THE INSTITUTE OF CHARTERED ACCOUNTANTS OF PAKISTAN

Final Examinations Winter 2006

December 5, 2006

MANAGEMENT ACCOUNTING

(MARKS 100)

Module F

(3 hours)

Q.1 AZKA Manufacturing Company is involved in manufacturing and sale of a single product called AZKA. Sales and operating profits of the company for the first two quarters of the year were as follows:

	First Quarter (Rs.)	Second Quarter (Rs.)	Increase %
Sales	750,000,000	1,125,000,000	50%
Operating profit	198,750,000	208,650,000	4.9%

Directors of the company are concerned about the lower profitability in the second quarter, as despite 50% increase in sales, operating profit increased by a nominal percentage only. The other data relating to the company's operations is as under:

		First Quarter	Second Quarter
Sales in units	- actual	1,000,000	1,500,000
	- budgeted	1,500,000	1,500,000
Production in units	- actual	1,500,000	1,200,000
	- budgeted	1,500,000	1,500,000
Ending inventory in units		500,000	200,000
Sales price per unit		750	750
Variable manufacturing cost per unit		250	250
Fixed manufacturing costs	Rs.	450,000,000	450,000,000
Marketing and administrative expenses (Rs. 1,250,000 fixed)		1,250,000	1,350,000

Required:

(a) Prepare an income statement for second quarter under:
   (i) Absorption costing
   (ii) Direct costing

(b) Reconcile the profits of the two quarters in such a way as to highlight the reasons for low profit percentage in the second quarter. **(12)**

Q.2 Leads Pharmaceuticals Limited is engaged in the production and marketing of a number of products. PQR is their main product. This product is produced in three different formats. Following data pertains to one month of production:

Final Product:

Product	Production Capacity	Sale Price (Rs. Per unit)
PQR – Tablets	1,000,000 tablets	1.00
PQR – Syrup	50,000 bottles	10.00
PQR – Injections	100,000 injections	2.00

Raw Materials:

Item	Source	Price (per unit)
ABC	Imported from a single source	Rs. 10.00
DEG	Both Imported / Local	Rs. 5.00
XY	Local	Rs. 2.00
YZ	Imported	Rs. 0.50

Quantities Required for Production:

Material Item	Tablets	Syrup	Injections
ABC	1 unit for 100 Tablets	1 unit for 10 bottles	1 unit for 50 injections
DEG	1 unit for 50 Tablets	1 unit for 5 bottles	1 unit for 25 injections
XY	--	1 unit per bottle	--
YZ	--	--	1 unit per injection

Packing:

Material Item	Tablets	Syrup	Injections	Price per unit (Rs.)
Strips	10 Tab/Strip	--	--	1.00
Bottles	--	1	--	1.00
Spoons	--	1	--	0.10
Vials	--	--	1	0.50
Boxes	20 Strips / Box	4 Bottles / Box	10 Injections / Box	2.00
Cartons	10 Boxes / Carton	10 Boxes / Carton	10 Boxes / Carton	10.00

Other direct costs are as follows:

Tablets	Re. 0.01 per unit
Syrup	Re. 0.09 per unit
Injections	Re. 0.03 per unit

- The product is in high demand and the company is able to sell as much as it can produce. However, there is a shortage of raw material ABC. Only 15,000 units of ABC are available with the company for production in the next month.

- To maintain the market share, the marketing staff has suggested that at least 25% of the production of each format should be maintained in the market.

Required:
Prepare a production plan for next month which would give maximum profit while maintaining the market share at a reasonable level in each category. **(20)**

Q.3 A company manufactures three products. Extracts from its standard cost data are given below:

Units of Material in Final Product

Material	Unit cost Rs.	Product A	Product B	Product C
V	55	5	4	-
W	50	3	2	6
X	35	-	3	5
Y	60	-	1	4
Z	80	1	1	-

No losses occur in the use of materials V, W, X, and Y. The expected yield of material Z is 80% although 90% is considered as an ideal standard.

For the next four-week period, budgeted sales are:

Product	Sales Units
A	12, 000
B	15, 000
C	10, 000

It is anticipated that 5% of the production of Product B will be rejected during inspection and will be disposed of immediately at 10% of the normal selling price.

The stocks on hand at the beginning of the period are expected to be:

		Units
Finished goods	A	1,800
	B	2,000
	C	1,600
Raw Materials	V	20,000
	W	30,000
	X	15,000
	Y	5,000
	Z	9,000

It is planned to increase finished goods stocks by 10% in order to reduce the chances of stock outs. However, raw material stocks are considered to be too high and a reduction of 10% is planned by the end of the period.

