

STRICTLY CONFIDENTIAL



2014 EXAMINATIONS

ACCOUNTING TECHNICIAN PROGRAMME

PAPER TC9: COSTING & BUDGETARY CONTROL

MONDAY 8 DECEMBER 2014

TIME ALLOWED : 3 HOURS

SUGGESTED SOLUTIONS

1(a) (i) Fixed costs are costs that remain the same regardless of change in activity levels.

(ii) Variable costs are costs which change as the level of activity changes.

(b) (i)	K'000	W	Y	Z	Total
Sales	300	400	350		1,050
Material	90	80	80		250
Labour	70	100	100		270
Variable O/h	<u>30</u>	<u>100</u>	<u>80</u>		<u>210</u>
Contribution	110	120	90		320
Fixed overhead					<u>300</u>
Profit					<u>20</u>

Products V and X should be retained as they make a positive contribution. Without them, the profit will fall by K50,000.

(ii)	K'000	V	W	X	Y	Z	Total
Sales	400	600	400	800	700		2,900
Material	150	270	240	240	240		1,140
Labour	140	140	120	200	200		800
Variable o/h	<u>100</u>	<u>60</u>	<u>80</u>	<u>200</u>	<u>160</u>		<u>600</u>
Contribution	10	130	(40)	160	100		360
Fixed overhead							<u>300</u>
Profit							<u>60</u>

Both V and X will show a decrease in contribution. The total profit will decrease by K10,000. The company should retain all five products in their original state.

(c)	V	X
Total Variable costs*	K170,000	K180,000
Units	10,000	8,000
Variable cost per unit	K17.00	K22.50
New cost per unit (x 20%)	K20.40	K27.00
Selling price	K25.0	K29.00
Contribution per unit	K4.60	K2.00
Saleable units (10,000x90%)	9,000	(8,000x90%) 7,200
Contribution (9,000xK4.60)	K41,400	(7,200xK2)K14,400

*Total variable costs is the sum of materials, labour and variable overheads per product

Product V should be sold as the contribution will increase from K30,000 (K200,000 – K170,000) to K41,400, this would increase the overall company profit by K11,400.

2. (i) Joint products occur when two or more products arise simultaneously from a single process, each of which has a significant sales value.

By-products are incidental products that arise in the course of Processing. It is not the intention to produce the by-products.

(ii) The most common methods of dealing with by-products are:

- The sales value is deducted from the total cost of production
- Total costs (main product and by-product) are deducted from total sales value of main and by-products.
- By-product receipts are treated as incidental income and are transferred to the Profit and Loss Account.

(b) Workings

			K	
Costs	Material	20,000 × K6	120,000	
	Labour	5,000 × K8	40,000	
	Overhead	20,000 × K1.10	<u>22,000</u>	
			182,000	
	Scrap sale	2,000 kg × K2.80	<u>5,600</u>	
			<u>176,400</u>	
			kilos	
	Output		20,000	
	Loss	10%	<u>2,000</u>	
			<u>18,000</u>	
	A	3/12 x 18,000	4,500	
	B	4/12 x 18,000	6,000	
	C	5/12 x 18,000	<u>7,500</u>	
			<u>18,000</u>	

$$\text{Cost per kilo} = \frac{\text{K}176,400}{18,000} = \text{K}9.80 \text{ per kilo}$$

Sales Value (K)	A	4,500 × K14 =	63,000	
	B	6,000 × K16 =	96,000	
	C	7,500 × K18 =	<u>135,000</u>	
			<u>294,000</u>	

$$\text{Cost per K sales} = \frac{\text{K}176,400}{294,000} = 60\% \text{ of sales value}$$

(i) Sales value method

	K	A	B	C	Total
Sales		63,000 ²	96,000 ²	135,000 ²	294,000
Cost	60%	<u>37,800¹</u>	<u>57,600¹</u>	<u>81,000¹</u>	<u>176,400</u>
Profit		<u>25,200</u>	<u>38,400</u>	<u>54,000</u>	<u>117,600</u>

(ii) Weight of production method

	K	A	B	C	Total
Sales		63,000	96,000	135,000	294,000
Costs K9.8/kilo		<u>44,100¹</u>	<u>58,800¹</u>	<u>73,500¹</u>	<u>176,400</u>
Profit		<u>18,900</u>	<u>37,200</u>	<u>61,500</u>	<u>117,600</u>

