**Examination No._____**

# THE PUBLIC ACCOUNTANTS EXAMINATION COUNCIL OF MALAWI

## 2010 EXAMINATIONS

## ACCOUNTING TECHNICIAN PROGRAMME

## PAPER TC9: COSTING AND BUDGETARY CONTROL

**TUESDAY, 7 DECEMBER 2010** **TIME ALLOWED : 3 HOURS**
**9.00 AM - 12.00 NOON**

**INSTRUCTIONS:**

1. You are allowed **15 minutes** reading time **before the examination begins** during which you should read the question paper and, if you wish, make annotations on the question paper. However, you are **not** allowed, **under any circumstances**, to open the answer book and start writing or use your calculator during this reading time.

2. Number of questions on paper – 7.

3. **FIVE** questions **ONLY** to be answered.

4. Each question carries 20 marks.

5. Show all your workings in order to gain full marks.

6. Marks will be awarded for clarity, correctness and logical presentation.

7. Use of non-programmable calculators is allowed.

8. Begin each answer on a fresh page.

9. **DO NOT OPEN THIS PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.**

This question paper contains 8 pages

1. Tulinje Ltd is preparing its budgets for the four months commencing 1 January 2011. The company makes and sells a single product.

The details of the product are thus:

| | |
|---|---|
| Sales price | K400 per unit |
| Direct material | K50 per unit |
| Direct labour | K100 per unit |
| Variable overhead | K60 per unit |

The following information is also available (in '000 units) from November 2010 to April 2011:

| | November | December | January | February | March | April |
|---|---|---|---|---|---|---|
| Sales | 130 | 150 | 170 | 190 | 180 | 180 |
| Production | 140 | 150 | 180 | 200 | 220 | 220 |

(1) Fixed overhead is budgeted at K10,000,000 per month, including depreciation of K4,000,000.
(2) Wages are paid 75% during the month in which they are earned and 25% in the following month.
(3) Variable overhead is paid in the month in which it is incurred.
(4) Material costs are paid two months after the material is used in production.
(5) There is a tax liability of K14,000,000 to be settled in February 2011.
(6) The company will purchase a new van for K5,000,000 in January 2011 and will pay for it in the same month. The present van will be sold for K3,000,000 receivable in March 2011.
(7) 5% of the monthly sales are for cash. The remainder will be sold on credit and the debtors will be allowed to pay one month after the sales.
(8) 10% of the credit sales in November are expected to end in bad debts.
(9) The cash in hand balance on 1 January 2011 is expected to be K10,000,000.

**Required**

(a) Prepare a cash budget for the four months commencing 1 January 2011. **11 Marks**

(b) Mention **three** advantages of preparing cash budgets. **3 Marks**

(c) Explain, by giving **two** reasons, why there may be a difference between the budgeted cash balance at 30 April 2011 and the budgeted profit before taxation for the four months.

Note: (You are not required to calculate the budgeted profit) **4 Marks**

(d) Mention any **two** costs that are associated with holding excess cash. **2 Marks**

**(TOTAL: 20 MARKS)**

**Continued/……**

2. Mweo Engineering Ltd produces three products, A, B and C, in a single process. There is a normal loss in the process of 10% of input, and the products emerge in the ratio of 5:3:2 respectively.

The following budgeted figures are available for the month of January 2011:

| | | |
|---|---|---|
| Material input | 80,000 kilos | K2 per kilo |
| Labour | 3,000 hours | K6 per hour |
| Variable overhead | 3,000 hours | K3 per hour |

Fixed overhead is absorbed at 50% of labour cost.

There is no abnormal loss. The normal loss is sold for scrap value at K1 per kilo which is credited to the process account.

There was no opening or closing work-in-progress.

The products sell for: A K15 per kilo
B K12 per kilo
C K10 per kilo

**Required:**

(a) Define the following terms in relation to process costing:

(i) Normal loss; **1 Mark**
(ii) Abnormal loss. **1 Mark**

(b) Using the following methods to apportion the joint processing costs, calculate separately the costs of products A, B and C (to the nearest K),

(i) Relative weight of output; **6 Marks**
(ii) Sales value of output. **3 Marks**

(c) Products A, B and C can be further processed into X, Y and Z respectively. The selling prices would be X: K18 per kilo, Y: K15 per kilo and Z: K12 per kilo. This further processing of the products would cost K1 per kilo of input, with a 10% normal material loss of the input, with no scrap value.

