THE INSTITUTE OF CHARTERED ACCOUNTANTS OF PAKISTAN

Intermediate Examinations   Spring 2007

March 07, 2007

COST ACCOUNTING (MARKS 100)

Module D (3 hours)

Q.1 The marketing department of Moon Engineering Limited has prepared the following projected profit and loss account:

	2007	2008
	Rupees in million	
Sales	750.0	800.0
Less:		
Direct materials	187.5	200.0
Direct labour	112.5	120.0
Production overhead	135.0	144.0
	435.0	464.0
Contribution margin	315.0	336.0
Less: Fixed costs	297.8	312.7
Net Profit	17.2	23.3

The marketing director is not happy with the sales growth shown in the forecasts. Similarly, the finance director has shown his concern on the lower profitability. They have also pointed our certain factors which were ignored while developing the above projections. Consequently, a comprehensive study was carried out at all levels which has resulted in the following revisions:

(i) Sales forecast for 2007 has been projected at Rs. 1.0 billion.
(ii) Sales prices are projected to remain the same in 2008. However, the total sales have been projected to increase by 20% over the year 2007.
(iii) Material prices and costs of production overheads in 2008 will be higher by 10% as compared to 2007;
(iv) Fixed costs will remain the same except for an expenditure of Rs. 12 million to be incurred on a special advertising campaign during the year 2008.

Required:
(a) Revise the projected profit and loss account for both years; **(05)**
(b) Calculate breakeven sales and margin of safety% for 2007 and 2008; **(04)**
(c) Draw a profit volume chart in respect of each year. **(04)**

Q.2 (a) The production and cost data of Planet Manufacturing (Pvt.) Limited for the year 2006 and projections for the year 2007 are as follows:

	2006	**2007**
Production (units)	175,000	225,000
Total costs (Rs.)	11,900,000	16,518,600

The rate of inflation in 2007 has been estimated at 15%.

Required:
Calculate the fixed and variable costs for 2007 in 'real' terms. **(05)**

(b) What is a 'cost unit' and 'cost center'? Give two examples of each. **(04)**

Q.3 Star Chemicals Limited uses three processes to manufacture a product "ST". After the third process the product is transferred to finished goods warehouse.

The following data for the month of January 2007 is available:

	PROCESS		
	I	**II**	**III**
	----------Rs. in thousands-------		
Raw material – A	1,500	-	-
Other direct materials	2,500	3,200	4,000
Direct wages	5,000	6,000	8,000
Direct expenses	1,600	1,885	2,020

Following additional information is also available:

(i) Production overheads are absorbed @ 80% of direct wages;
(ii) 20,000 units of raw material 'A' having a cost of Rs. 1,500,000 were initially put in process-I.
(iii) In each process, an amount of Rs. 500,000 has been wrongly classified as direct wages, instead of indirect wages.
(iv) The actual output obtained during the month was as under:

Process I	18,500 units
Process II	16,000 units
Process III	16,000 units

(v) Normal loss in each process is 10%, 10% and 5% respectively. Scrap value per unit is Rs. 100 for process-I, Rs. 200 for process-II and Rs. 300 for process-III.
(vi) There was no stock at the start or at the end of any process.

Required:
Prepare the following in the books of Star Chemicals Limited:
(a) Ledger account for each process; **(12)**
(b) Abnormal gain/(loss) account. **(04)**

Q.4 Venus Pharmaceutical Company Limited faced a very high labour turnover during the last year. The issue has now been settled after the announcement of an attractive payment plan.

Following data relating to last year has been made available to you:

(i) Sales during the last year was Rs. 726 million and contribution margin was 10% of sales;
(ii) Total number of actual direct labour hours was 510,000;
(iii) As a result of delays by the Personnel Department in filling vacancies, 10,000 potential productive hours were lost. All these potential lost hours could have been sold at the prevailing rate;
(iv) The actual direct labour hours included 40,000 hours attributable to training new recruits, out of which 25% of the hours were unproductive;
(v) The labour turnover resulted in following additional costs:

	Rupees
Recruitment costs	284,000
Selection costs	128,500

Required:
Calculate the profit foregone by the company during the last year on account of labour turnover. **(05)**

Q.5 The production engineering staff of Skyline Company Limited, has set the following standard mix for the production of one unit of Product X:

	Weight (Kg)	**Rate Per Kg (Rs.)**	**Amount (Rs.)**
Material A	0.50	10.00	5.00
Material B	0.30	5.00	1.50
Material C	0.20	2.00	0.40
	1.00		6.90
Standard loss (10%)	0.10		-
	0.90		6.90

