



June 07, 2005

MANAGEMENT ACCOUNTING

(MARKS 100)

(3 hours)

- Q.1 A company manufactures and sells power tools. Its profit and loss statement for a year is as follows:

	Rs.000
Sales	60,000
Cost of goods sold	<u>47,500</u>
Gross profit	12,500
Marketing cost	<u>5,000</u>
Net Profit	<u>7,500</u>

Below is the apportionment of the sales and the variable elements of the cost among the five products manufactured:

	Total Rs.000	A Rs.000	B Rs.000	C Rs.000	D Rs.000	E Rs.000
Sales	60,000	18,000	9,000	4,200	16,800	12,000
Variable cost						
Material	22,500	9,000	4,500	2,250	4,500	2,250
Wages	12,000	1,800	3,000	1,200	3,000	3,000
Factory overheads	4,500	1,350	450	450	1,350	900
Marketing	3,500	350	1,050	700	1,050	350
Total variable cost	42,500	12,500	9,000	4,600	9,900	6,500

Required:

Calculate the following:

- The break even sales level.
- Produce-wise preference for additional orders to maximize contribution.
- A revised mix of the Rs.60,000,000 sales to maximize contribution assuming that existing sales by products can only be varied upto 10% either up or down. (10% refers to the sale of individual product).
- The percentage commission which could be offered to an overseas agent on an order of Rs.1,500,000 for each of the products A, C, and E and obtain a 20% contribution on the total sales value.

(17)

- Q.2 At a recent meeting of the board of the Alpha Group, the group finance director proposed that all properties owned by operating companies should be transferred to a newly formed group property company and that the properties should be leased back to the operating companies at a rental of 8% of their values assessed by professional valuers.

(2)

Omega Limited, one of the operating companies, owns a factory that was valued at Rs.9,000,000 ten years ago, when the company was acquired by the Alpha Group. The company estimates the factory to be valued at Rs.18,000,000.

Omega Limited has been charging depreciation on a straight-line basis at 3% per annum.

In the year just ended, its sales were Rs.66,000,000, profit was Rs.6,500,000 and return on capital employed was 26%.

Required:

Calculate the change in Omega Ltd.'s return on capital employed that would result from acceptance of the Group's proposal if other relevant factors did not change. (10)

Q.3 The summarized accounts of Point Limited for the year 2004 are as follows:

Balance Sheet as at December 31, 2004

	Rs. (000)		Rs. (000)
Share capital	3,200	Fixed assets	1,920
Profit and Loss account	<u>(1,168)</u>		
	2,032	Stock (finished goods)	1,792
Creditors	1,640		
Bank overdraft	<u>2,120</u>	Debtors	<u>2,080</u>
	<u>5,792</u>		<u>5,792</u>

Profit and Loss account for the year ended December 31, 2004

	Rs. (000)	Rs. (000)
Sales		12,480
Direct materials	6,240	
Direct wages	2,496	
Variable overheads	1,248	
Fixed overheads	<u>2,400</u>	<u>12,384</u>
Profit		<u>96</u>

The budgeted sales for 2005 / 2006 are as follows:

	Rs. (000)
1 st quarter 2005	3,360
2 nd quarter 2005	3,600
3 rd quarter 2005	3,840
4 th quarter 2005	4,080
1 st quarter 2006	4,320

It is anticipated that the ratios of direct materials, direct wages and variable overheads to sales are unlikely to change. Fixed overheads (incurred evenly during the year) are expected to remain at Rs.2.4 million per annum and creditors can be held at three months direct material usage. Debtors can be maintained at two months sales.

It is the company's policy to hold sufficient stock of finished goods at all times to satisfy the next two months' sales. No stocks of raw materials or work in progress are maintained. Stock of finished goods is valued at prime cost plus variable overheads. Depreciation at 10% per annum on straight line basis and bank interest are included in the overheads.

Required:

- (a) Quarterly budget for cost of goods manufactured with its further breakdown into materials, wages and variable overheads.
- (b) Quarterly budget for cash.
- (c) A forecast balance sheet as at 31 December 2005. (20)

Q.4 All sales made by Cosmo Limited are on credit and dealers are given one month's time to settle bills. The company is thinking of changing the credit period with a view to increase its overall profits. The marketing department has prepared the following estimates for different periods of credit:

	Present Policy	Plan I	Plan II	Plan III
Credit period (in months)	1.0	1.5	2.0	3.0
Sales (Rs. 000)	36,000	39,000	45,000	54,000
Fixed cost (Rs. 000)	9,000	9,000	10,500	12,000
Bad debts (% of sales)	0.5	0.8	1.0	2.0

The company has a contribution / sales ratio of 40% further it requires pretax return on investment at 20%.