3. (a) Uses of budgets

- (i) *Planning* annual operations
- (ii) *Controlling* activities
- (iii) *Evaluating* performance of employees
- (iv) *Motivating* employees to achieve the organisational goals
- (v) *Communicating* plans to the various responsibility center managers
- (vi) *Coordinating* the activities of the various parts of the organization and ensuring that the parts are in harmony with each other

(b) Criticism of budgeting

- (i) It encourages rigid planning and incremental thinking
- (ii) It is time consuming
- (iii) At times it produces inadequate variance reports leaving the "how" and "why" questions unanswered
- (iv) It is a mere yearly rigid ritual
- (v) Meeting only the lowest targets and not attempting to beat the targets
- (vi) Spending what is in the budget even if this is not necessary in order to guard against next year's budget being reduced.
- (vii) Tying the company to a 12-month commitment, which is risky since it is based on uncertain forecasts
- (viii) Achieving the budget even if this results in undesirable actions
- (ix) It ignores key drivers of shareholder value by focusing too much attention on short term financial numbers

(c)(i)	January- April	May - August	September - December
Sales budget			
Sales units	7,000	5,000	6,000
Price	<u>K50</u>	<u>K50</u>	<u>K50</u>
Value	<u>K350,000</u>	<u>K250,000</u>	<u>K300,000</u>
(ii) Production budget			
Sales	7,000	5,000	6,000
Add closing stock	<u>500(5,000x10%)</u>	<u>600 (6,000x10%)</u>	<u>800(8,000x10%)</u>
	7,500	5,600	6,800
Less opening stock	<u>700 (7,000x10%)</u>	<u>500(5,000x10%)</u>	<u>600 (6,000x10%)</u>
Production	<u>6,800</u>	<u>5,100</u>	<u>6,200</u>
(iii) Material usage budget			
Production	6,800	5,100	6,200
Components	<u>3</u>	<u>3</u>	<u>3</u>
Usage (quantity)	20,400	15,300	18,600
Price/component (K)	<u>5</u>	<u>5</u>	<u>5</u>
Usage (K)	<u>102,000</u>	<u>76,500</u>	<u>93,000</u>
(iv) Labour utilization (hours) budget			
Department G			
Production	6,800	5,100	6,200
Hours per unit	<u>2</u>	<u>2</u>	<u>2</u>
Total hours	<u>13,600</u>	<u>10,200</u>	<u>12,400</u>
Department H			
Production	6,800	5,100	6,200
Hours per unit	<u>4</u>	<u>4</u>	<u>4</u>
Total hours	<u>27,200</u>	<u>20,400</u>	<u>24,800</u>
(v) Department G			
Total hours	13,600	10,200	12,400
Rate per hour	<u>K4</u>	<u>K4</u>	<u>K4</u>
Total cost	<u>K54,400</u>	<u>K40,800</u>	<u>K49,600</u>
Department H			
Total hours	27,200	20,400	24,800
Rate per hour	<u>K5</u>	<u>K5</u>	<u>K5</u>
Total cost	<u>K136,000</u>	<u>K102,000</u>	<u>K124,000</u>

4. (a) (i) Cost allocation is the charging of discrete identifiable items of cost to cost centres or cost units.
- (ii) Cost apportionment is the re-allocation of costs amongst two or more cost centres in proportion to the estimated benefit received, using a proxy, e.g. square feet.
- (iii) Cost absorption is the charging of overhead to cost units by means of rates separately calculated for each cost centre.

(b)	Total	Basis	Machine Shop	Assembly	Stores	Eng Service	General Service
	K		K	K	K	K	K
Indirect wages	125,680	Allocated	88,580		16,220	8,200	5,340
	7,340 $1\frac{1}{4}$						
Consumable Supplies	45,200	Allocated	30,800		4,200	2,800	4,000
	3,400 $1\frac{1}{4}$						
Depreciation of Machinery	44,000	Book value	30,800	4,400	1,760	5,280	1,760
	$1\frac{1}{4}$						
Insurance of machinery	8,000	Book value	5,600	800	320		960
	320 $1\frac{1}{4}$						
Power	7,200	HP hours	6,120	360			720
	$\frac{3}{4}$						
Light and heat	6,000	Floor area	2,640	1,920	480	600	360
Rent and rates	14,100	Floor area (exc. general services)	6,600	4,800	1,200		1,500
	1						
	<u>250,180</u>		<u>171,140</u>	<u>32,700</u>	<u>14,760</u>	<u>18,400</u>	<u>13,180</u>