Actual costs incurred on the production of 927,000 units were as follows:

	Weight (Kg)	**Rate Per Kg (Rs.)**
Material A	530,000	10.00
Material B	280,000	5.30
Material C	190,000	2.20

Required:

(a) Calculate the mix and yield variances. **(06)**

(b) Reconcile actual material costs with the standard costs. **(05)**

Q.6 The following figures have been extracted from the budget of Uranus Limited for the year ended June 30, 2007:

	Rupees
Direct labour	35,000,000
Electricity	25,000,000
Repairs and maintenance	5,200,000
Depreciation	14,200,000
Other expenses	8,000,000

Budgeted annual production is 40,000 units. It is the policy of the company to charge factory overhead on the basis of direct labour costs. Following additional information is available for the first six months:

Direct material consumed (Rs.)	16,250,000
Direct labour cost (Rs.)	17,500,000
Factory overhead applied (Rs.)	?
Good units produced	20,000
Spoiled units (considered abnormal)	750

Spoiled units were sold for Rs. 1,200 per unit. Actual direct labour cost includes the cost of bringing certain defective units to saleable condition, amounting to Rs. 100,000.

Required:

Prepare journal entries to record the transactions that took place during the first six months of the year and support your answer with computation. **(17)**

Q.7 Sun Fashions (Pvt.) Limited, a chain of retail garments store, has planned to introduce a new fancy dress for babies at all its seven outlets in the country.

The company is also considering to introduce a matching crown scarf and handbag with the new dress. Currently they are expecting to sell 15,000 dresses in the first six months but the management feels that this sale can be increased by 30% if matching crown scarf and handbag are marketed together.

The data relating to sales and production of dress, crown scarf and handbag are as follows:

(i) Each dress requires three and half meter of cloth which is easily available in the market at a price of Rs. 100 per meter. Part of the material left unused can be used to manufacture a crown scarf and handbag.
(ii) The cost of cutting the dress, crown scarf and handbag is Rs. 35, Rs. 15 and Rs. 20 respectively.
(iii) The leftover pieces can be sold as under:
   – if only the dress is manufactured, Rs. 20 per dress;
   – if crown scarf and handbag is also manufactured, Rs. 5 per set.
(iv) The company has a contract with a designer firm at a monthly fee of Rs. 1,500,000. However, in the case of handbag and crown scarf, the company will have to pay a one time additional amount of Rs. 150,000 to the designer firm.
(v) Each handbag will require a metal hook which is available in the market at Rs. 10 per hook. However, the company has sufficient number of metal hooks in stock which was purchased at Rs. 6 per hook. If the company does not opt for the manufacturing of handbags, these hooks can be sold at Rs. 8 per hook.
(vi) The dresses, crown scarves and handbags are expected to be sold according to the following mix:

Complete set	60%
Dress and crown scarf only	10%
Dress and handbag only	20%
Dress only	10%

(vii) The selling price and variable costs (besides those mentioned above) of each product are as follows:

	Selling Price per unit (Rs.)	**Variable Costs (besides those mentioned above)**
Dress	2,000	40% of selling price
Crown scarf	400	55% of selling price
Handbag	500	60% of selling price

Required:
Calculate the incremental profit or loss as a result of manufacturing handbags and crown scarves with the dress. **(16)**

Q.8 Jupiter Manufacturing Company Limited consists of two manufacturing departments and one service department. The company applies factory overhead on the following basis:

Manufacturing Department	
A-1	70% of direct labour cost
A-2	Rs. 40 per direct labour hour

Following relevant information is available:

	Manufacturing Dept.		Service Department
	A-1	**A-2**	
Direct materials (Rs.)	433,000	313,000	
Direct labour (Rs.)	388,800	259,200	
Direct labour hours	3,500	4,000	
Number of employees	140	220	40
Floor space (Sq. ft.)	1500	1500	750

The other expenses are as under:

	Rupees
Indirect labour	217,400
Factory office expenses	43,200
Depreciation of computer	45,000
Factory building expenses	54,000
Service department's expenses	112,800

Indirect labour and service department's expenses are apportioned on the basis of direct labour cost. Factory expenses and computer depreciation are allocated in the ratio of number of employees to all the departments including service department.

Required:
Prepare a factory overhead distribution statement showing over / under applied FOH for each department. **(13)**

(THE END)