

THE PUBLIC ACCOUNTANTS EXAMINATIONS BOARD

A Committee of the Council of ICPAU

CPA(U) EXAMINATIONS

LEVEL TWO

MANAGEMENT DECISION AND CONTROL - PAPER 10

WEDNESDAY, 18 JUNE 2008

INSTRUCTIONS TO CANDIDATES:

1. Time allowed: **3 hours**
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. Please read further instructions on the answer book.

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SECTION A

Question 1

Hard Case Uganda Limited is the market leader in the fabrication and sale of hardware products in Uganda. It employs staff all over the country in its upcountry depots to sell its products.

The Managing Director of Hard Case has divided the company into major regions of; West, North, East, South and Central Regions for which General Managers have been appointed.

The payment methods for these General Managers is based on the following:

1. Basic salary: This is given at a starting figure of Shs 12 million per year which increases by Shs 1 million per year for every year of service, up to a maximum of Shs 22 million per year.
2. Commissions of 2% of the regions' sales above the sales target of the month.
3. Bonus of 0.75% of the excess of sales over target for the year. The target sales figure is calculated by a formula based on the value of motor vehicles in the region.
4. Bonus based on the region's return on capital employed(ROCE)

$$\text{ROCE} = \frac{\text{Annual Net Profit before interest and tax}}{\text{End of year book value of net assets}}$$

The Bonus is ROCE multiplied by;

- 3% of the capital employed if the capital employed is Shs 2 billion or above.
- 2% of the capital employed if the capital employed is below Shs 2 billion.

For regions West and Northern the following figures show actual data for the year ended 31 December 2007 and the budgeted data for the year to 31 December 2008:

	Region West		Region Northern	
	Actual	Budgeted	Actual	Budgeted
	2007	2008	2007	2008
	Shs 'million	Shs 'million	Shs 'million	Shs 'million
Sales	2,400	2,750	3,700	3,600
Cost of Sales	1,872	2,173	3,034	2,844
Net Profit	123	147	166	241
End of year capital employed;				
Net Current Assets	180	210	230	230
Fixed Assets(NBV);				
Buildings	640	680	820	820
Vehicles	1,030	1,370	1,750	1,850
Target Sales	2,250	2,700	3,400	3,600
	Shs '000		Shs '000	
General Manager's Basic Salary	18,000		22,000	

The company has no long-term liabilities.

Required:

- (a) Calculate and advise the Managing Director of Hard Case Uganda Limited what change there will be for each of the regional General Managers, **West** and **Northern**, between the remuneration based on the actual results for the year to 31 December 2007 and the remuneration based on the budgeted results for the year to 31 December 2008.

(11 marks)

- (b) Explain whether you consider that changes in remuneration calculated in (a) above show an appropriate reward for the performance of each of the two regional General Managers in 2008.

Show relevant calculations.

(9 marks)

- (c) Recommend what changes, in the basis of remuneration scheme for regional General Managers, you would propose for discussion with the Managing Director. Briefly explain why you have included each recommendation.

HINT: Assume that:

- (i) Your objective is to achieve rewards for the regional General Managers that will adequately recognize effective performance of benefit to the Company as a whole.
- (ii) The company does not wish to make changes in the operating methods of the managers or in the ways in which each region is financed.

(10 marks)

(Total 30 marks)

SECTION B

Question 2

Kubikulima Limited (KL) is a firm producing ladies' umbrellas. The budget for the period shows the following:

	Shs '000
Direct materials(120,000 units)	120,000
Direct labour	80,000
Variable overheads	80,000
Fixed overheads	<u>120,000</u>
Total cost	400,000
Profit (25% of total cost)	<u>100,000</u>
Sales	<u>500,000</u>

The company has been asked to quote a price for a new contract for a revolutionary new type of umbrella which would necessitate variable costs to be incurred in the ratio of 1:1:1 instead of the ratio above. Fixed expenses would remain the same as above and 1 unit would still require a similar cost for direct material.

Required:

Suggest to KL a minimum selling price:

- (a) to break even on the new contract, assuming that the new contract is in addition to existing contracts.

(10 marks)

- (b) assuming that the budgeted amount of labour is the limiting factor.

(10 marks)

(Total 20 marks)

Question 3

Amooti and Family Enterprise (A&FE) makes two products. Both products use the same type of materials and labour, but in different proportions as shown in table 3 below.

Table 3:

	Chapatti (C)	Rolex (R)
	Shs	Shs
Labour cost Shs 50 per hour	150	200
Material cost per unit	100	150
Selling price per unit	400	530

The company incurs total fixed costs of Shs 20,000 per month.

In a month, the maximum number of labour hours available is limited to 600 and the value of material available is limited to Shs 60,000.

Required:

Advise A&FE on the quantities they should make for each product in order to maximize profits in each of the following situations:

- (a) When the maximum demand for product C is 150 units and that for product R is 100 units.