Apportionment of service departments

Stores (consumable supplies)		12,989	1,771	(14,760)			
Eng Service (machine hours)		18,400			(18,400)		
General Service (direct labour)		7,097 $\frac{1}{2}$	6,083 $\frac{1}{2}$				(13,180)
	<u>250,180</u>	<u>209,626</u>	<u>40,554</u>				

(c)		Hourly Rate K
Machine shop overhead absorption rate	$\frac{209,626}{90,000}$	2.33 per machine hour
Assembly overhead absorption rate	$\frac{40,554}{300,000}$	0.14 per direct labour hou

5. (a) (i) Whether to make a product or buy it in.
(ii) Whether or not to accept an order at a reduced price.
(iii) Whether or not to discontinue producing an apparently loss making product.
(iv) When allocating scarce resource so as to maximize profits
- b) (i) All costs can be resolved into fixed and variable elements
(ii) Fixed costs will remain constant and variable costs will vary proportionately with activity
- (ii) Over the activity range being considered, costs and revenues behave in a linear fashion
(iii) The only factor affecting costs and revenues is volume
(iv) Technology, production methods and efficiency remain constant
(v) Particularly for graphical methods, the analysis relates to one product only or to a constant product mix
(vi) There are no stock level changes or that stocks are valued at variable cost only
- c) (i) Advantages of zero-based budgeting(ZBB)
1. It results in a more efficient allocation of resources to activities and departments
 2. It focuses attention on value for money and makes explicit the relationship between the input of resources and the output of benefits
 3. It develops a questioning attitude and makes it easier to identify inefficient, obsolete or less cost effective operations
 4. Its process leads to greater staff and management knowledge of the operations and activities of the organisation and can increase motivation.
 5. It is a systematic way of challenging the status quo and obliges the organization to examine alternative activities and existing cost behavior patterns and expenditure levels.
- (ii) Disadvantages of ZBB
1. It is a time consuming process which can generate volumes of paperwork especially for the decision packages
 2. There is considerable management skill required in both drawing decision packages and for the ranking process. These skills may not exist in the organization

3. It may encourage the wrong impression that all decisions have to be made in the budget. Circumstances change and new opportunities and threats can arise at any point in time and organizations must be flexible enough to deal rapidly with these circumstances when they occur.
 4. It is not always acceptable to staff or management or trade unions who may prefer the cosy status quo and who see detailed examination of alternatives, costs and benefits as a threat not a challenge.
 5. There are considerable problems in ranking packages and there are inevitably many subjective judgments. Political pressures within organizations also contribute to the problem of ranking different types of activity, especially where there are qualitative rather than quantitative benefits.
 6. It may emphasize short term benefits to the detriment of longer term ones which in the end may be more important.
- (d)
- (i) Basic standards
 - (ii) Ideal standards
 - (iii) Attainable standards
 - (iv) Current standards

END

NOTES ON ALIGNMENT WITH NEW SYLLABUS

1. Instructions 2 and 3 on the cover/front page have been amended.
2. Two questions, question 4 and 5, have been removed to ensure the paper has 5 compulsory questions as required by the new syllabus.
3. Question 7(a) has been replaced with another question and requirement 7(c)(ii) has been amended.
4. Notes 3 and 4 above have addressed the specification grid in the new syllabus as follows:

Syllabus area	Weighting (%)	Questions /items addressing the syllabus area	Total marks for the questions/items in the paper
Cost ascertainment	40%	Q 2 and 4	40 marks*
Planning, performance measurement & control	30%	Q 3, 5(c), 5 (d)	31 marks*
Decision-making	30%	Q 1, 5(a), 5(b)	29 marks
TOTALS	100%		100 marks

*Difference between mark allocation versus required weighting as per the syllabus is immaterial (1 mark only). Such differences (+/-) should be expected.

5. Question 5 will continue being a 'theory' question (no calculations involved) and has been put as such.

END