

THE PUBLIC ACCOUNTANTS EXAMINATIONS BOARD

A Committee of the Council of ICPAU

CPA (U) EXAMINATIONS

LEVEL TWO

MANAGEMENT DECISION AND CONTROL - PAPER 10

THURSDAY, 29 NOVEMBER 2012

INSTRUCTIONS TO CANDIDATES:

1. Time allowed: **3 hours 15 minutes.**

The first 15 minutes of this examination have been designated for reading time. You may not start to write your answer during this time.

2. Section **A** has **one** compulsory question carrying 30 marks.
3. Section **B** has **four** questions and only **three** questions are to be attempted. Each question carries 20 marks.
4. Section **C** has **two** questions and only **one** question is to be attempted. Each question carries 10 marks.
5. Write your answer to each question on a fresh page in your answer booklet.
6. Please, read further instructions on the question paper and answer book before attempting any question.

SECTION A

This section has one compulsory question to be attempted.

Question 1

PTN Ltd manufactures and sells two products X and Y. At an operating capacity of 75%, PTN Ltd produces and sells 80,000 units of product X and 50,000 units of product Y. The unit cost structure of PTN Ltd is as follows:

	Product X Shs '000'	Product Y Shs '000'
Direct materials	40	80
Direct labour	80	80
Factory overhead (35% fixed)	90	60
Administration and selling overhead (65% fixed)	120	90

PTN Ltd sells each unit of product X at Shs 450,000 and that of product Y at Shs 380,000.

The company has received offers from Rwanda and Burundi to supply products X and Y respectively. Rwanda is offering to purchase product X at Shs 300,000 per unit, while Burundi is offering Shs 280,000 per unit for product Y. The offers will result in an additional packaging cost of Shs 9,000 per unit.

PTN Ltd absorbs factory overheads on the basis of machine hours, and the hourly rate at the 75% capacity is Shs 40,000 per hour.

The company can accept either offer by utilizing the 25% of its idle capacity.

Required:

- Calculate the surplus machine hours available if PTN Ltd is to take up either of the offers.
(7 marks)
- Compute PTN Ltd's fixed costs.
(2 marks)
- Using relevant calculations, advise the management of PTN Ltd as to which offer they should take up.
(10 marks)
- Using your answer in (c) above, compute the number of units that can be produced with the surplus machine hours.
(2 marks)
- Prepare a statement showing the overall profitability of PTN Ltd after incorporating the offer suggested in (c) above.
(9 marks)

(Total 30 marks)

SECTION B

Attempt three out of the four questions in this section.

Question 2

NIK Ltd produces five different types of beverage products (V, W, X, Y, Z), which are made by subjecting ingredients to a series of processing activities. The beverages are different and therefore need differing amounts of processing activities.

Budget and actual information for May 2012 is shown below:

Budgeted data:	Products				
	V	W	X	Y	Z
Number of batches	60	90	45	120	75
Processing activities per batch:					
Activity E	12	15	6	9	3
Activity F	9	6	15	3	12
Activity G	9	9	6	12	6
Activity H	12	18	24	6	9
Cost of processing activities:	Shs '000'				
Activity E	4,800				
Activity F	390				
Activity G	240				
Activity H	600				

All costs are expected to vary in relation to the number of the processing activities.

Actual data:

	Products				
	V	W	X	Y	Z
Number of batches	54	99	48	105	84
Cost of processing activities:	Shs '000'				
Activity E	474				
Activity F	417				
Activity G	219				
Activity H	618				

Required:

- (a) Prepare a budgetary control statement that shows the original budget costs, flexible budget costs, the actual costs, and the total variance of each processing activity for May 2012.

(12 marks)

- (b) The control statement has been circulated to managers responsible for each processing activity and the finance director has asked each of them to explain the reasons for the variances. The managers are not happy about this as they were not involved in preparing the budgets and think that they should not be held responsible for achieving targets that were merely imposed upon them.

Explain briefly the reasons why managers should be involved in setting their own budgets.

(4 marks)

- (c) Explain the difference between fixed and flexible budgets and how each may be used to control production and non-production costs like marketing costs within NIK Ltd.

(2 marks)

- (d) Give **two** examples of costs that are more appropriately controlled using a fixed budget, and explain why a flexible budget is less appropriate for the control of these costs.

(2 marks)

(Total 20 marks)

Question 3

- (a) Kendal Ltd is a soft drinks company with various branches. Bango, a branch based in Jinja, had a budgeted net profit before tax of Shs 60 million per annum over the period of the foreseeable future, based on the capital employed of Shs 200 million. Plant replacement anticipated over this period is expected to be approximately equal to the annual depreciation each year. These figures compare well with the company's required rate of return of 20% before tax.

Bango's management is currently considering a substantial expansion of its manufacturing capacity to cope with the forecast demand from a new customer. The customer is prepared to offer a five year contract providing Bango with annual sales of Shs 40 million.

