

# THE PUBLIC ACCOUNTANTS EXAMINATIONS BOARD

*A Committee of the Council of ICPAU*

## CPA(U) EXAMINATIONS

### LEVEL THREE

#### MANAGEMENT DECISION AND CONTROL - PAPER 12

**THURSDAY, 16 DECEMBER 2004**

#### INSTRUCTIONS TO CANDIDATES:

1. Time allowed: **3 hours**
2. Section **A** has two compulsory questions. Question **one** carries 30 marks and question **two** carries 10 marks.
3. Section **B** has **four** questions and only **three** questions are to be attempted. Each question carries 20 marks.
4. Please read further instructions on the answer book.

## SECTION A

### Question 1

Afro Com Construction Limited prepared a budget for the 2004 financial year. The budget showed a big loss. At present, the company has no ongoing contracts, yet they have stock piles of building materials in store. When it was presented to the Directors, they resolved that they couldn't plan to work for a loss.

They decided that they should sell the workshop together with the construction equipment and if possible the building materials as well, and invest the money in another business. Gobo Construction has offered to buy the business including its workshop, equipment and the building materials at Shs 1.2 billion; they are to pay at 31 December 2004.

But before the deal with Gobo was concluded AfroCom received an offer to build three schools from Wakiso District Administration. They are to build three primary schools in the next three years, one school per year handing over the first school on 31 December 2005.

They will be paid cash Shs 2.5 billion for each school completed, and there are some construction materials currently available in their stores.

In addition the following data / information have been confirmed:

**Non-current assets:** The Workshop and the equipment therein were purchased 7 years ago on a 10-year lease for Shs 4 billion. Their book value at 31 December 2004 will be Shs 1.2 billion.

**Labour:** The estimated labour of building each school to completion is Shs 1.2 billion based on forecast wage rates as at 1 January 2005. Labour rates are expected to rise by 10% per year.

If the company is sold at 31 December 2004, then pay in lieu of notice plus redundancy payments are expected to equal to one year's labour cost. These payments would be spread evenly over the year. By the end of the third year, the directors believe that other jobs will be available to absorb the manpower.

**Materials:** There are sufficient materials in store to complete the first school project. These were purchased two years ago for Shs 800 million but their current replacement cost is Shs 1 billion. Prices are expected to rise by 8% per annum. Orders for further materials must be placed ahead of the year in which the material is used in construction. It is paid for on 31 December of the year of purchase. If not used the material in stock has a scrap value of Shs 250 million. But will deteriorate and be useless in 3 years' time.

	Per year
Overheads:	Shs
Variable Overhead	100,000,000
Depreciation	40,000,000
Allocated head office fixed costs	50,000,000

Variable overhead and head office fixed costs are expected to increase by 10% per year.

**Sale realizations:** Realizations from the sale of the workshop and equipment, the material stock and the school project would be received on 31 December.

**Cost of capital:** The cost of capital is currently 12% per annum but the company may wish to earn up to 20% on the contract if it is taken.

Taxation can be ignored and all calculations should be made to the nearest Shs 000,000's (hundred of thousands of shillings).

**Required:**

As a Management Accountant of Afro Com Construction Company and based on the information / data above, you are required to:

- (a) Calculate whether there is a financial incentive to accept the school construction contracts if the cost of capital for the next three years will be 12%, 16% or 20%.  
(12 marks)
  - (b) Comment on the figures you have used in your calculations in (a) above.  
(8 marks)
  - (c) State whether the schools construction contract should be taken assuming that the Directors assess the probability of the interest rate to be 0.5 for 12%, 0.4 for 16% and 0.1 for 20%.  
(10 marks)
- (Total 30 marks)**

**Question 2**

During the Board Meeting of Trinity Bank Ltd, for which you work, one of the Directors comments, "In order to beat the competition, we need to benchmark."

