Chartered Accountants
Professional Consultants
www.gcaofficial.org fb.com/gcaofficial

Subject Name :

Cost Accounting Mock Exam Paper

RAET Name : PAC, Lahore

Mock Exam Spring 2014
Module : D
(Additional reading time - 15 minutes)
February 21, 2014
100 marks – 3 hours

Q.1. Shah Jehan Automobiles is a subsidiary of RevTech Industries and is involved in assembling motor vehicles. The components are imported from Japan and assembled locally at Shah Jehan's factory.

Due to tough competition the Management of Shah Jehan is considering outsourcing the assembly of gearboxes to a Chinese company Xianwing Electronics. Currently:

- The gearbox of one car costs 70,000 Yen to import and the company has to pay a further 35% custom duties in equivalent Rupees.
- It is estimated that 10% of labour hours worked are spent in the assembly of the gearbox.
- The capacity of the assembly plant is 300 cars per month and is likely to increase in the future.

Costs of assembling

Labour Cost per car	Rs. 760,000
Assembly shop utilities and maintenance per month	Rs. 5,000,000

Under the proposal, the components for the Gearbox will be sent directly to Xianwing for assembly. Import duties from Japan to China are 25% in equivalent Yuans.

Xianwing will charge 20,000 Yuan per gearbox for assembly. Import duties from China to Pakistan are 12% in equivalent rupees. The rate has been agreed for a year and is subject to negotiation every year.

Because of the longer processing time Shah Jehan will have to maintain one month's buffer stock at all times. The company's cost of capital is 18%.

The space saved by eliminating the gearbox assembly shop will then be used as a storage area and will lead to cost savings of Rs. 6 million per annum. The company will also save on utilities and maintenance.

Requirement:

Evaluate the option and Recommend whether the company should accept the offer. *(11 marks)*

Exchange rates

1 Yuan = 0.87 Rupees

1 Yen = 1.22 Rupees

1 Yen = 1.40 Yuan

Q.2 You have received a request from EXE Ltd. to provide a quotation for the manufacture of a specialized piece of equipment. This would be a one-off order, in excess of normal budgeted production. The following cost estimate has already been prepared:

		Note	Rs.
Direct materials:			
Steel	10 m2 at Rs.5.00 per sq. metre	1	50
Brass fittings		2	20
Direct labour			
Skilled	25 hours at Rs.8.00 per hour	3	200
Semi-skilled	10 hours at Rs.5.00 per hour	4	50
Overhead	35 hours at Rs.10.00 per hour	5	350
Estimating time		6	100
			770
Administrative overhead at 20% of production cost		7	154
			924
Profit at 25% of total cost		8	231
Selling price			1155

Notes:

1. The steel is regularly used, and has a current stock value of Rs.5.00 per sq. metre. There are currently 100 sq. metres in stock. The steel is readily available at a price of Rs.5.50 per sq. metre.
2. The brass fittings would have to be bought specifically for this job: a supplier has quoted the price of Rs.20 for the fittings required.
3. The skilled labour is currently employed by your company and paid at a rate of Rs.8.00 per hour. If this job were undertaken it would be necessary either to work 25 hours overtime which would be paid at time plus one half *or* to reduce production of another product which earns a contribution of Rs.13.00 per hour.
4. The semi-skilled labour currently has sufficient paid idle time to be able to complete this work.
5. The overhead absorption rate includes power costs which are directly related to machine usage. If this job were undertaken, it is estimated that the machine time required would be ten hours. The machines incur power costs of Rs.0.75 per hour. There are no other overhead costs which can be specifically identified with this job.
6. The cost of the estimating time is that attributed to the four hours taken by the engineers to analyse the drawings and determine the cost estimate given above.
7. It is company policy to add 20% on to the production cost as an allowance against administration costs associated with the jobs accepted.
8. This is the standard profit added by your company as part of its pricing policy.

Required:

(a) Prepare, on a relevant cost basis, the lowest cost estimate that could be used as the basis for a quotation. Explain briefly your reasons for using *each* of the values in your estimate. ***(10 marks)***

(b) There may be a possibility of repeat orders from EXE Ltd. which would occupy part of normal production capacity. What factors need to be considered before quoting for this order? ***(04 marks)***

(c) When an organisation identifies that it has a single production resource which is in short supply, but is used by more than one product, the optimum production plan is determined by ranking the products according to their contribution per unit of the scarce resource.

Using a numerical example of your own, reconcile this approach with the opportunity cost approach used in (a) above. ***(06 marks)***

Q.3. Nida is the CEO of an HR consultancy firm which she founded. The firm offers a variety of services. For the "Executive Hiring Services" HR specialists are hired at a per hour rate which is negotiated per assignment. The specialists are paid for hours actually spent planning and conducting the interviews.