**Required:**

State, with supporting figures, which (if any) of the products A, B and C should be further processed into X, Y and Z. **8 Marks**

(d) Other than the weight of output and sales value of output bases, state **one** basis used in the apportionment of production costs for joint products, in process costing. **1 Mark**

**(TOTAL: 20 MARKS)**

3. Tawewa Ltd prepared the following budgeted figures for the first two periods of its financial year:

| | Period 1 '000 units | Period 2 '000 units |
|---|---|---|
| Production | 20 | 22 |
| Sales | 20 | 21 |
| Costs | K'000 | K'000 |
| Direct material | 60 | 66 |
| Direct labour | 100 | 110 |
| Production overhead | 160 | 166 |
| Depreciation | 50 | 50 |
| Sales overhead | 110 | 113 |

Overheads comprise fixed costs and proportionately variable costs. The variable elements of sales overhead and distribution overhead vary with sales units. All other variable costs vary with production units.

For period 2 the actual figures were:

| | '000 units |
|---|---|
| Production | 21.9 |
| Sales | 20.5 |
| | K'000 |
| Direct material | 68 |
| Direct labour | 103 |
| Production overheads | 170 |
| Depreciation | 50 |
| Sales overheads | 115 |

**Required:**

(a) Prepare a revised budget for costs for period 2 based on the actual activity for the period, clearly showing how fixed and variable elements of overheads have been separated. **11 Marks**

(b) Calculate the cost variances for period 2 arising from the revised budget in (a), above. **5 Marks**

(c) State **two** reasons why the investigation of variances is important in a standard costing system. **4 Marks**

**(TOTAL : 20 MARKS)**

**Continued/……**

4. Mabuchi Cosmetics has two departments, A and B. Both departments absorb fixed overheads using a direct labour hour rate. The following figures relate to a recent period:

| **Department A** | |
|---|---|
| Budgeted fixed overhead | K56,000 |
| Budgeted overhead absorption rate | K7 per hour |
| Budgeted production units | 4,000 |
| Actual production units | 3,800 |
| Under/over absorbed overhead | K5,000 under |
| Standard hours produced | 7,600 |
| Capacity ratio | 90% |

| **Department B** | |
|---|---|
| Budgeted fixed overhead | K48,000 |
| Budgeted direct labour hours | 8,000 |
| Budgeted hours per unit | 4 |
| Actual hours worked | 7,500 |
| Actual production units | 1,800 |
| Fixed overhead absorbed | K45,000 |
| Actual fixed overhead | K46,000 |
| Standard hours produced | 7,200 |
| Efficiency ratio | 96% |
| Capacity ratio | 93.75% |

**Required:**

(a) For Department A, calculate the following:

| | | |
|---|---|---|
| (i) | Budgeted direct labour hours; | **1 Mark** |
| (ii) | Budgeted hours per unit; | **1 Mark** |
| (iii) | Actual hours worked; | **1 Mark** |
| (iv) | Fixed overhead absorbed; | **1 Mark** |
| (v) | Actual fixed overhead; | **1 Mark** |
| (vi) | Efficiency ratio. | **1 Mark** |
| | | **6 Marks** |

(b) For Department B, calculate the following:

| | | |
|---|---|---|
| (i) | Budgeted overhead absorption rate | **1 Mark** |
| (ii) | Budgeted production units | **1 Mark** |
| (iii) | Under/over absorbed overheads | **1 Mark** |
| (iv) | Activity (volume) ratio | **1 Mark** |
| | | **4 Marks** |

**Continued/……**

(c) Overheads can be absorbed on a percentage basis as an alternative to using hourly rates.

