

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



**MAY 2006 EXAMINATIONS
(PROFESSIONAL)**

PART 2

**MANAGEMENT ACCOUNTING & CONTROL
(Paper 2.2)**

Attempt five Questions in All

TIME ALLOWED: 3 HOURS

NB: Please use separate booklet(s) for each part

Do not answer PARTS A & B in the same answer booklet(s)

PART A

Attempt ALL Questions in this section

NB: Use a separate Answer Booklet(s) for Part A

QUESTION 1

Kotmat Ltd is a newly established company. The Managing Director has observed that, recently, there have been a lot of talks on the development of efficient and effective budgetary control systems in seminars and workshops he had attended. The management of the company therefore decided to prepare a master budget for the 2006 financial year. As a Management Accountant of Kotmat Ltd.

You are required to:

- a) Outline the objectives of budgetary planning and control system? (6marks)
- b) What is a “Principal budget factor” and what is its significance in a budgetary planning process? (2 marks)
- c) Under what circumstance would a “rolling budget” be beneficial? (1 mark)
- d) Discuss the importance of recognising behavioural aspects in effective budgetary system. (6 marks)

(Total: 15 marks)

QUESTION 2

Yepimso Ltd is a wholly owned Ghanaian Company. The company specialises in the production of three products: - cassava, kokonte and agbelima flour. The company is considering an advertising campaign for one of its products, cassava flour. The campaign will cost ₵10 million and would increase total sales of cassava flour by 10%. However, it will cause a reduction in total sales of kokonte and agbelima flour by 4% and 2% respectively.

Information concerning the three products is as follows:

<u>Product</u>	<u>% of total company Sales at present</u>	<u>Production contribution to Sales ratio (%)</u>
Cassava	30	45
Kokonte	50	40
Agbelima	20	32.5

The total sales of the company’s products are ₵5000 million per annum and the annual fixed cost amounts to ₵1,400 million.

Required:

- a) i. Calculate the current annual profit. (3 marks)
ii. Calculate the current breakeven sales revenue. (5 marks)
iii. Advise whether Yepimso Ltd should pursue the advertising campaign for cassava flour. (6 marks)
- b) Explain "Margin of Safty" and calculate the margin of safty for the company;
- i. Currently
ii. If the advertising campaign is pursued. (6 marks)

(Total: 20 marks)

QUESTION 3

The following information relates to Joebalaa Ltd. The company manufactures and sells a single product known as Kokus. The product which is made out of three materials:- Beans, Banana and flour is packaged in sachets.

- i) Third quarter variances for 2005 are as follow:-

Direct Materials Price	€' 000
Beans	4,400 (A)
Banana	7,000 (A)
Flour	3,000 (F)
Direct Materials Usage	
Beans	800 (A)
Banana	2,800 (A)
Flour	500 (A)
Direct usage rate	7,000 (A)
Direct labour efficiency	100,000 F
Variable production overhead	2,000 F
Fixed production overhead:	
Expenditure	6,000 (A)
Capacity	750 (A)
Productivity	3,750 F
Operating Profit Variance:	
Due to selling prices	€320,000
Due to sales volume	€350,000

- ii) Transactions recorded for the same period are as follows:

Direct Material purchased	<u>Kg</u>	<u>Price/Kg</u> ¢
Beans	11,000	8,400
Banana	35,000	14,200
Flour	15,000	4,800
Direct wages paid – 39,800 hours		405,000,000
Overheads: Variable		100,000,000
Fixed		156,000,000

Sales:	<u>Sachets</u>	<u>Price/Sachet</u> ¢
Home	4,500	350
Export	1,600	330

Production:

Actual	5,100
Budget	5,000

iii) Other related information:

You may assume that, there is no opening or closing stock of work-in-progress and that; raw material and finished product stock accounts are kept at standard cost.

The standard quantities of raw material used in one sachet of the product are below:

Beans	2kg
Banana	6kg
Flour	4kg

Eight (8) budgeted direct hours are required to make each sachet of the product.

