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The Institute of Chartered Accountants of Pakistan

Cost Accounting

Intermediate Examinations – Autumn 2010 | September 3, 2010
Module D | 100 marks - 3 hours

Q.1 Ahsan Enterprises (AE) produces three products Alpha, Beta and Gamma. The management has some reservations on the method of costing. Consequently, the cost accountant has reviewed the records and gathered the following information:

(i) The costs incurred during the latest quarter were as follows:

	Rupees
Direct material	240,000
Direct labour	1,680,000
Indirect wages – machine maintenance	600,000
– stores	360,000
– quality control	468,000
– cleaning and related services	400,000
Fuel and power	2,800,000
Depreciation on plant, machinery and building	1,560,000
Insurance on plant and machinery	240,000
Insurance on building	60,000
Stores, spares and supplies consumed	1,800,000
Rent, rates and taxes	1,200,000

(ii) The production report for the previous quarter depicted the following information:

	Production (units)	Direct labour hours per unit	Machine hours per unit	Inspection hours per unit
Alpha	12,000	20.00	6.00	2.0
Beta	20,000	5.00	8.00	3.0
Gamma	45,000	4.00	10.00	4.0

(iii) Other relevant details are as follows:

	Alpha	Beta	Gamma
Factory space utilization	40%	35%	25%
Cost of machinery (Rs. in thousands)	6,000	4,000	3,000
Stores consumption (Rs. in thousands)	720	270	810
No. of units inspected	600	400	1,350

The rate of depreciation for plant and machinery is 10% per annum.

Required:

(a) Determine the factory overhead cost per unit for products Alpha, Beta and Gamma by using single factory overhead rate based on direct labour hours.

(b) Recalculate the factory overhead cost per unit, for each product, by allocating individual expenses on the basis of specific utilisation of related facilities. ***(13 marks)***

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Q.2 Quality Limited (QL) is a manufacturer of washing machines. The company uses perpetual method for recording and weighted average method for valuation of inventory.

The following information pertains to a raw material (SRM), for the month of June 2010.

(i) Opening inventory of SRM was 100,000 units having a value of Rs. 80 per unit.
(ii) 150,000 units were purchased on June 5, at Rs. 85 per unit
(iii) 150,000 units were issued from stores on June 6.
(iv) 5,000 defective units were returned from the production to the store on June 12.
(v) 150,000 units were purchased on June 15 at Rs. 88.10 per unit.
(vi) On June 17, 50% of the defective units were disposed off as scrap, for Rs. 20 per unit, because these had been damaged on account of improper handling at QL.
(vii) On June 18, the remaining defective units were returned to the supplier for replacement under warranty.
(viii) On June 19, 5,000 units were issued to production in replacement of the defective units which were returned to store.
(ix) On June 20, the supplier delivered 2,500 units in replacement of the defective units which had been returned by QL.
(x) 150,000 units were issued from stores on June 21.
(xi) During physical stock count carried out on June 30, 2010 it was noted that closing inventory of SRM included 500 obsolete units having net realizable value of Rs. 30 per unit. 4,000 units were found short.

Required:
Prepare necessary journal entries to record the above transactions. ***(15 marks)***

Q.3 Naseem (Private) Limited (NPL) is a manufacturer of industrial goods and is launching a new product. The production will be carried out using existing facilities. However, the capacity of a machine would have to be increased at a cost of Rs. 3.0 million.

The budgeted costs per unit are as under:

Imported material	1.3 kg at Rs. 750 per kg
Local material	0.5 kg at Rs. 150 per kg
Labour	2.0 hours at Rs. 300 per hour
Variable overheads	Rs. 200 per labour hour
Selling & administration cost - variable	Rs. 359

Other relevant details are as under:

(i) Net weight of each unit of finished product will be 1.6 kg.
(ii) During production, 5% of material input will evaporate. The remaining waste would be disposed off at a rate of Rs. 80 per kg.
(iii) The cost of existing plant is Rs. 10 million. The rate of depreciation is 10% per annum.
(iv) Administration and other fixed overheads amount to Rs. 150,000 per month. As a result of the introduction of the new product, these will increase to Rs. 170,000 per month. The management estimates that 20% of the facilities would be used for the new product.
(v) The company fixes its sale price at variable cost plus 25%.
(vi) Applicable tax rate for the company is 35%.

