tax rate for the company is 40%.

i. Required :

Calculate the average cost of capital using :

- (a) Book value proportions; and
- (b) Market value proportions.

ii. Define the marginal cost of capital schedule for the company, if it raises Rs.10 crores next year, given the following information:

- (a) The amount will be raised by equity and debt in equal proportions;
- (b) The company expects to retain Rs.1.5 crores earnings next year.
- (c) The additional issue of equity shares will result in the net price per share being fixed at Rs.32;
- (d) The debt capital raised by way of term loans will cost 15% for the first Rs.2.5 crores and 16% for the next Rs.2.5 crores.

Question 2

(a) The following table shows interest rates for the United States dollar and French francs. The spot exchange rate is 7.05 francs per dollar. Complete the missing entries: **(8 Marks)**

	3 months	6 months	1 year
Dollar interest rate (annually compounded)	11 ½%	12 ¼%	?
Franc interest rate (annually compounded)	19 ½%	?	20%
Forward franc per dollar	?	?	7.5200
Forward discount on franc per cent per year	?	-6.3%	?

(b) The Recovery General Hospital operates a separate department specifically for private health patients. In 2000, the patients paid a fixed fee of Rs.850 per day for the use of hospital facilities and this is expected to remain unchanged for the year 2001. In addition, the patients pay an extra fee to the physicians for their services. This is a private arrangement between the patient and the physician, and has no effect on the finances of the hospital. For the year ending 31st December, 2000 the department expected to receive revenue of Rs.1,39,61,250 for private health care. Expenditure chargeable to the department for the year 2000 will be as follows: **(12 Marks)**

	Basis of Allocation	
	Patient Days (Rs.)	Bed Capacity (Rs.)
Meals	22,00,000	--

Porters' Salaries	--	1,20,000
Laundry	12,00,000	--
Laboratory	26,00,000	--
Maintenance	3,70,000	--
General Administrative Services	--	23,70,000
Other expenses	2,00,000	--
	65,70,000*	24,90,000

*All variable expenses.

It is estimated that all costs will increase by 10% in the year 2001. In addition, rent and rates of Rs.40,00,000 was charged directly to the department, since it is the sole occupier of a separate building within the hospital grounds. This is expected to increase to Rs.50,00,00 for the year 2001.

The salaries of the nursing staff are charged to the department at the end of the year according to the following schedule:

Annual Patient Days	Nurses Supplied
Less than 7,000	3
7,000 – 10,000	4
10,000 – 13,000	5
Over 13,000	8

The average salary of the nursing staff for the year 2001 is estimated at Rs.70,000 per anum (actual for the year 2000 was Rs.65,000 p.a.). The department has a maximum capacity of 60 beds, but in the year 2000 a number of beds were unoccupied because of insufficient demand and there have been demand from a number of parties that the department is losing money and should be closed down.

You are required to find out Break-even point to cover:

- All fixed costs for next year.
- Fixed cost specific to private department.

You are also required to find out the requisite fees per patient day to break –even in the year 2001 (Assuming demand same as in the year 2000)

[Note: Please adopt 365 days to a calendar year.]

Question 3

- (a) A Bank is analyzing the receivables of Jackson Company in order to identify acceptable collateral for a short term loan. The company's credit policy is 2/10 net 30. The Bank lends 80 per cent on accounts where customers are not currently overdue and where the average payment period does not exceed 10 days past the net period. A schedule of Jackson's receivables has been prepared. How much will the Bank lend on a pledge of receivables, if the Bank uses a 10 per cent allowance for each discount and returns? **(6 Marks)**

Account	Amount (Rs.)	Days outstanding in days	Average payment period historically
74	25,000	15	20
91	9,000	45	60
107	11,500	22	24
108	2,300	9	10
114	18,000	50	45
116	29,000	16	10
123	14,000	27	48
	1,08,800		

- (b) Big Oil is wondering to drill for oil in Westchester Country. The prospects are as follows: **(8 Marks)**

Depth of well	Total cost million of	Cumulative probability of	PV of Oil (if found) Millions of
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feet	Dollars	finding oil	Dollars
2,000	4	0.5	10
4,000	5	0.6	9
6,000	6	0.7	8

Draw a decision tree showing the successive drilling decisions to be made by Big Oil. How deep should it be prepared to drill?

- (c) “The information age has given a fresh perspective on the role of finance management and finance managers. With the shift in paradigm it is imperative that the role of Chief Financial Officer(CFO) changes from a controller to a facilitator” Can you describe the emergent role which is described by the speaker / author? (6Marks)

EITHER

Question 4

A company is evaluating a new venture that will cost Rs.10 crores. The venture will have a return on investment of 20 per cent and the firm forecasts a 12 per cent growth in earnings from the project. The treasurer has identified the following sources for financing the project: (20 Marks)

- Equity shares to be sold at Rs.400 per share.
- Convertible debentures with a 6 per cent coupon to net Rs.980 (face value Rs.1,000), and convertible at Rs.500 per share after 2002
- Debentures with warrants with a 6 per cent coupon to net Rs.980 (face value Rs.1,000), and with each bond having one warrant entitling the holder to buy one equity share at Rs.500 after 2002.

