

**NOVEMBER 2016 PROFESSIONAL EXAMINATIONS  
MANAGEMENT ACCOUNTING (PAPER 2.2)  
CHIEF EXAMINER'S REPORT, QUESTIONS & MARKING SCHEME**

**EXAMINER'S GENERAL COMMENTS**

This report is focused on the evaluation of the management accounting paper written in the November 2016 professional examinations. The questions were fairly balanced in terms of spread over the syllabus and with respect to theory and calculations.

The overall performance was expected to be good since the questions were within reach of an average student. It was however expected that annuity table would have been provided for question five.

On the whole questions one and two were well attempted as well as question four. Most of the candidates performed poorly in questions three and five.

## MANAGEMENT ACCOUNTING QUESTIONS

### QUESTION ONE

- a) The Management Accountant plays an important role in the modern business environment and his/her activities may be categorized as providing information under the key headings of planning, control and decision making.

You have just been appointed to a new role as Management Accountant in Akwaba Ltd, a large engineering company producing a wide range of parts for the automobile industry. This new role has been created following a majority decision of the Board of Directors based on the advice of the company's auditors. However, the Managing Director comes from a marketing background and does not understand why the company needs another accountant as there is already a Financial Accountant employed on a full time basis. She voted against the creation of the new position and considers the cost of your remuneration to be an unwelcome burden which will only serve to reduce the company's reported profits. According to her the equation  $Y = a - bx$  which management accountant always uses are not relevant in modern day business environment.

You are aware of the strong opinion of the Managing Director and as your first task, you decide to attempt to convince her of the importance of Management Accounting in the modern business environment and also suggest some ways that you can ensure your future role in Akwaba Ltd is financially viable.

#### Required:

Prepare a Memorandum to the Managing Director in which you address her concerns using the following guidelines:

- i) Distinguish clearly between *Financial Accounting* and *Management Accounting* under any **FOUR** different headings. **(6 marks)**
  - ii) For each of the **THREE** key headings of planning, control and decision making; outline one Management Accounting technique and how it would lead to stronger commercial success for the company. **(6 marks)**
  - iii) Identify any **THREE** qualitative (non-financial) issues that you should consider as a Management Accountant when providing information for decision making in Akwaba Ltd. **(2 marks)**
- b) Identify and explain briefly **THREE** similarities and **TWO** differences between *activity-based costing* and the *traditional system* of assigning overheads to products. **(6 marks)**

**(Total: 20 marks)**

## QUESTION TWO

- a) Smooth Sailing Ltd is a medium size company that specialises in the construction of iron gates for clients. It has three production departments through which all jobs are processed, Assembling, Welding and Finishing. The following data relates to the year ended 30 September, 2015:

### Budgeted Data:

	Assembling	Welding	Finishing
Overheads (GH¢)	64,050	108,900	83,520
Direct labour hours	-	-	14,400
Machine hours	5,250	6,600	-

Job CA2 was undertaken during the last month of the year recording the following:

Direct materials:	GH¢
From stores	16,500
Bought-in	12,600

### Direct labour:

Assembling	450 hours @ GH¢8/hr
Welding	535 hours @ GH¢8/hr
Finishing	1235hours @ GH¢6/hr

### Machine hours:

Assembling	425
Welding	532
Finishing	.....

Trials and testing cost of GH¢5,400 is incurred on each job.

It is company policy to make a mark-up of 50% of profit on each job.

### Required:

- Calculate an appropriate *overhead absorption rate* for each department for the year ended 30 September, 2015; and **(5 marks)**
  - Determine the total costs, and hence, the price of Job CA2. **(10 marks)**
- b) Most products go through five stages in their life namely, Development, Introduction, Growth, Maturity and Decline. These stages have helped in the design of marketing strategies and it is now believed that it can be equally useful for accountants in the determination of the cost of products.

### Required:

Identify **FIVE** benefits of product life cycle costing.

**(5 marks)**

**(Total: 20 marks)**

### QUESTION THREE

- a) Pinto company Limited processes materials into finished products. After process one, two main products PEF and CEF are turned out. The production processes allow for 10% normal loss at process one and 5% for each product if it is to be processed further. The scrap at process one can be sold for GH¢6.60 per unit. The standard prices of the products are as follows; PEF to be sold at split off point GH¢17 per unit but can be sold for GH¢28 per unit after further processing. A unit of CEF can also be sold for GH¢16 at split off point or GH¢25 after further processing. Further processing costs are; PEF; direct materials GH¢4 per unit and conversion GH¢3.50 per unit. The materials and conversion costs per unit for CEF are GH¢5 and GH¢4 respectively.

