THE INSTITUTE OF CHARTERED ACCOUNTANTS OF PAKISTAN

Professional Examinations Winter 2003

December 01, 2003

MANAGEMENT ACCOUNTING **(MARKS 100)**
PE-2 **(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 (a) Spreadsheets and databases are commonly used by accountants, but what is the difference between a database and a spreadsheet? **(05)**

(b) Explain using a simple numerical example of your own, how a spreadsheet may be used in the preparation of a cost budget and its comparison with actual results. Assume that only one product is made. Your answer should include a screen layout showing appropriate entries. Where formulae are to be used, these should be given and cross referenced to your screen layout. **(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

(b) Sales of 650 machines would be lost to competition. The balance tha ordinarily have been produced during the strike period, could howeve sold, but these machines would have to be made up in overtime workin 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 The Akbar Company operates a process – cost system. It has two departments, cleaning and milling. For both departments conversion costs are applied in proportion to the stage of completion. But direct materials are added at the beginning of the process in the cleaning department and additional direct materials are added at the end of the milling process. Following are the costs and unit production statistics for May. All unfinished work at the end of May is 25% completed. All beginning inventories were 80% completed as of May 1. All completed work is transferred to the next department:

<u>Beginning inventories</u>	<u>Cleaning</u>	<u>Milling</u>
Cleaning: Rs.10,000 direct materials, Rs. 8,000 conversion cost	Rs.18,000	
Milling: Rs.64,500 previous deptt. (transferred-in-cost) and Rs.24,500 conversion costs		Rs.89,000
<u>Current costs</u>		
Direct materials	Rs. 90,000	Rs. 6,400

Physical units

Units in beginning inventory	1,000	3,00[illegible]
Units started this month	9,000	7,400
Total units finished and transferred	7,400	6,000
Normal spoilage	500	400
Abnormal spoilage	500	0

Additional factors

(i) Spoilage is assumed to occur at the end of each of the two processes when the units are inspected.

(ii) Assume that there is no wastage, shrinkage, evaporation, or abnormal spoilage other than that indicated in the tabulation above.

(iii) Carry out unit cost calculation to three decimal places where necessary. Calculate final totals to the nearest rupee.

Required:

Using the weighted average method, show for each department:

(a) Analysis of physical units and an analysis of equivalent units. **(06)**

(b) Calculations of unit costs. **(06)**

(c) Detailed presentation of the total costs assigned to goods transferred out and the total costs assigned to ending work in process. **(08)**

(THE END)