Required:

(a) Prepare budgets for the next four week period for the following:
  (i) Production (in quantity); **(03)**
  (ii) Materials usage (in quantity); **(04)**
  (iii) Materials purchases (in quantity and value). **(04)**

(b) Briefly describe the four main types of standards under standard costing. **(02)**

Q.4 Reliable Cement Ltd. has an installed capacity of 125 000 tonnes of cement per annum. Its present capacity utilization is 80 per cent. The company produces cement in bags of 50 kgs each. Cost structure per bag of cement, as estimated by the management is given below:

	Rupees
Limestone	30
Other raw materials	50
Packing material	20
Direct labour	60
Fuel	100
Factory overheads (including deprecation of Rs 20)	60
Administrative overheads	40
Selling overheads	50
Total cost	410
Profit margin	90
Selling price	500
Add: Government levies (20 per cent of selling price)	100
Invoice price to consumers	600

Following additional information is also available:

(i) Desired holding period of various materials is Limestone : 1 month; Other raw materials : 3 months; Fuel : 2.5 months; Packing material : 1.5 months.

(ii) Work in process is equal to approximately half month's production (assume that full units of materials are required in the beginning; other conversion costs are to be taken at 50 per cent).
(iii) Finished goods are in stock for a period of 1 month before they are sold.
(iv) Debtors are extended credit for a period of 3 months.
(v) Average time lag in payment of wages is approximately ½ month and that of overheads is one month.
(vi) Average time lag in payment of government levies is 1 month.
(vii) The credit period extended by suppliers of fuel, packing materials and other raw materials is 1 month, ½ month and 2 months respectively.
(viii) Minimum desired cash balance is Rs. 5 million.

Required:
From the information given above, determine the net working capital requirement of the company for the current year. **(15)**

Q.5 Desktop Products propose to install a central air-conditioning system in their city office building. Three systems - gas, oil and solid fuel are under consideration. The costs of installing and running the three systems are estimated as follows:

(i) Equipment and installation costs (payable on 1st January 2007):

	Rs.
Gas	1,700,000
Oil	1,500,000
Solid Fuel	1,400,000

(ii) Annual fuel costs (payable at the end of each year) will depend on the severity of the weather and on the rate of increase in fuel prices. At the prices expected to exist during 2007, annual fuel costs have been estimated as follows:

	Severe Weather (Rs.)	**Mild Weather (Rs.)**
Gas	400,000	240,000
Oil	530,000	370,000
Solid Fuel	450,000	360,000

The company estimates that in each year there is a 70% chance of severe weather and a 30% chance of mild weather. Fuel prices during 2008 and 2009 are expected to increase either by 10% per annum (probability equal to 0.4) or 15% per annum (probability equal to 0.6). The rate of price increase in 2008 is expected to prevail in 2009 also.

(iii) Maintenance costs (payable at the end of the year in which they are incurred):

Gas	Rs. 25,000	(per annum)
Oil	Rs. 20,000	(per annum)
Solid fuel	Rs.100,000	(in 2008 only)

All maintenance costs are fixed by contract when the system is installed. Desktop Products have a cost of capital of 10% per annum. The discounting factors at 10%, for years 1, 2, and 3 are 0.909, 0.826 and 0.751 respectively

Required:
Prepare calculations showing which central air-conditioning system should be installed, assuming that the decision will be based on the expected present values of the costs of each system. **(14)**

Q.6 Your assistant has been preparing the profit and loss statement for the week ended October 31. Unfortunately he had to proceed on leave in an emergency. The incomplete statement and relevant data are shown below:

		Rs.	**Rs.**
Sales			150,000
Standard cost:			
direct materials			
direct wages			
overhead			
Standard profit			
Variances	**Fav / (Adv)**	**Fav / (Adv)**	
	Rs.	**Rs.**	
Direct materials			
price	(400)		
usage	(300)		
total		(700)	
Direct labour			
rate			
efficiency			
total			
Overhead			
expenditure			
volume			
total			
Total variance			
Actual profit			

- The standard price of direct materials used is Rs. 600 per ton. It is expected that 2,400 units will be produced from each ton of material;
- Standard labour rate per hour is Rs. 40/-;
- There are 60 employees working as direct labour;
- There are four working weeks in October;
- The budgeted fixed overhead for October is Rs. 76,800/-
- Standard production is 20 units per hour per employee;
- A forty hour week is in operation;

Actual data pertaining to the week is as follows:

Materials issued	20 tonnes
Labour payments	4 employees @ Rs. 42 per hour
	6 employees @ Rs. 38 per hour
	others at standard rate
Actual factory overheads	Rs 18,000

Required:
Complete the above statement for the week ended October 31. **(18)**

Q.7 With reference to the concept of Total Quality Management (TQM):

(a) Identify and explain the categories of quality costs. Also give two examples in each case.
(b) How quality can be measured? **(08)**

(THE END)