In the month of August 2016 6,000 units were processed through process one at the following costs; direct materials GH¢40,000, conversion GH¢32,000. The output at the end of process one were 3,000 units for PEF and 2,000 units for CEF.

**Required:**

Advise management which of the products should be processed further and which should be sold at split off point if volume is used to share common cost. **(12 marks)**

- b) The use of relevant information is key to managerial successes. Describe *relevant costs* to your newly appointed Managing Director who will be negotiating a new contract. **(3 marks)**
- c) Explain the following concepts and describe their application in responsibility accounting:
- i) The controllability principle **(2.5 marks)**
  - ii) Budgetary slacks **(2.5 marks)**

**(Total: 20 marks)**

### QUESTION FOUR

- a) Jungle Twist Ltd manufactures quality blocks for the housing industry in Ghana. It operates a standard marginal costing system. The following standard costs, volume and revenue data for the quarter ending 31 October, 2015 are provided:

**Standard cost card:**

Selling price		GH¢18 per block
Costs:		
Direct material	P	3 kg at GH¢2.60 per kg
	Q	2 kg at GH¢2.50 per kg
Direct labour		2 hours at GH¢0.60 per hour

Budgeted sales for the quarter: 62,500 blocks

Variable overheads are absorbed at the rate of GH¢0.50 per direct labour hour.

Fixed production overhead for the quarter are estimated to be GH¢78,500

The following actual results were recorded for the quarter just ended 31 October, 2015:

Production	:	60,000 blocks
Sales	:	58,000 blocks
Price	:	GH¢17.00 per block
Direct material	P	150,000 kg were bought and used at GH¢360,000
	Q	109,000 kg were bought and used at GH¢327,000
Direct labour		108,000 hours were worked for at a cost of GH¢90,400
Variable overheads		GH¢82,000
Fixed production overheads		GH¢80,000

**Required:**

Calculate the following variances for the quarter just ended 30 September, 2015 the:

- i) Sales volume and sales price variances; **(3 marks)**
- ii) Price and usage variances for each material; **(3 marks)**
- iii) Mix and yield variance for each material; **(3 marks)**
- iv) Labour rate, labour efficiency and idle time variances; and **(3 marks)**
- v) Variable overheads expenditure and variable overheads efficiency variances. **(3 marks)**

- b) Describe the *balanced score card approach* to performance measurement. **(5 marks)**

**(Total: 20 marks)**

**QUESTION FIVE**

- a) DDB limited has decided to set up a factory to process groundnuts into oil. The feasibility studies cost them GH¢35,000. The consultants have advised that the initial outlay will be GH¢250,000, however, they were unable to estimate the cash inflow due to the uncertain economic environment.

**Required:**

Using NPV as an appraisal technique you are required to calculate;

- i) The constant cash inflow needed to break even if the cost of capital is 15% and the project is to last for 10 years. **(4 marks)**
  - ii) By how much should the cash inflow increase to break even if cost of capital is increased to 20%. **(4 marks)**
  - iii) If the cash inflow is GH¢45,000, for how long should the project run to break even if the cost of capital is 15%. **(4 marks)**
- b) Budgetary control is one of the important tools used by management, yet most organisations are unable to derive its full benefits.

**Required:**

Identify and explain **FOUR** reasons that may account for unsuccessful implementation of a budgetary control system. **(8 marks)**

**(Total: 20 marks)**

## MANAGEMENT ACCOUNTING SCHEME

### QUESTION ONE

a)

#### MEMORANDUM

To: Managing Director, Akwaba Ltd  
From: New Management Accountant  
Subject: Role of Management Accounting  
Date: 8th November 2016

Further to my recent appointment as Management Accountant at Akwaba Ltd, the following is a brief outline of the role and importance of management accounting to companies like Akwaba Ltd, the meaning of the question and also some brief Suggestions as to how my appointment may prove beneficial to you and the company from both a financial and non-financial viewpoint.

#### **Financial Vs Management Accounting**

Despite the fact that the word "Accountant" is common to both job titles, they are in fact very different roles. The financial accountant is primarily concerned with stewardship and compliance activities whereas the management accountant is concerned with information gathering, analysis and dissemination. The roles can be further differentiated using the following headings:

- **Users:**

Financial Accountant aims to report the company's affairs and transactions to external audiences such as shareholders; debt providers; government bodies; etc. Management Accountants aim to report information exclusively to internal audiences such as Directors; department managers; project managers; etc.

- **Time Horizon:**

Financial accounts are usually based on historic data and are often reported some time (months) after the event to which they relate. Hence they are said to be backward looking.

Management accounting information can often be more forward looking and may use historic data but will usually try to use it predicatively to make decisions about the future direction of the company.