(6 marks)

- (b) When the maximum demand for product C has increased to 300 units and that for R increased to 400 units.

(14 marks)**(Total 20 marks)****Question 4**

Moses Muhumuza is a sole proprietor and deals in the purchase of Automatic Teller Machines (ATMs) for rental to banks under operating lease arrangements.

Currently, Muhumuza is experiencing a capital rationing situation and must opt between one of the two profitable different ATM models available. The demand for ATMs is seasonal, specifically, more people use ATMs during holidays (Easter, Idd, and Christmas) seasons, which increases the demand for more ATMs to rent by the banks. Consequently, Muhumuza expects two possible demand levels – high and low and the estimated probability of event 'High' occurring is 0.6.

The estimated profit for each demand level are as follows:

	Demand level	
	High	Low
	Shs million	Shs million
Model A	180,000	120,000
Model B	200,000	80,000

Muhumuza is considering employing an independent market research consultant who would be able to provide 100% perfect prediction of the actual demand.

Required:

- (a) (i) Calculate the expected profit for Models A and B, and advise him on the **Model** to be bought on the basis of expected value. **(2 marks)**
- (ii) With relevant explanations and computations, determine the maximum amount of money Muhumuza should be prepared to pay the consultant for the additional information to enable him obtain 100% perfect predictions of the actual demand instead of taking decisions based on probabilities. **(6 marks)**
- (b) Explain the meaning of each of the following decision criteria and advise Muhumuza on which Model should be bought using each decision criteria:
- (i) Maximin. **(2 marks)**
- (ii) Maximax. **(2 marks)**
- (iii) Regret. **(4 marks)**
- (c) The independent market research consultant has advised Muhumuza that "it is risky to invest all your money in the ATM business only because it is seasonal. I would advise you to diversify and create a portfolio."

Required:

Explain with examples, the meaning of each of the underlined words in the consultant's statement above.

(4 marks)

(Total 20 marks)

Question 5

Gomba Marines Limited (GML) builds fishing boats. Late last year, the company accepted an order for 15 specialized "Dingy" boats at a fixed price of Shs 100 million each.

The contract allows for four months for building and delivery of all the boats and stipulates a penalty of Shs 10 million for each late delivery.

The boats are to be built using purchased components and internally manufactured parts, all of which are readily available. However, there is only a small team of specialized technicians and limited boatyard space, so that only one boat can be built at a time. 4 boats have been completed. Since GML has no previous experience of building this

particular boat, the building times have been carefully monitored as follows:

Boat Number Completion time (days)

1	10.0
2	8.1
3	7.4
4	7.1

GML has 23 normal working days in every month and the first four boats were completed within normal working time.

Management is now concerned about completing the contract on time.

The management accountant's estimate of direct costs per boat, excluding labour costs, is as follows:

	Shs million
Purchased components	40.0
Manufactured components	15.0
Other direct expenses	5.0

Direct labour costs are Shs 2.5 million per day for the normal 23 working days per month. Additional weekend working days at double the normal pay rates can be arranged up to a maximum of 7 days per month.

Overheads will be allocated to the contract at a rate of Shs 3 million per normal working day.

Required:

- (a) Using the completion time information provided, calculate the learning rate showing full workings.
Use the formula $Y = aX^b$
where: Y = cumulative average time (or cost) to produce x units.
X = cumulative number of units produced.
a = time (or cost) required to produce the first unit.
b = slope of the function when plotted on log-log paper.
= log of the learning rate/log of 2.
- (5 marks)**
- (b) Using calculations, show whether it would be preferable for GML to continue normal working or to avoid penalties by working weekends. Support your calculations with any reservations or explanations you consider appropriate.
- (10 marks)**
- (c) Discuss the limitations of the learning curve in this type of scenario.

(5 marks)

(Total 20 marks)

SECTION C

Question 6

ZINS Limited was formed ten years ago to provide business equipment solutions to local businesses. It has separate divisions for research, marketing, product design, technology and communication services and now is venturing into the documentation business.

Todate, it has evaluated its performance using monthly and annual financial reports that analyze performance by division.

The Managing Director of ZINS recently an ICPAU seminar at which it was suggested that the "balance scorecard" could be a useful way of measuring performance.

Required:

Explain the term "Balance Scorecard" and how it can be used by ZINS Limited to measure performance.

(10 marks)

Question 7

The transfer pricing system operated by a company with many divisions has a potential to cause losses or profits towards achievement of its strategic objectives.

Required:

- (a) Explain the:
 - (i) circumstances under which transfer pricing is required. **(2 marks)**
 - (ii) meaning of the term 'divisional autonomy'. **(2 marks)**
 - (b) Explain **three** problems associated with transfer pricing? **(4 marks)**
 - (c) What is an 'ideal' transfer price? **(2 marks)**
- (Total 10 marks)**