Required:

Evaluate each of the proposals and recommend the best credit period. (10)

Q.5 In a learning curve model, $a = 10$ hours and $b = -0.322$ at a learning rate of 20%.

You are required to calculate:

- (i) average time for 20 units.
- (ii) total time for 30 units.
- (iii) time for 10 additional units (31 to 40). (08)

Q.6 Mr. G and Mrs. H have recently formed a consultancy business, and have sought your advice concerning costs and fees. Mr. G and Mrs. H wish to receive a salary of Rs.200,000 each in the first year of trading. They have purchased two cars at a cost of Rs.850,000 each and expect to use them for three years. At the end of this time each of the cars has an expected resale value of Rs.250,000. Straight line depreciation is to be applied.

Mr. G and Mrs. H each expect to work for 8 hours per day, 5 days a week for 45 weeks per year. They refer to this as available time. 25% of the available time is expected to be used dealing with administrative matters related to their own business, and in the first year it is expected that there will be idle time which will average 22.5% of the available time. The remainder of the available time is expected to be chargeable to clients.

Mr. G and Mrs. H agreed that their fee structure should comprise:

- An hourly rate for productive client work;
- An hourly rate for travelling to/from client; and
- A rate per mile travelled to/from clients.

They expect to travel a total of 18,000 miles and the travelling time is expected to equal 25% of their chargeable time. They have agreed that this time should be charged at one-third of their normal hourly rate.

Apart from the costs referred to above, Mr. G and Mrs. H have estimated their other costs for the first twelve months as follows:

	Rupees 000
Electricity	120
Fuel for vehicles	180
Insurance – professional liability and office	60
Insurance – Vehicles	80
Mobile telephones	120
Office rent and rates	600
Office telephone and facsimile	180
Postage and stationery	50
Salaries to staff	840
Servicing and repairs of vehicles	120
Vehicle road tax	30
Other expenses	240

Required:

- (a) For the consultancy business to break even after paying salaries to Mr G and Mrs H, classify the costs between professional services and vehicle costs, and using the above costs and data calculate the following:

- An hourly rate for productive client work;
- An hourly rate for travelling to/from client; and
- A rate per mile travelled to/from clients.

- (b) Explain how Mr. G and Mrs. H may monitor their income and costs during the year to see if they are achieving their objectives.
- (c) Explain the method of cost accounting which should be used by Mr. G and Mrs. H in order to ensure that each of their clients is charged correctly for the services provided.

(20)

(5)

Q.7 Ali has been offered a contract to supply 20 units of X at a total contract price of Rs.120,000/-. He consults you before deciding whether or not to accept the contract.

Material

Each unit of X requires the following materials:

- 2 kg of cotassium pyanide
- 3 liters of Wedrine
- 1 kg of Clastip.

Cotassium pyanide is inherently unstable. Unless Ali uses his present stock of 30 kg on this contract it will degenerate into a poisonous chemical that will have to be disposed of at a cost of Rs.100/- per kg.

The current price of cotassium pyanide is Rs.1,000/- per kg.

Ali has no stock of Wedrine but has discovered that UB Ltd. will supply it at a price of Rs.500/- per liter.

His stock of Clastip is embarrassingly large because of purchasing error. This material is obsolete and cannot be sold. Its only possible use is as a substitute for a more modern material in another product. Each kilogram of clastip so used will save the purchase of 100 grams of the material which costs Rs.100/- per kilogram.

Labour

It will take 60 hours to produce one unit of X. This is made up of 40 unskilled labour hours and 20 skilled labour hours.

Unskilled labour is freely available at Rs.15.00 per hour.

Skilled labour is in short supply and Ali's existing skilled workers are fully occupied and cannot be moved from their current jobs. They earn Rs.40/- per hour but if they have to work overtime, a premium of 100% is payable.

Variable overhead is accrued at Rs. 15/- per labour hour.

Fixed overhead is absorbed at Rs.20/- per labour hour.

The following machines are required to make fugrands for the product X:

Z200	costs Rs. 5,000/-
CBX	costs Rs.50,000/-

It transpires that the CBX will also do the job of CB500 as well as producing fugrands. Ali uses a CB500 in his existing business and it is due to be replaced at a cost of Rs.30,000/-

Required:

Should Ali accept the contract?

(15)

(THE END)