# EASTERN UNIVERSITY, SRI LANKA <br> FACULTY OF COMMERCE AND MANAGEMENT <br> PART - II EXAMINATION IN BACHELOR OF BUSINESS <br> ADMINISTRATION - 1998/1999 (EXTERNAL DEGREES - MARCH - 2005 ) <br> BBA - 301 MANAGERIAL ACCOUNTING 

TIME : 03 HOURS
Q. XY Ltd. Manufactures two products and it has recently introduced a standard costing system. The standard cost data is as follows.

| PRODUCT <br> COST ELEMENT | PRODUCT a | PRODUCT B |
| :---: | :---: | :---: |
| Material | P- 2 Kgs @ Rs. 5 per Kg | P-4 Kgs @ Rs. 5 per Kg |
|  | Q-4 Kgs @ Rs. 7.50 per Kg . | Q-2 Kgs @Rs.7.50 per Kg |
| Labour | $\begin{aligned} & \text { Skilled - } 2 \text { hours @ } \\ & \text { Rs.10/= } \end{aligned}$ | Skilled - 1 hour @ Rs. 10 per hour |
|  | Unskilled Rs.7.50/= | Unskilled - 2 hours @ Rs. 7.50 per hour |
| Variable Overheads | Rs. 10 per hour of unskilled and skilled labour hours | Rs. 10 per hour of skilled and unskilled labour hours |
| Fixed Overheads | Rs. 15 per hour of skilled labour only | Rs. 15 per of skilled labour only |
| Profit Margin | 1/9 of standard full cost | Rs. 15 per unit |

Budgeted quantities for August 2004 were as follows:

|  | A | B |
| :--- | :---: | :---: |
| Production | $3,000.00$ | $5,000.00$ |
| Sales | $2,500.00$ | $4,000.00$ |

Budgeted fixed production overhead for a month is Rs.165,000.00.

In this operation $P$ is introduced at the beginning of the process and there are no process losses. Labour and overheads occur evenly throughout the process. $Q$ is introduced only at 50\% completion stage and again there are no process losses.

It is the policy of the firm to exclude all overheads when valuing work in progress if work in progress is less than $60 \%$ complete and to include all overheads if work in progress is more than $60 \%$ complete.
The actual data gathered for the month of August 2004 was as follows:

1. Materials

Stocks as at August 1, 2004

P - 2,000 Kgs
Q - $1,000 \mathrm{Kgs}$
Purchases in August 2004
P - 30,000 Kgs at Rs. $6 /=$ per Kg
Q - $25,000 \mathrm{Kgs}$ at Rs.7/= per Kg

Stocks as at August 31,2004
P - 3,000 Kgs
Q - $2,000 \mathrm{Kgs}$

The material price variances is calculated at the time of purchasing the raw materids
2. Work in Progress

As at August 1, 2004

A - 200 units ( $40 \%$ complete)
B - 50 Q units ( $80 \%$ complete)
As at August 31, 2004

A - 500 units ( $40 \%$ complete)
B - $\quad 1,000$ units ( $20 \%$ complete)
3. During August 2004, 3500 units of $A \& 4500$ units of $B$ have been transferred finished goods stocks
4. Labour

5. Variable overhead incurred - Rs.350,000/=
6. Fixed overhead incurred - Rs.175,000/=
7. During the month 3000 units of $A$ and 4500 units of $B$ have been sold at Rs.210/= and Rs.125/= per unit respectively.

You are required to:

1. Calculate the standard cost and selling price per unit.
2. Value of opening and closing work in progress
3. Calculate the following variances

- Material (Price \& Usage)
- Labour (Rate \& Efficiency)
n Variable overhead (Expenditure \& Efficiency)
- Fixed overhead (Expenditure \& Volume)
" $\quad$ Sales variances (Price \& Volume)
2
1

Shown below is an extract from next year's budget for a company manufacturing three different products in three production departments.

| Products | A | B | C |
| :--- | :---: | :---: | :---: |
| Production | 4000 units | 3000 units | 6000 units |
| Direct labour requirements : | $7 /=$ per unit | $4 /=$ per unit | $9 /=$ per unit |
| Cutting Department | Hours per unit | Hours per unit | Heurs per unit |
| Skilled operators | 3 | 5 | 2 |
| Unskilled operators | 6 | 1 | 2 |
| Machining department | 0.5 | 0.25 | 0.33 |
| Pressing department | 2 | 3 | 4 |
| Machine hour requirements: | 2 | 1.5 | 2.5 |
| Machining department |  |  |  |