Clients are charged at the hours spent by the firm conducting the interviews. The hourly rate to be charged to clients is fixed at the start of the year and is calculated to absorb all related costs. Based on her limited knowledge of Accounting, Nida budgeted a profit of Rs. 2,000,000 from the "Executive Hiring Services" based on the following assumptions:

Hours billed to clients	**8,000**
	Rupees
Paid to specialists @ 1,600 / Hour	25,600,000
Conference room rentals	1,400,000
Salaries of permanent staff	2,000,000
Advertising costs	1,000,000
Total costs	**30,000,000**

At the end of the year the actual results were as follows:

	Rupees
Revenue from clients	28,800,000
Paid to specialists (16,000 Hrs)	28,000,000
Conference room rentals	1,400,000
Salaries to permanent staff	2,000,000
Advertising costs	1,000,000
Profit / (Loss)	**(3,600,000)**

Nida is at a loss to understand how the Loss was incurred as all factors other than those managed above were the same as budgeted. She has hired you as an accountant to investigate. Using the following variances, demonstrate the underlying causes of the Losses.

Requirement:

a) Sales Volume Variance (Competed at Budgeted Hourly Rate) *(04 marks)*

b) Labour efficiency variance *(03 marks)*

c) Labour rate variance *(03 marks)*

d) Prepare a reconciliation of budgeted profit to actual profit using the above variances. *(02 marks)*

Q.4 A division of Electronic Appliances Limited sold 6,000 units of refrigerators during the year ended September 30, 2008, the sale price being Rs. 24,000 per unit.

The opening work in progress comprised of 500 units which were complete as regards material but only 40% complete as to labour and overheads. The closing work in progress comprised of 1,200 units which were also complete as regards material but only 50% complete as to labour and overheads. The finished goods inventory was 800 units at the beginning of the year and 1000 units at the year end.

The work in progress account had been debited during the year with the following costs:

	Rs. in '000'
Direct material	83,490
Direct labour	14,256
Variable overheads	10,890
Fixed overheads	17,490

As compared to the previous year, the costs per units have increased as follows:

Direct material	10%
Direct labour	8%
Variable overheads	10%
Fixed overheads	6%

The selling and administration costs for the year were:

	Rupees
Variable cost per unit sold	1,600
Fixed costs	12,000,000

Required:

(a) Compute the cost per unit, by element of cost and in total, assuming FIFO basis.

(b) Prepare profit statements on the basis of:

(i) Absorption costing

(ii) Marginal costing.

(20 marks)

Q.5 Ahmed Chemicals have been facing problems with labour relations over the past couple of year. Tough competition and rising material costs have made it difficult to fulfill commitments for incentives and bonuses. The Union is now threatening to strike unless a workable reward program is introduced.

A program is being considered under which the workers will be paid on time saved on production good output. It is proposed that workers will be paid 80% of the normal wage rate on total hours saved per month.

Production figures of the last month are as follows:

Units produced	45,000
Units rejected from quality department	1,710
Total Labour Hours paid	15,000

	Rs.
Total Labour cost	450,000
Total Raw material cost	1,125,000
Variable Overheads	675,000

- Under the new scheme it is estimated that labour efficiency will improve thereby reducing the current product time by 25%.
- It is estimated that 5% of the raw material used would now be wasted because of negligence.
- It is estimated that the current rejection rate will double because of poor workmanship.
- Current proportion of rejections will be used to determine hours saved.
- Variable overheads are absorbed per labour hour basis.
- Good output to increase by 10%.

Required

Evaluate whether management should accept the program or not. ***(15 marks)***

6 A company made the following estimates at the beginning of the year 2004 for one of the components they use:

Annual usage	100,000 units
Ordering costs	Rs. 5,000 per order
Annual carrying costs	Rs. 10 per unit per annum

Throughout the year the company used the EOQ based on the above data for reordering but the actual usage of components turned out to be 25% higher.

Required:

(a) Calculate the total cost associated with stock.

(b) Calculate the amount that could have been saved if the correct EOQ had been used.

(10 marks)

7 Jameel Ltd. manufactures two products Orange and Mango by processing a raw material in Department 1. Orange is then further processed in Department 2 with no loss. Mango is further processed in department 3. By-product Leaf is also produced in department 3 which can be sold in the market.

It is estimated that after processing in Department 1, 55% of the raw material is converted into processed Orange and 40% into processed Mango. No product is in a saleable condition at this stage.

The selling price of Orange is Rs 45 per kilo and Mango is Rs 64 per kilo. Leaf can be sold at Rs. 12 per kilo.

It is estimated that in department 3, 10% of all input becomes leaf and 88% becomes Mango.

During the month of January 198,000 kilos of Orange were produced.

It is company policy to subtract revenue of by products from total costs of the departments in which they are produced.

	Labour	Overheads
Department 1	1,060,000	795,000
Department 2	720,000	540,000
Department 3	880,000	660,000

Raw material consumed per unit started is Rs. 32 per kilo.

(12 marks)

Required:

Calculate the profit for the month of January assuming all output is sold.

(THE END)