In order not to limit this contract, a total additional capital outlay of Shs 40 million is expected being Shs 30 million of the new fixed assets plus Shs 10 million working capital. A five year plant life is expected. Operating costs on the contract are estimated to be Shs 27 million per annum excluding

depreciation. This is considered to be a low risk venture as the contract would be firm for five years and the manufacturing processes are well understood within Bango.

Required:

As a management accountant, using return on capital employed (ROCE) and residual income (RI), advise the management of Kendal Ltd whether it would be worthwhile for Bango to take on the substantial expansion of the manufacturing capacity.

(12 marks)

- (b) At a recent meeting held at Kendal Ltd, the managing director proposed to use a single ROCE as an index of performance of its branches which differ considerably in size and type of activities. The company is, however, concerned whether the evaluations it makes using a single ROCE would be valid in terms of measurement of performance.

Required:

Write a report to the managing director, mentioning to him any three circumstances in which a single ROCE might not be an adequate measure of performance, clearly explaining what should be done to supplement the interpretation of results of the single ROCE.

(8 marks)

(Total 20 marks)

Question 4

- (a) BCN Ltd is considering the feasibility of purchasing from a jobber a component in the required quantities at a unit price of Shs 2,500. Transportation and storage of the component costs are negligible and can thus be ignored.

BCN Ltd produces the component from a single raw material. The company at present orders materials in economic order quantities of 2,000 units at a unit cost of Shs 200, average annual usage is 20,000 units of the component. The annual storage cost (including rent, taxes, return on investment in inventory and so on) is estimated at Shs 100 per unit. The minimum inventory is set at 400 units.

Direct labour costs for the component are Shs 600 per unit. Fixed manufacturing overhead is absorbed at Shs 400 per unit based on a normal capacity of 20,000 units. In addition to the above costs, the machine on which the components are produced is leased at Shs 20,000 per month.

Required:

As a management accountant, advise the director of BCN Ltd whether to make or buy the component.

(14 marks)

- (b) Pricing strategies and product costing interact in helping to achieve competitive advantage leading to retention or increase of the company's market share and maintenance or improvement of the profit levels.

Discuss the above statement in the context of:

- (i) cost leadership.
- (ii) product differentiation.

(6 marks)

(Total 20 marks)

Question 5

The instruments department of Dormat Ltd makes two products A and B. Standard revenues and costs per unit for these products are shown below:

	Product A		Product B	
	Shs	Shs	Shs	Shs
Selling price		10,000		9,000
Variable costs:				
Material P (Shs 500 per kg)	2,000		2,000	
Direct labour (400 per hour)	1,600		800	
Plating (Shs 600 per hour)	600		1,200	
Other variable costs	<u>3,800</u>		<u>3,500</u>	
		(8,000)		(7,500)
Fixed overheads (allocated at Shs 350 per direct labour hour)		<u>(1,400)</u>		<u>(700)</u>
Profit		<u><u>600</u></u>		<u><u>800</u></u>

Plating is a separate automated operation and the cost of Shs 600 per hour is for plating materials and electricity.

In any week, the maximum availability of inputs is limited to the following:

Material P	6,000 kg
Direct labour	5,000 hours
Plating time	2,500 hours

A management meeting was held recently to consider ways of increasing the profitability of the instruments department. It was agreed that each of the following possible alternatives be examined independently of each other:

- (i) The selling price of product B be increased.

- (ii) A new product, H be introduced at a selling price of Shs 420,000 per unit. Each unit would require the following:

Material P	250 kg
Direct labour	250 hours
Plating time	50 hours
Other variable costs	Shs 4,500

Required:

- (a) (i) Formulate a linear programme to determine the production policy which maximizes the profits of Dormat Ltd in the present situation. **(2 marks)**
- (ii) With the help of a graph, specify the optimal product mix and weekly profit. **(5 marks)**
- (b) Using shadow prices, determine whether product H would be a profitable addition to the product range. **(5 marks)**
- (c) Discuss the limitations of the linear programming approach to the problems of Dormat Ltd. **(8 marks)**

(Total 20 marks)

SECTION C

Attempt one of the two questions in this section.

Question 6

Incremental budgeting and zero-based budgeting are some of the different types of budgeting used by public sector organizations in Uganda.

Required:

- (a) Explain the terms 'incremental budgeting' and 'zero-based budgeting'. **(2 marks)**
- (b) State the main stages involved in preparing zero-based budgets. **(3 marks)**
- (c) Discuss the particular difficulties encountered when budgeting in public sector organizations as compared to budgeting in private sector organisations, drawing comparisons between the two given types of budgeting. **(5 marks)**

(Total 10 marks)

Question 7

In many big manufacturing organisations today, there are various divisions, and with a bid to increase efficiency most of these organisations set divisional goals which divisional managers have to achieve. Thus most of the divisional managers whose outputs become inputs for the other divisions are embarking on transferring their output to other divisions at fee. This is popularly known as “transfer pricing”.

Required:

- (a) Give **four** reasons why divisions in a given company would use transfer pricing.
(5 marks)
- (b) What factors influence pricing decisions when divisions buy from and sell to one another overseas?
(5 marks)

(Total 10 marks)