Required:
Compute the sales quantity and value, required to achieve a targeted increase of Rs. 4.5 million in after tax profit. ***(10 marks)***

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Q.4 Mazahir (Pakistan) Limited manufactures and sells a consumer product Zee. Relevant information relating to the year ended June 30, 2010 is as under:

Raw material per unit	5 kg at Rs. 60 per kg
Actual labour time per unit (same as budgeted)	4 hours at Rs. 75 per hour
Actual machine hours per unit (same as budgeted)	3 hours
Variable production overheads	Rs. 15 per machine hour
Fixed production overheads	Rs. 6 million
Annual sales	19,000 units
Annual production	18,000 units
Selling and administration overheads (70% fixed)	Rs. 10 million

Salient features of the business plan for the year ending June 30, 2011 are as under:

(i) Sale is budgeted at 21,000 units at the rate of Rs. 1,100 per unit.
(ii) Cost of raw material is budgeted to increase by 4%.
(iii) A quality control consultant will be hired to check the quality of raw material. It will help improve the quality of material procured and reduce raw material usage by 5%. Payment will be made to the consultant at Rs. 2 per kg.
(iv) The management has negotiated a new agreement with labour union whereby wages would be increased by 10%. The following measures have been planned to improve the efficiency:
- 30% of the savings in labour cost, would be paid as bonus.
- A training consultant will be hired at a cost of Rs. 300,000 per annum to improve the working capabilities of the workers.

On account of the above measures, it is estimated that labour time will be reduced by 15%.
(v) Variable production overheads will increase by 5%.
(vi) Fixed production overheads are expected to increase at the rate of 8% on account of inflation. Fixed overheads are allocated on the basis of machine hours.
(vii) The company has a policy of maintaining closing stock at 5% of sales. In order to avoid stock-outs, closing stock would now be maintained at 10% of sales. The closing stocks are valued on FIFO basis.

Required:
(a) Prepare a budgeted profit and loss statement for the year ending June 30, 2011 under marginal and absorption costing.
(b) Reconcile the profit worked out under the two methods. ***(20 marks)***

Q.5 Jaseem Limited manufactures a stationery item in three different sizes. All the sizes are manufactured at a plant having annual capacity of 1,800,000 machine hours.

Relevant data for each product is given below:

	Small Size	**Medium Size**	**Large Size**
Sales price per unit (Rs.)	75	90	130
Direct material cost per unit (Rs.)	25	32	35
Labour hours per unit	3	4	5
Variable overheads per unit (Rs.)	5	7	8
Machine hours per unit	2	4	5
Demand (Units)	210,000	150,000	180,000
Minimum production required (Units)	100,000	100,000	100,000

Other relevant information is as under:

(i) Cost of the monthly payroll is Rs. 1,500,000.
(ii) Fixed overheads are Rs. 110,000 per month and are allocated on the basis of machine hours.

Required:
Recommend the number of units to be produced for each size. ***(12 marks)***

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Q.6 ABC Limited produces and markets a single product. The company operates a standard costing system. The standard cost card for the product is as under:

Sale price	Rs. 600 per unit
Direct material	2.5 kg per unit at Rs. 50 per kg
Direct labour	2.0 hours per unit at Rs. 100 per hour
Variable overheads	Rs. 25 per direct labour hour
Fixed overheads	Rs. 10 per unit
Budgeted production	500,000 units per month

The company maintains finished goods inventory at 25,000 units throughout the year. Actual results for the month of August 2010 were as under:

		Rupees in '000
Sales	480,000 units	295,000
Direct material	950,000 kgs	55,000
Direct labour	990,000 hours	105,000
Variable overheads		26,000
Fixed overheads		5,100

Required:
Reconcile budgeted profit with actual profit using the relevant variances (2 variances each for sale, raw material and labour and 4 variances for overheads). ***(18 marks)***

Q.7 Pakair Limited manufactures special tools. Information pertaining to payroll costs for the month of April 2010 is as under:

Department	**Gross salaries excluding overtime**	**Overtime**	**Income tax Deductions**
	Rupees in thousands		
Machining	1,000	75	25
Assembly	400	40	15
Tool room	25	5	-
Warehouse	75	15	-

Details of other benefits are as under:

(i) 35 paid leaves are allowed per year including annual, casual and sick leaves.
(ii) Annual bonus equal to one month salary is paid in June.
(iii) The company maintains a contributory Provident Fund in which 8.33% of the monthly salary is contributed by the employer as well as the employees.
(iv) During April 2010, the employees availed leaves that cost Rs. 85,000.
(v) Advances paid and recovered during the month amounted to Rs. 17,000 and Rs. 28,000 respectively.
(vi) The company follows a policy of accruing bonus and paid leaves on a monthly basis.

Required:
Prepare journal entries to record payroll and its disbursements. ***(12 marks)***

(THE END)

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