

STRICTLY CONFIDENTIAL

THE PUBLIC ACCOUNTANTS EXAMINATION

COUNCIL OF MALAWI

2009 EXAMINATIONS

ACCOUNTING TECHNICIAN PROGRAMME

PAPER TC9: COSTING AND BUDGETARY CONTROL

(DECEMBER 2009)

TIME ALLOWED :3 HOURS

SUGGESTED SOLUTIONS

1. (a) Supplier verification Fixed cost K360,000 at both activity levels
- Receiving Variable cost Constant K56.00 at both activity levels
- Purchase order processing Mixed cost Different at both activity levels

$$\text{Variable cost per order} = \frac{\text{K}(1,032,000 - 432,000)}{(25,000 - 15,000) \text{ orders}}$$

K40 per order

Total cost for 25,000 orders K1,032,000

Variable cost K40 x 25,000 orders 1,000,000

Fixed cost 32,000

- (b) At 20,000 purchase orders,

Supplier verification K360,000

Receiving K56.00 x 20,000 K1,120,000

Purchase order processing K40 x 20,000 + K32,000 K832,000

- (c) (i) Cost formula

$$y = a + bx$$

$$y = \text{K}(360,000 + 32,000) + \text{K}(56.00 + 40.00)x$$

$$y = 392,000 + 96x$$

- (ii) $y = \text{K}392,000 + \text{K}96.00 \times 22,000 \text{ orders}$

Total cost = K2,504,000

2. (a) Number and value of closing finished goods inventory

| | |
|-------------------------------|---------------------|
| Opening inventory | 13,500 toys |
| Production | <u>200,000</u> toys |
| Total toys available for sale | 213,500 toys |
| Sales of toys | <u>207,000</u> toys |
| Closing inventory | 6,500 toys |
| Production cost | <u>K68.50</u> |
| Value of closing inventory | <u>K445,250</u> |

(b) Statement of cost of goods sold

| | |
|---|------------|
| | K |
| Opening inventory | 924,750 |
| Add Production cost $K68.50 \times 200,000$ | 13,700,000 |
| Subtract Closing inventory | 445,250 |
| Cost of goods sold | 14,179,500 |

(c) Income Statement

| | |
|---|-------------------|
| | K |
| Sales $207,000 \times K95.00$ | 19,665,000 |
| Cost of sales | <u>14,179,500</u> |
| Gross profit | 5,485,500 |
| Sales commission $K2.50 \times 207,000$ | 517,500 |
| Advertising expenses | 360,000 |
| Administrative expenses | <u>740,000</u> |
| Net profit | <u>3,868,000</u> |

- 3 (a) Home Decorators should use job order costing method as each job is unique requiring different resources in terms of designs, labour and materials. This means it is not possible to standardize resource usage.

- (b) Installation cost of unit

| | | K |
|---------------|-----------------|---------------|
| Materials | | 35,000 |
| Direct labour | K150 x 50 hours | 7,500 |
| Overheads | K130 x 50 hours | <u>6,500</u> |
| Total cost | | <u>49,000</u> |

- (c) An actual costing system will be difficult to use as this will result in delays in determining costs of units as well as making the actual costs of resource usage on the units highly variable. This will adversely affect planning as well as pricing of the services provided.

4. (a) Monthly budgets

- (i) Production budget

| Month | January | February | March |
|----------------------------|---------|----------|--------|
| Sales | 20,000 | 24,000 | 16,000 |
| Add closing inventory | 12,000 | 8,000 | 9,000 |
| Total requirement | 32,000 | 32,000 | 25,000 |
| Subtract opening inventory | 10,000 | 12,000 | 8,000 |
| Production | 22,000 | 20,000 | 17,000 |

(ii) Direct labour hours budget

| Month | January | February | March |
|-------|----------------------------------|----------------------------------|----------------------------------|
| | <u>22,000 x 4 hours = 88,000</u> | <u>20,000 x 4 hours = 80,000</u> | <u>17,000 x 4 hours = 68,000</u> |

Direct materials cost budget

| Month | January | February | March |
|-------|-----------------------------------|-----------------------------------|-----------------------------------|
| | <u>22,000 x K100 = K2,200,000</u> | <u>20,000 x K100 = K2,000,000</u> | <u>17,000 x K100 = K1,700,000</u> |

(iii) Sales budget

| Month | January | February | March |
|-------|------------------------------------|------------------------------------|------------------------------------|
| | <u>20,000 x K800 = K16,000,000</u> | <u>24,000 x K800 = K19,200,000</u> | <u>16,000 x K750 = K12,000,000</u> |

(b) Budgeted Contribution for Quarter 1, 2010

| | | K |
|--|---|-------------------------|
| Sales | K(16,000,000 + 19,200,000 + 12,000,000) | 47,200,000 |
| Direct materials cost | | = 5,900,000 |
| Direct labour cost (168,000 hours x K150 + 59,500 hours x K16,0) | | <u>34,720,000</u> |
| Contribution | | <u><u>6,580,000</u></u> |

5. (a) Cost of tests completed during the month of August**Statement of equivalent units**

| | Units | Materials | | Conversion costs | |
|----------------------------------|--------------------|-----------|--------|------------------|-------------------|
| | | % | EU | % | EU |
| Opening work-in-progress | 1,250 | - | - | 40 | 500 |
| Units introduced | 22,500 | 100 | 22,500 | 100 | 22,500 |
| Closing work-in-progress | 2,500 | 100 | 2,500 | 40 | 1,000 |
| Finished goods valuation | | | | | |
| Opening work-in-progress: | | | | | |
| Cost brought forward – Materials | 1,250 x K180 | | | | 225,000 |
| Conversion costs | 1,250 x 60% x K660 | | | | 495,000 |
| Costs to completion | 500 x K660 | | | | 330,000 |
| Units introduced | 22,500 x K840 | | | | <u>18,900,000</u> |
| Total value at standard cost | | | | | <u>19,950,000</u> |

(b) The process costing principle requires that the costs of the period be divided by the output of the period i.e. current period costs and current period output should be used in calculating current period unit costs and the FIFO method of valuing production attempts to follow this. Standard costing will be useful in this case as the organization will have set standards for the current period to be used in valuing production unlike the weighted average cost method which merges both costs in opening work-in-progress and current period costs as well as output in opening work-in-progress and current period output where the standards would be different. The FIFO method greatly simplifies the valuation of production in a process costing operation as it removes the need to calculate the actual cost per equivalent unit for current period production.