**Required:**

State **three** different ways in which the percentage basis may be used to absorb overheads. **6 Marks**

(d) (i) State **one** method, other than the hourly rate or percentage basis, that can be used to absorb overheads. **2 Marks**

(ii) Why are hourly rates generally accepted to be the most appropriate method of overhead absorption? **2 Marks**

**(TOTAL: 20 MARKS)**



**Continued/……**

5. Fortune Ltd has an opportunity to undertake a one year contract for a major manufacturer, Smith Ltd. The company has sufficient spare capacity to undertake the contract, and the production department has prepared the following cost statement:

| | | K'000 |
|---|---|---|
| Material A | In stock at cost price | 200 |
| Material B | On order at contract price | 400 |
| Material C | To be ordered at current price | 350 |
| Labour: | | |
| Machine operator | 50 weeks at K6,000 per week | 300 |
| Labourer | 50 weeks at K3,000 per week | 150 |
| Supervisor | | 500 |
| Other costs: | | |
| Depreciation of machine | | 200 |
| Variable overheads | | 200 |
| | | 2,300 |

Smith Ltd has offered Fortune Ltd K2.28 million and Fortune's production department are inclined to reject the contract, but have sought a second opinion from the accounting department. The following information has now been made available:

(1) Material A is obsolete and could not be sold.It could be used as a substitute for material W on another job, which would cost K1 million to purchase a similar quantity, but would need processing at a cost of K400,000 to make it useable.

(2) Material B has not yet been delivered, and would have no other use. If it has to be sold, the current price is K200,000.

(3) The machine operator will be transferred from another department where he currently earns K5,000 per week. The labourer would be hired for the duration of the contract, and the supervisor would be transfered from another department where he is currently a deputy supervisor at a salary of K450,000 per year.

(4) The machinery is not currently in use. The company has recently received an offer of K800,000 for it. Its resale value in one year's time will be K400,000.

(5) There is no opportunity of further work from Smith Ltd.

**Required:**

(a) Define the following terms:

(i) Relevant cost **1 Mark**
(ii) Sunk cost **1 Mark**
(iii) Fixed cost **1 Mark**

(b) State whether or not Fortune Ltd should accept the contract, clearly showing your calculations to support your conclusion. **14 Marks**

(c) State any **three** principles that you have applied to reach the conclusion in (b), above based on the calculations done. **3 Marks**

**(TOTAL : 20 MARKS)**

**Continued/……**

6. The following information relates to one of the products retailed by Anthon's Ltd, which completed its first year of trading on 30 November 2010. During the first year of trading, the following transactions took place:

Purchases of Product A:

| | |
|---|---|
| December 2009 | 1,000 units at K30 per unit |
| February 2010 | 1,400 units at K35 per unit |
| November 2010 | 1,100 units at K40 per unit |

Sales of product A:

| | |
|---|---|
| January 2010 | 800 units at K50 per unit |
| March 2010 | 600 units at K56 per unit |
| September 2010 | 900 units at K60 per unit |

There was no opening stock at the beginning of the financial year.
It is the accounting policy of Anthon's Ltd to use the First In First Out (FIFO) method of stock valuation.

At 30 November 2010, a stock-take ascertained the following, in relation to Product A:

(1) 950 units were in perfect condition.
(2) 150 units were in a damaged condition and would be sold at K20 per unit after repairs costing K3 per unit have been carried out.
(3) Any missing units are to be treated as uninsured loss.

**Required:**

(a) Using the FIFO method of stock valuation, prepare a stores card to show the value of the closing stock before taking into account the damaged stock or any other stock losses. **7 Marks**

(b) Calculate the value of stock to be included in the company's statement of financial position (balance sheet) as at 30 November 2010. **4 Marks**

(c) Calculate the profit on product A for the year ended 30 November 2010. **6 Marks**

(d) Other than FIFO, state any other **three** methods used in stock valuation. **3 Marks**

**(TOTAL: 20 MARKS)**



**Continued/……**

7. (a) (i) Explain the difference between "fixed" and "flexible budgets", with reference to the preparation and uses of such budgets. **3 Marks**

(ii) Define, giving examples, the term "Principal Budget Factor" and explain its importance in budgeting. **3 Marks**

(b) The Cost volume profit analysis is based on certain assumptions that may not always be correct.

**Required:**

Explain any **five** of such assumptions and state why they may not always be correct. **5 Marks**

(d) Absorption costing comprises of three stages: cost allocation, cost apportionment and cost absorption.

**Required:**

Define **each** of the three terms. **6 Marks**

(d) Define the term "overtime premium" and state how it would be treated:

(i) if worked specifically at a customer's request.

(ii) if worked as a matter of company policy. **3 Marks**

**(TOTAL : 20 MARKS)**



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