The financing decision is being made in the fourth quarter of 2000. Over the past ten years, A company has been growing at a 10 per cent rate of sales and earnings.

The treasurer expects the company to continue to grow at 10 per cent even though the firm has traditionally paid 40 per cent of its earnings as dividends. The treasurer expects A's Equity shares to continue to rise in price. Using the price trend over the past 5 years, he has projected probable market price ranges for the next three years. The historical data and the projections of the treasurer are given below:

Year	Historical Market Price	Year	Forecasted Probability	Market Price
1995	220	2001	20%	450
1996	250		60%	500
1997	330		20%	600
1998	270	2002	20%	480
1999	380		60%	550
Current	450		20%	620
		2003	20%	500
			60%	600
			20%	700

The performance Balance Sheet and Income Statement prepared by the treasurer for the year 2000 is shown below:

A Company Ltd., Proforma Balance Sheet (December 31, 2000)(Rs.'000)

	2000	1999		2000	1999
Equity shares (Rs.10)	10,000	10,000	Plant and Equipment	2,52,000	2,31,000
Share premium	40,000	40,000	(Less: Accumulated Deprn.	(62,000)	(59,000)
Retained Earnings	1,36,000	1,27,000		1,90,000	1,72,000
Bonds (7%)	90,000	52,000	Inventories	64,000	62,000
Mortgage (6%)	30,000	55,000	Receivables	44,000	45,000

Accounts payable	7,000	6,000	Cash and Bank Balances	22,000	18,000
Other current liabilities	11,000	10,000	Other current Assets	4,000	3,000
	3,24,000	3,00,000		3,24,000	3,00,000

Proforma Income Statement (Rs.'000)

	Sales	EBIT	Interest *	EBT	NIAT	EPS
2000	4,20,000	71,500	8,000	63,500	31,750	31.75
1999	3,80,000	65,000	7,000	58,000	29,000	29.00

*Rounded Off.

The management of A Ltd., was initially impressed by the fact that the new venture will increase sales by Rs.12 crores. Management is also interested in the expected 12 percent growth rate of the venture. As per Company's financial Policy, the firm's debt-asset ratio should not be above 40 per cent.

With the above information and detailed analysis for next 3 years, what will be the long-term sources of financing for the new proposal?

Make suitable assumptions in your answer, wherever necessary figures could be rounded off. Income Tax rate applicable to the company is to be taken at 50%.

OR

Dyer Ltd., manufactures a variety of products using a standardized process, which takes one month to complete. Each production batch is started at the beginning of a month and is transferred to finished goods at the beginning of the next month. The cost structure, based on current selling price is: **(20Marks)**

	(%)	(%)
Sales price		100
Variable costs		
Raw materials	30	
Other Variable Costs	40	
Total variable cost – used for stock valuation		70
Contribution		30

Activity levels are constant throughout the year and annual sales, all of which are made on credit are Rs.24,00,000. Dyer is now planning to increase sales volume by 50% and unit sales price by 10%; such expansion would not alter the fixed costs of Rs.50,000 per month, which includes monthly depreciation of plant of Rs.10,000. Similarly raw material and other variable costs per unit will not alter as a result of the price rise.

In order to facilitate the envisaged increases several changes would be required in the long run. The relevant changes are:

- The average credit period allowed to customers will increase to 70 days;
- Suppliers will continue to be paid on strictly monthly terms;
- Raw material stocks held will continue to be sufficient for one month's production;
- Stocks of finished goods held will increase to one month's output;
- There will be no change in the production period and other variable costs will continue to be paid for in the month of production;
- The current end of month working capital position is:

	(Rs.'000)
Raw material	60
WIP	140
Finished goods	70
Debtors	270
	470
Creditors	60
Net working capital – Excluding Cash	
	410

Compliance with the long term changes required by the expansion will be spread over several months. The relevant points concerning the transitional arrangements are :

- (i) The Cash balance anticipated at the end of the May is Rs.80,000.
- (ii) Upto and including June all sales will be made on one month's credit. From July all sales will be on the transitional credit terms which will mean;
 - a. 60% of sales will take 2 months' credit
 - b. 40% of sales will take 3 months' credit.
- (iii) Sales price increases will occur with effect from sales in the month of August.
- (iv) Production will increase by 50% with effect from the month of July. Raw material purchases made in June will reflect this.
- (v) Sales volume will increase by 50% from sales made in October.

Required:

- (a) Show the long-term increase in annual profit and long term working capital requirements as a result of the plans for expansion and a price increase. (Cost of financing the extra working capital requirements may be ignored.)
- (b) Produce a monthly cash forecast for the period from June to December, the first seven months of the transitional period. Prepare also a working capital position at the end of December.
- (c) Using your findings for (a) and (b) above, make brief comments to the management of Dyer Ltd., on the major factors concerning the financial aspects of the expansion which should be brought to their attention.

Assume that there are 360 days in a year and each month contains 30 days.

Question 5

(5×4=20 Marks)

- (a) Major elements of a completed financial plan
- (b) Non-financial performance measures
- (c) Zero base review in the context of budgeting
- (d) Packing order theory of capital structure
- (e) Effect of a Government imposed freeze on dividends on stock prices and the volume of capital investment in the background of Miller-Modigliani (MM) theory on dividend policy.