THE INSTITUTE OF CHARTERED ACCOUNTANTS OF PAKISTAN

Final Examinations   Winter 2003

December 01, 2003

MANAGEMENT ACCOUNTING **(MARKS 100)**
Module F **(3 hours)**

Q. 1 Dawood has recently set up a small business which manufactures three different types of chairs to customers order. Each type is produced in a single batch per week and dispatched as individual item. The size of the batch is based on weekly customers order. The three different types of chairs are known as 'Comfort', 'Relaxer', and 'Standard'. The 'Comfort' is the most expensive chair. The 'Relaxer' is the middle of the range. The cheapest of the range is the 'Standard'. Dawood feels that it has great potential and hopes it will provide at least 50% of the sales revenue.

Dawood has employed Fareed, an experienced but unqualified accountant, to act as the organization's accountant. Fareed has produced figures for the past month, April 2003, which is considered as a normal month.

Profit statement for April 2003

	Rs.	Rs.
Sales revenue		79,800
Material Costs	17,250	
Labour costs	27,600	
Overheads	34,500	
		79,350
Profit		450

	Comfort	Relaxer	Standard
Units produced & sold during April	30	120	150
Selling price per chair	Rs 395	Rs 285	Rs 225
Less: Cost per chair			
Material	85	60	50
Labour	120	100	80
Overhead absorbed as labor hrs.	150	125	100
	355	285	230
Profit per chair	40	0	(5)

Dawood hopes to use these figures for budgets for next 3 months. He is pleased that the first monthly profit has been made. On the other hand, he is unhappy with Fareed's advice about the loss making 'Standard', which is either to reduce its production or to increase its price. Dawood is concerned because this advice goes against the strategy on which he based his business idea. After much discussion, Fareed says that he has heard of a new type of costing system, known as Activity Based Costing (ABC) and that he will recalculate the position on this basis. In order to do this, Fareed extracts the following information:

	Comfort	Relaxer	Standard
Wood (meters) per chair	10	9	9
Leather (meters) per chair	4	2	0
Labour (hours) per chair	24	20	16

The overheads included in April's profit statement were:

	Rs.
Set up costs	5,600
Purchasing of leather	4,000
Purchase of wood	2,400
Quality inspection of leather	3,200
Despatch and transport	6,000
Administration costs	13,300

Required:

(a) Use the ABC technique to prepare a revised cost statement for April 2003. **(15)**

(b) Explain whether the statement you have prepared in (a) above provides an adequate basis to make decisions on the future production volume and price of the "Standard". What other information or approach might you seek to adopt. **(05)**

Q. 2 POV Ltd manufactures three products, X, Y and Z that use the same machines. The budgeted profit and loss statements for the three products are as follows:

	X	Y	Z
	Rs. '000'	Rs. '000'	Rs. '000'
Sales	1,000	1,125	625
Prime costs	(500)	(562.5)	(437.5)
Variable overheads	(250)	(187.5)	(62.5)
Fixed overheads	(200)	(315)	(130)
Profit/(Loss)	50	60	(5)
Annual sales demand (units)	5,000	7,500	2,500
Machine hours per unit	20	21	26

Fixed overheads are absorbed on the basis of machine hours. The budgeted machine hours based on normal capacity were 322,500 hours.
However, after the budget had been formulated, an unforeseen condition has arisen which will limit the available machine capacity to 296,500 hours in the next period.

Required:

(a) Determine the optimum production plan for the next period and calculate the resulting profit that your production plan will yield. **(15)**

(b) Discuss problems which may arise as a result of failure of POV Ltd. to satisfy demand. **(10)**

Q. 3 A company manufacturing agricultural machinery is faced with the possibility of a strike by its direct production workers engaged on the assembly of one of its machines. The trade union is demanding an increase of 7%, backdated to the beginning of its financial year (Jan 01). The company expects that if a strike does take place, it will lose four weeks after which the union will settle for an increase of 5% similarly backdated.

The machine whose production would be affected by the strike is sold to distributors at a discount of 20% from the current recommended selling price of Rs.3,000.
Estimated cost for the machines are:

	Fixed costs per year (Rs.)	Variable costs per machine (Rs.)
Production	16,000	1,800
Distribution	1,000	100

Direct labour costs comprise 40% of the variable production costs. The budgeted output is 27,500 machines in 50 working weeks per year. If the strike takes place following events are expected by the company:

(a) Maintenance staff, whose wages are included in the fixed production costs, would be used to carry out an overhaul of the conveyor system using Rs.25,000 worth of materials. This overhaul would otherwise be undertaken by an outside contractor at a cost of Rs.100,000 including materials.

(b) Sales of 650 machines would be lost to competition. The balance that would ordinarily have been produced during the strike period, could however, be sold, but these machines would have to be made up in overtime working which would be at an efficiency rate of 90% of normal. This would entail additional fixed costs of Rs.10,000 and wage payments at 150% of normal rate.

Required:

(a) To state with explanation and full supporting data, whether from a purely economic point of view you would advise the management to allow the strike to go ahead, rather than agree to the union demand. **(15)**

(b) To explain factors, not considered in your above evaluation, that may have adverse effects for the company if the strike were to take place (mention at least five factors). **(10)**

Q. 4 "The learning curve is a simple mathematical model but its application to management accounting problems requires careful thought".

Required:

Having regard to the above statement, you are required to:

(a) Explain the 'cumulative average time' model commonly used to represent learning curve effects. **(06)**

(b) Sketch two diagrams to illustrate, in regard to a new product, the relative impacts of 70%, 80% and 90% learning curves on:
   (i) cumulative average hours per unit;
   (ii) cumulative hours taken **(05)**

(c) Explain the use of learning curve theory in budgeting, budgeting control and project evaluation. Explain the difficulties that the management accountant may encounter in such use. **(09)**

Q. 5 Wong Limited manufactures mother board for use in personal computers. Since the year 2000, business has been expanding very rapidly and the company has now encountered a liquidity problem as illustrated by Balance Sheets reproduced below:

Wong Ltd balance sheet as at

	30 June 2003	30 June 2002
Fixed Assets	6,160,000	5,280,000
Current assets		
Stock	4,400,000	1,900,000
Debtors	4,200,000	2,160,000
Cash	-	35,000
	8,600,000	4,095,000
Current liabilities		
Bank	3,160,000	825,000
Trade creditors	4,100,000	1,650,000
	7,260,000	2,475,000
Net current assets	1,340,000	1,620,000
	7,500,000	6,900,000
Capital and reserves		
Issued share capital	360,000	360,000
Reserves	7,140,000	6,540,000
	7,500,000	6,900,000

Other information:

1. Sales for year ended 30 June 2002 were Rs. 17.0 million, yielding a gross profit of Rs.3.33 million and a net profit before tax of Rs.0.82 million.
2. The company's tax rate is 30%.
3. For the year ended 30 June 2002 dividends of Rs. 36,000 were paid out.
4. During the year ended 30 June 2003, the company bought some new manufacturing equipment and recruited six more sales staff.
5. Sales for the year ended 30 June 2003 were Rs. 30 million, with a gross profit of Rs.4.5 million and a net profit before tax of Rs.600,000.
6. Dividends paid for the year ended 30 June 2003 amounted to Rs.72,000.

Required:

(a) Illustrating your answer with figures taken from the question, explain why it is not unusual for manufacturing companies to face a cash shortage when sales are expanding rapidly. **(05)**

(b) Explain why Wong Ltd has not increased its net profit, despite the large increase in sales between 2002 and 2003. **(05)**

(THE END)