Note: Adverse variances are indicated by (A) and favourable variances by F

Required:

- Explain what is meant by “interdependence of variances” (2 marks)
- Discuss four (4) factors to be kept in mind in deciding whether or not to investigate variances. (4 marks)

- (c) Calculate the standard cost of the product Kokus for the third quarter of 2005.
(7 marks)
- (d) Prepare a suitable management accounting statement in respect of the third quarter of 2005, clearly setting out budgeted and actual sales, standard and actual costs and variances.
(7 marks)

(Total: 20 marks)

PART B

Attempt ANY Two (2) Questions

NB: Use a SEPARATE answer Booklet(s) for this Section

QUESTION 1

A firm of accountants, Consulting Chartered Accountants, has recently started to give economic advice to its clients. Acting as one of the firm's consultants you have estimated the demand curve of a client's firm to be:

$$AR = 200 - 8x$$

Where

AR is average revenue in thousand cedis

X is output, in units.

Your investigation of the client firm's cost profile shows that marginal cost is given by:

$$MC = x^2 - 28x + 211$$

Where MC is marginal cost in thousand cedis

X is output in units.

Further investigation by you has shown that the firm's cost when producing 6 units is €934,000.

Required:

- a) Find:
- i) the total revenue function
 - ii) the total cost function (5 marks)
- b) Determine:
- i) the output level
 - ii) the price per unit
- at which profit is maximized. (9 marks)
- c) Compute the maximum profit. (2 marks)
- d) Obtain the point elasticity of demand at an output level at which profit is maximized.

Interpret your answer. (4 marks)

(Total: 20 marks)

QUESTION 2

A simple linear regression equation was developed to predict the annual salary of senior accountants from an Accounting firm with salary, y (in million) as the dependent variable and experience on the job, x (in years) as the independent variable.

The following partial output of the analysis was obtained from the salaries of twelve senior accountants, using the Minitab package:

REGRESSION ANALYSIS

<u>Predictor</u>	<u>Regression coefficient</u>	<u>Standard error</u>
Constant	60.479	-
X	4.864	2.39

ANALYSIS OF VARIANCE

<u>Source</u>	<u>Sum of squares</u>
Regression	9179.97
Error	-
Total	11405.98

Required:

- State the linear regression equation relating salaries of senior accountants to experience of the accountants. (2 marks)
- Use a t - test to determine whether salary is related to experience at a level of significance of 5%. (7 marks)
- Use the f – statistic to test the significance of the relationship obtained in (a) above, at a level of significance of 5%. (7 marks)
- Determine the salary of a senior accountant with 10 years experience. (2 marks)
- What percentage of the variation in salary is explained by a variation in years of experience? (2 marks)

(Total: 20 marks)

QUESTION 3

A company has developed a new product and has identified the activities necessary for the product promotion campaign as follows:

Activity	Description	Preceding Activity	Duration (weeks)	Support Staff
A	Approval of training budget	None	1	1
B	Training of service people	A	8	2
C	Training of sales people	A	4	2
D	Sales promotion to distributors	C	4	1
E	Distribution to distributors	D	2	1
F	Distribution to retailers	E	4	1
G	Advertising brief	A	2	2
H	Advertising contract	G	1	1
I	Illustrations and text	H	4	1
J	Printing	I	4	2
K	Product launch	B, F, J	1	3

Required:

- Explain the term critical path. (2 marks)
- Construct a network diagram for this project. (4 marks)
- Compute the total float for each activity. (4 marks)
- Determine the critical path and project duration. (3 marks)
- Assuming the project starts at time zero and that each activity commences at the earliest start date, construct a Gantt chart showing the weekly requirements of support staff. (4 marks)

- f) The Director of Finance of the company has intimated that the budget for the project cannot support more than five support staff in any given week. Suggest how this project could most effectively be managed and show the revised weekly requirements of support staff. (3 marks)

(Total: 20 marks)

QUESTION 4

- a) Explain the following terms.
- i) Mutually exclusive events. (2 marks)
 - ii) Independent events. (2 marks)
- b) A and B are independent events. The probability $P(A) = 2/3$ and $P(A \cap B) = 1/6$
- Find:
- i) $P(B)$ (3 marks)
 - ii) $P(A \cup B)$ (3 marks)
- c) A life test on a large number of a particular type of alkaline batteries revealed that the mean life use before failure is 19.0 hours. The distribution of the lives is approximately normally distributed with a standard deviation of 1.2 hours.
- i) What proportion of batteries had a use before failure between 18 and 20 hours? (8 marks)
 - iii) What proportion of batteries had a use before failure of more than 20 hours? (2 marks)

(Total: 20 marks)