The skilled operators employed in the Cutting Department are paid Rs. 4 per hour anj the unskilled operators are paid Rs. 2.50 per hour. All the operators in the Machining and Pressing Departments are paid Rs. 3 per hour.

|  | Production Department |  |  | Serive Depratment |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | CUTTING | MACHINING | PRESSING | ENGINEERIN G | PEP |
| Budgeted Total Overheads | 154.482 | 64.316 | 58,452 | 56,000 | 34 |
| Service department costs are to other departments in the following basis |  |  |  |  |  |
| Engineering services | 20\% | 45\% | 25\% | - | 101 |
| Personnel services | 55\% | 10\% | 20\% | 15\% |  |

## The company uses absorption costing system.

## Required:

Calculate as equitably as possible the total budgeted manufacturing cost
(i) One completed unit of product A and
(ii) One incomplete unit of product $B$ which has been processed by the cutting and machining Departments but which has not yet been passed into pressing Department.
(20 Marks)
The Library Co Ltd Produce a Product A. This Product is processed at $A_{1}, A_{2}$ and $A_{3}$ Departments before transferring to stores. At the department of $A_{3}$, a by-product arises. The by-product $Z$ is further processed in the department of $B P$ at the cost of Rs.4/= per unit. A distribution and selling cost of Rs.2/= per unit is added to the by-product and sold at Rs. 18/= per unit.

| COST |  | PROCESS |  |
| :---: | :---: | :---: | :---: |
|  | $\mathrm{A}_{1}$ | $\mathrm{A}_{2}$ | $\mathrm{A}_{3}$ |
| Normal loss | 10\% | 5\% | 10\% |
| Unit Scrape Value (Rs) | 1 | 3 | 5 |
| The following information is for the month of December 2003 out put (units) |  |  |  |
| Out put unit $A_{1}$ - | 17,600 |  |  |
| Process $\mathrm{A}_{2}$ - | 16,800 |  |  |
| Process $A_{3}$ - | Output $\times 14,000$ units |  |  |
| Process BP - | By product Z 840 units |  |  |
| cost |  | PROCESS |  |
| , | $\mathrm{A}_{1}$ (Rs) | $\mathrm{A}_{2}$ (Rs) | $\mathrm{A}_{3}(\mathrm{Rs}$ ) |
| Direct material (20,000 units) | 40,000 | - | - |
| Added Material | 12,000 | 25,280 | 51,440 |
| Direct Wages | 10,000 | 12,000 | 20,000 |
| Direct Expensives | 8,000 | 12,400 | 8,160 |

The Budgeted fixed overheads for the month of December is Rs.168,000/= The overheads are absorbed on the basis of direct wages. There is no opening or closing Working in process.

You are required to prepare :
a $\quad A_{1}, A_{2}, A_{3}$ and $B P$ process $A c c o u n t s$
b. Abnormal loss Abnormal Gain accounts
(22 Marks
a. A firm which uses cost (full cost) pricing makes 100 each of a range products J, K, L, M and N each month. The unit costs of the whole range are shown below.

|  | J | K | L | M | N |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Rs.(00) | Rs.(00) | Rs.(00) | Rs.(00) | Rs. (0 |
| Direct Materials | 10 | 12 | 13 | 16 | 19 |
| Direct labour | 8 | 9 | 10 | 13 | 13 |
| Variable <br> overhead | 4 | 5 | 7 | 9 | 10 |
| Fixed over head | 22 | 26 | 30 | 38 | 42 |
|  | 3 | 4 | 5 | 7 | 8 |
|  | 5 | 30 | 35 | 45 | 50 |

Market conditions have moved against the firm and competitors are chargin: the following prices for the whole range, beginig with J: Rs.21; K: Rs.34; Rs.38; M: Rs.51, N: Rs.40;
a. Show how the firm can still compete at the new prices, and earnitse an overall profit of Rs. 20,000 per month producing K, L and M. Explit

- fully how this can be so.
b. Why is the marginal costing approach not suitable for analyzit long - term decisions?