(c) Cost variances(i) Materials price variance

| | | |
|----------|---------------------|-----------------------|
| Standard | 23,750 tests x K180 | K4,275,000 |
| Actual | 102,000 ml x K42.50 | <u>4,335,000</u> |
| Variance | | <u>60,000</u> Adverse |

(ii) Materials usage variance

| | | |
|-----------------|---------------------|-------------------------|
| Standard | 23,750 tests x 4 ml | 95,000 ml |
| Actual | | 102,000 ml |
| Variance | | <u>7,000</u> ml Adverse |
| Standard price | | <u>K45</u> |
| Variance amount | | <u>K315,000</u> Adverse |

(iii) Labour rate variance

| | | |
|----------|---------------|------------------------|
| Standard | 23,750 x K360 | K8,550,000 |
| Actual | 47,000 x K190 | <u>8,930,000</u> |
| Variance | | <u>380,000</u> Adverse |

(iv) Labour efficiency variance

| | | |
|-----------------|------------------|-----------------------------|
| Standard | 23,750 x 2 hours | 47,500 hours |
| Actual | | 47,000 hours |
| Variance | | <u>500</u> hours Favourable |
| Standard rate | | <u>K180</u> |
| Variance amount | | <u>K90,000</u> Favourable |

6. (a) Definition of terms

- (i) A relevant cost is a future cost or revenue that will differ amongst alternatives. An example is the cost of the RAV4 or the additional costs to be incurred to restore the vehicle to a good running condition.
- (ii) A sunk cost is a cost that regardless of the option chosen cannot be avoided i.e. it is a past cost that has already been incurred. An example is the K1,000,000 paid to acquire the pick-up vehicle or the K120,000 already incurred on repairs.

- (iii) An opportunity cost is the value of the benefit foregone or sacrificed in favour of an alternative course of action. An example is foregoing setting up the business venture in favour of the lucrative job with the international non-governmental organization.

(b) List of relevant costs

| | |
|----------------------------|------------|
| Engine overhaul | K70,000 |
| Spray painting | K80,000 |
| Tyres | K36,000 |
| Upholstery | K50,000 |
| Miscellaneous repairs | K34,000 |
| Purchase price of the RAV4 | K1,000,000 |

- (c) Mayamiko must sell the pick-up vehicle for K360,000 and raise an additional amount of K640,000 in order to buy the RAV4 at K1,000,000. Although she has already spent K1,120,000 on the pick-up vehicle, these costs are irrelevant as they have already been incurred and do not matter anymore whichever option is chosen.

7. (a) (i) The financial accounting information system is concerned with producing information for external users e.g. investors, creditors, government agencies using rules and conventions set by statute and standard setting bodies. its outputs are financial statements such as the statement of financial position (balance sheet), the statement of comprehensive income (income statement) and the statement of cash flows which are used for investment decisions, stewardship evaluation, activity monitoring and regulatory measures.
- (ii) The cost accounting information system is concerned with producing information for internal use to satisfy management objectives of costing products, services and other objects of interest to management, planning, control and decision making using criteria set by people within the organization.

(iii) Cost behaviour refers to whether a cost changes when the level of output changes. In order to determine cost behaviour it is imperative to understand the underlying cost and the measure of output associated with the cost object.

(iv) The **three** major cost behaviour patterns are:

Fixed costs which are costs that in total are constant within the relevant range as the level of activity varies. An example of a fixed cost is the salary of the production supervisor in a factory producing work suits.

Variable costs are costs that in total vary in direct proportion to changes in the level of activity. An example a variable cost is the direct materials used in making the work suits.

Mixed costs are costs that have both fixed and variable components i.e. some components vary with changes in the level of activity while the others do not. An example of a mixed cost is the pay of a sales representative of the work suits who is paid a fixed monthly salary plus a commission which varies with the level of sales.

(c) (i) Budgets are quantitative expressions of the plans which identify objectives and actions required to achieve them. Budgets can be used for planning as a means of translating the goals and strategies of an organization into operational terms as well as for control through the setting of standards, receiving feedback on actual performance and taking corrective action whenever actual performance is differs significantly from planned performance.

(ii) Roles of budgets

Budgets force managers to plan for the future through the development of an overall direction for the organization, foresee problems and develop future policies.

Budgets enable managers to make better decisions, for example cash budgets may forecast a cash deficiency and managers may decide the best way to avert it.

Budgets set standards that can control the use of a company's resources and control and motivate employees.

Budgets serve to communicate the plans of the organization to each employee and to coordinate their efforts so all employees can be aware of their roles in achieving the organisation's objectives.

- (d) (i) A standard cost is a standard expressed in money terms. It is derived from the value of the cost elements required to produce the product.
- (ii) Uses of standard costs
- They provide bases for performance measurement.
- They can be used for control by exception reporting.
- They can be used in valuing inventory as an alternative to FIFO and average cost method.
- They can be used in establishing selling prices.

END