

**THE INSTITUTE OF CHARTERED
ACCOUNTANTS (GHANA)**



**MAY 2006 EXAMINATIONS
(PROFESSIONAL)**

**MANAGEMENT ACCOUNTING
(Special Paper)**

Attempt ALL Questions

TIME ALLOWED: 3 HOURS

QUESTION 1

- (a) Budgetary Control is a system of controlling costs which includes the preparation of budgets.

Required:

- (i) State the process of Budgetary Control.
- (ii) What benefits are derived by a company that uses Budgetary Control as a system of controlling costs? (10 marks)
- (b) Responsibility accounting is a system of accumulating and reporting both actual and budgeted costs and revenues by individuals responsible for them.

Required:

- (i) What are the basic principles underlying responsibility accounting? (4 marks)
- (ii) What are cost centres, profit centres and investment centres? (6 marks)

(Total: 20 marks)

QUESTION 2

Ekom de Yen Ltd is a company which destroys and demolishes buildings. It owns none of its demolition equipment, but hires them instead.

The company has difficulty in forecasting orders in the coming year because of uncertainty in the construction industry. However, the management have identified 3 levels of sales at the following probabilities.

High 15%	-	sales €120 m
Medium 55%	-	sales €80 m
Low 30%	-	sales €40 m

Ekom de Yen Ltd hires equipment for one year in advance, in an advance hire agreement. Equipment hire charges vary with the level of usage. To hire equipment to cope with a high level of usage costs €15m, a medium level of usage costs €10m, and a low level of usage costs €5m. (Usage levels relate to the sales levels above.)

If the company needs to hire extra equipment above usage specified in the advance hire agreement, the following extra costs are incurred.

- Medium level usage where a low level usage was originally specified in the advance hire agreement costs €6m.

- High level usage where a low level usage was originally specified in the advance hire agreement costs €13m.
- High 0level usage where a medium level usage was originally specified costs €6m.

No refund is given to Ekom de Yen Ltd if the company's actual level of equipment usage is less than specified in the advance hire agreement.

Variable costs are 80% of turnover.

Required:

- For each possible outcome, show the forecast net margin which Ekom de Yen Ltd will earn. (6 marks)
- Which level of usage should be specified in the advance hire agreement if Ekom de Yen Ltd is to maximise the expected value of contribution received? (9 marks)
- Different members of management take different approaches to risk. How might these alter the choice in (b) above? (5 marks)

(Total: 20 marks)

QUESTION 3

Thonket Ltd has an opportunity to market a new product in Ghana under a special licensing arrangement for a five-year period. The product would be purchased from the manufacturer, with Thonket Ltd responsible for all costs of promotion and distribution.

The licensing arrangement could be renewed at the end of the five-year period at the option of the manufacturer. After careful study, Thonket Ltd has estimated that the following costs and revenues would be associated with the new product:

	€ m
Cost of equipment needed	90.00
Working capital needed	150.00
Overhaul of the equipment in 4 years	7.50
Salvage value of the equipment in 5 years	15.00
Sales revenue	300.00
Cost of goods sold	187.50
Out-of-pocket operating costs (for salaries, advertising and other direct costs)	52.5
Depreciation of equipment	15.0

At the end of the five-year period, the working capital would be released for investment elsewhere if the manufacturer decided not to renew the licensing arrangement. Thonket Ltd's cost of capital is 20%.

Required:

Advise management of the company on the viability of the introduction of the new product. Ignore taxation and make the necessary assumptions.

(Total: 15 marks)

QUESTION 4

S. A. Amenu is the manager of the Research division of Asoreba Rural Bank. This division provides research for the banking division of Asoreba Rural Bank.

Amenu has just received a proposal signed by all 10 of his researchers to replace the existing mainframe computer with 10 workstations.

Amenu is not interested in the proposal. The mainframe was purchased 2 years ago for €300m and has remaining useful life of 3 years. The workstation will cost €13.5m each and will have a useful life of 3 years. Straight-line depreciation is used for all computer equipment of Asoreba Rural Bank.

With the pace of technology, Amenu believes that both the mainframe and workstations will have zero disposal value in 3 years time.

Annual cash operating costs for the mainframe are €40m whilst that for the workstations are €10m. Annual revenue of the Division is €1 billion and non-computer related costs of €880m are expected to be unaffected by the computer equipment acquisition decision. The current disposal value of the mainframe is €95m.

Amenu's annual bonus includes a component based on the division's operating profit. He is keen to maintain his track record of 3 years of increasing divisional operating profit. He has a promotion possibility next year that will make him a General Manger of Asoreba Rural Bank.

Required:

- (a) Should the mainframe be replaced? (10 marks)
- (b) Show by quantitative and qualitative measures why S A Amenu might be reluctant to purchase the 10 workstations? (10 marks)

(Total: 20 marks)

QUESTION 5

Ayeyi Industries Ltd produces jams, marmalade and preservatives. All products are produced in a similar manner; the fruits are low temperature cooked in a vacuum

process and then blended with glucose syrup with added citric and pectin to ensure good setting.

Margins are tight and the company operates a system of standard costing for each batch of Jam.

The standard cost data for a batch of mango jam are:

Fruit extract	800 kg @	¢160 per kg
Glucose syrup	1400 kg @	¢100 per kg
Pectin	198 kg @	¢332 per kg
Citric Acid	2 kg @	¢2000 per kg
Labour	36 hours @	¢3250 per hour
Standard processing loss is 3%.		

The wet season of 2004 was a very bad period for the mango crop. There was extended rainy conditions during the ripening period and the result was a low national yield. The effect was that normal prices in the trade were ¢190 per kg for the fruit extract, although good buying could achieve some savings. The impact of exchange rates on imports of sugar has caused the price of syrup to increase by 20%.

The actual results for the batch were:

Fruit extract	856 kg @	¢180 per kg
Glucose syrup	1484 kg @	¢120 per kg
Pectin	250 kg @	¢328 per kg
Citric acid	2 kg @	¢950 per kg
Labour	40 hours @	¢3000 per hour
Actual output was 2328 kg of fruit jam.		

Required:

- Calculate the price and usage variances of the various materials.
- Calculate the mix and yield variances of the materials.
- Calculate the labour variances and the total variance.

(Total: 25 marks)