**Required:**

Write a memo to the Managing Director of Trinity Bank Ltd explaining the meaning of **benchmarking** and the benefits the bank would derive from its use. Highlight its shortcomings, if any.

**(10 marks)**

**SECTION B****Question 3**

Muko Industries manufactures two products; Canvas Tents and Comfort Mattresses in departments dedicated exclusively to them. There are also three service departments namely; Stores, Maintenance and Administration. They produce all their products on order.

Direct costs of the products, which are variable in the context of the whole business, are identified to each department. The step-wise apportionment of service department costs to the manufacturing departments is based on estimates of the usage of the service provided. These are expressed as percentages and assumed to be reliable over the current capacity range.

The general factory fixed overheads of Shs 3.6 billion are apportioned based on floor space occupied. The company establishes product costs based on budgeted volume and marks up these costs by 25% in order to set selling targets and prices.

The budget for 2004 was as follows:

	<b>Tents</b>		<b>Mattresses</b>		
Max. Capacity	200,000		100,000		
Budget	150,000		70,000		
	Tents	Mattresses	Stores	Maintenance	Administration
Costs (Shs billion)					
Material	1.8	0.7	0.1	0.1	0
Other variable	0.8	0.5	0.2	0.2	0.2
<i>Departmental Usage (%)</i>					
Maintenance	50	25	25		
Administration	40	30	20	10	
Stores	60	40			
<i>Floor space (sq M)</i>	640	480	240	80	160

**Required:**

- (a) Calculate the budgeted selling price of one unit of Canvas Tents and a Mattress based on the usual markup. **(8 marks)**
- (b) Discuss how the company may respond to each of the following independent events, which represent additional business opportunities:
  - (i) A customer from the Democratic Republic of Congo wants to place an order for 3,000 mattresses and is willing to pay Shs 35,000 per mattress. **(6 marks)**

- (ii) A dealer who has identified a foreign market is requesting that Muko supplies him with 50,000 mattresses on a regular interval throughout the year at full cost plus 10%.

(6 marks)

***Hint: In both cases, support your discussion with calculations and comment on any assumptions or matters on which you would seek clarification.***

(Total 20 marks)

#### Question 4

Mapesa Industries Ltd is a Ugandan company that has two divisions, Mapesa Extraction Industries and Mapesa Soap Works. Each division has its own manager.

Mapesa Extraction Division deals in oilseeds, which they process to produce a semi-finished product (liquid fat).

The liquid fat is an intermediate (semi-finished) product that has no external market. It can only be sold to Mapesa Soap Works, a sister division that produces and packs liquid soap.

Mapesa Soap Works needs one litre of liquid fat to produce one litre of liquid soap. It sells this soap to distributors in Kikuubo Business Centre, and the volume sold will depend on the prices charged.

A reduction in price would result in an increase in the dealer's margin, hence an increase in sales. However, an increase in price would result into dealers shifting to alternative soap products.

The market research has revealed the following information regarding volume sold depending on the price charged.

Selling Price (in Shs)	Quantity sold (litres)
10,000	2,000
9,000	4,000
8,000	6,000
7,000	8,000
6,000	10,000
5,000	12,000

The variable cost for Extraction Division is Shs 900 per litre, while that for the Soap Works Division is Shs 700 per litre, excluding the cost of liquid fat.

The fixed costs per annum are Shs 6,000,000 for Extraction and Shs 9,000,000 for the Soap Works.

The transfer price of the liquid fat is Shs 3,200 per litre; this is because the Extraction Division wants to recover its full costs plus profit.

**Required:**

- (a) Prepare profit statements at various selling prices and quantities of output for:
- (i) The Extraction Division. **(3 marks)**
  - (ii) Soap Works Division. **(3 marks)**
  - (iii) Mapesa Industries as a whole. **(4 marks)**
- (b) Which selling price maximizes the profit for each of the divisions and Mapesa Industries as a whole? **(4 marks)**
- (c) For companies like Mapesa with separate divisions, what is the best transfer pricing policy that maximizes the company's profit as a whole? Use figures from Mapesa Industries to support your answer. **(6 marks)**
- (Total 20 marks)**

**Question 5**

Mukwe Investments is a new company that has negotiated to buy the business of Kampala Plastics. Kampala Plastics manufactures a single size of plastic water tanks. Mukwe Investments intends to take over on 31 December 2004 and will begin production of the same product with effect from January 2005.

Kampala Plastics has been valued as a going concern as follows:

- Equipment and fittings Shs 150 million.
- Inventory of raw materials Shs 20 million.
- Inventory of finished goods Shs 40 million.
- Goodwill of Shs 50 million.

The directors of Mukwe have raised Shs 400 million, which will be used to pay for the business in December 2004, and the balance will be the starting working capital.

They plan to purchase a truck (Delivery van) at Shs 15 million in early January 2005, they will pay 50% of the purchase price and will pay the balance in five equal installments per month from Feb 2005 onwards:

The following forecasts have been made for the business following purchase:

- (a) Projected sales before discount at a mark up of 60% on production costs for the first six months are as follows:

Month	Jan	Feb	Mar	April	May	June
Sales in Shs million	104	88	92	96	100	104

25% of sales will be for cash; the reminder will be on credit paid for in the month following that of sales.

All the cash sales will qualify for a cash discount of 10%.

- (b) Production costs will be Shs 5,000 per unit, broken down as follows:
- |                                  | Shs   |
|----------------------------------|-------|
| Direct raw materials per unit    | 2,500 |
| Direct labour per unit           | 1,500 |
| Fixed overhead absorbed per unit | 1,000 |
- (c) Raw materials will be purchased in quantities that ensure that at end of every month, there is enough inventory to cover half of the following month's production requirements. Raw materials acquired at the purchase of the business are valued at the cost per unit which is forecast as in (b) above. Raw materials will be purchased on one month's credit.
- (d) Production will be arranged to ensure that there is enough finished inventory to cover sales requirements of the next month. Finished goods acquired at purchase of the business were valued based on the forecast production cost per unit given in (b) above.
- (e) Direct labour expenses will be paid for in the same month that they are incurred.
- (f) It was projected that fixed production overheads of Shs 150 million per annum will be incurred in the first year; this includes depreciation of equipment and fittings on a straight line basis over the next five years.
- (g) Selling and distribution overheads are fixed, and will be Shs 184 million for the first year. These overheads include depreciation of the delivery van at 30% per annum on a reducing balance basis.
- Overheads are incurred on a regular basis, with the exception of rent and rates. Rent is Shs 1.2 million per month, paid for on quarterly basis at the beginning of every quarter.
- Rates are Shs 10 million per annum paid for at the beginning of every year.

**Required:**

- (a) Prepare a monthly cash budget for the first four months of business.  
(12 marks)
- (b) Compute the inventory, accounts receivable and accounts payable balances at the end of April 2005.  
(8 marks)
- (Total 20 marks)**

**Question 6**

- (a) Uganda Forest Authority (UFA) is in the process of reviewing its Management Information Systems (MIS) to ensure that they meet the needs of all management levels. It is generally agreed that information is needed to support strategic planning, and that this information must be Timely, Complete and Accurate.

**Required:**

Briefly describe the significance of each of the attributes in the context of strategic planning for UFA:

- (i) Timeliness. **(4 marks)**
- (ii) Accuracy. **(4 marks)**
- (iii) Completeness. **(4 marks)**

- (b) It is also generally believed that different management levels require different types of information in terms of time periods referred to and sources or origin of that information.

**Required.**

Briefly describe how information required to support strategic planning differs from that required to support operational decisions in:

- (i) The time period referred to. **(4 marks)**
- (ii) The source or origin of the information/data. **(4 marks)**

**(Total 20 marks)**