- **Regulatory Compliance:**

Financial accounts are used for stewardship purposes and as a basis for other calculations such as taxation liabilities. Hence there are expectations of precision and accuracy to give a "true and fair view". Therefore they must comply with detailed legislation and generally accepted accounting practice (GAAP).

Management accounts and reports do not have to suffer the same restrictions of legislation and GAAP and may not have the same level of accuracy. The emphasis is on timely production of information rather than accuracy and compliance.

## **Objective**

The main objectives of financial accounting are to disclose the end results of the business, and the financial condition of the business on a particular date. Whereas the main objective of managerial accounting is to help management by providing information that is used to plan, set goals and evaluate these goals.

## **Formats**

Financial accounting statements must be prepared to conform to the legal requirements and the Generally Accepted Accounting Principles (GAAP) such as financial accounting standard board (FASB)

Management accounting are not required to adhere to generally accepted accounting principles when providing management information's for internal purposes

**(Any 3 points for 6 marks)**

## **ii) Suggested Management Accounting Techniques:**

### **Planning:**

Management accountants will be heavily involved in producing the budgets within a company. These from long-term strategic plans (3 to 5 years) to short term operational level plans (quarterly or monthly). Producing plans helps ensure the company grows in a structured and organized way and can ensure that adequate resources are put in place for example to help prepare for expansion into new markets.

### **Control:**

Management accountants often use variance analysis to monitor actual results and compare them to expected norms (standards) for all the different facets of business activities. This technique helps identify positive and negative trends/changes to ensure the company can adapt quickly when results are different from original expectations and thus optimize the company's commercial performance.

### **Decision Making:**

Management accountants use techniques such as break even analysis, (limiting factor, linear programming) to help predict the activity levels required to ensure a profit or a target return on capital is achieved. This can help inform production quotas and scheduling and will help ensure optimal resource utilisation.

**(6 marks)**

## **iii) Non-financial Considerations:**

Accountants are often criticised for concentrating too much on the financial outcome of activities – profit focused. Management accountants are encouraged to look at other aspects that contribute to business success such as:

- Customer satisfaction
- Corporate governance and ethical responsibilities
- Good labour relations
- Market penetration/expansion
- Environmental protection

- No. of complains
- Idle times
- No. of defects

**(Any 2 points for 2 marks)**

If you have any further queries in this regard, please do not hesitate to contact my office.

Yours sincerely,

**b) Similarities**

- they all apply allocation, apportionment and absorption
- **there** may be over and under absorbed overheads if pre-determined rates are used
- They all use cost centers that are consistent with the operating system
- The same subjective bases of apportioning some overheads are applied

**Differences**

- Traditional uses a single rate ABC uses multiple rates
- Traditional apportions costs to cost centers, ABC put cost into cost pools
- ABC will look for cost drivers as bases of establishing the absorption rate traditional may use any acceptable base

**(6 marks)**

**(Total: 20 marks)**

**EXAMINER'S COMMENTS**

This question was well attempted by most of the candidates;

The differences between financial accounting and management accounting were well spelt out.

Under the techniques needed for control, planning and decision making , the concepts were fairly understood but some candidates could not identify the appropriate technique for the above stated areas;

(iii) Most candidates misunderstood non-financial issues with qualitative factors of good information system i.e. timeliness, understandability, comparability and so on.

(b) The similarities and differences between Activity Based Costing and the Traditional system were well attempted.



## QUESTION TWO

### (a) SMOOTH SAILING LTD

(i) Overheads absorption rate =  $\frac{\text{Budgeted Overhaeds}}{\text{Budgeted Activity}}$

Assembling  $\frac{\text{GH}\text{\textasciicircum}64,050}{5,250\text{MachineHours}} = \text{GH}\text{\textasciicircum}12.20/\text{Machine Hour}$

**2mks**

Welding  $\frac{\text{GH}\text{\textasciicircum}108,900}{6,600\text{MachineHours}} = \text{GH}\text{\textasciicircum}16.50/\text{Machine Hour}$

**1.5mks**

Finishing  $\frac{\text{GH}\text{\textasciicircum}83,520}{14,400\text{LabourHours}} = \text{GH}\text{\textasciicircum}5.80/\text{Machine Hour}$

**1.5mks**

(ii)

#### Job CA2 Cost Sheet

	GH¢	GH¢
Direct materials:		
From stores	16,500	
Bought-in	<u>12,600</u>	29,100
Direct labour:		
Assembling (450 x GH¢8)	3,600	
Welding (535 x GH¢8)	4,280	
Finishing (1,235 x GH¢6)	<u>7,410</u>	15,920
Direct expense		<u>5,400</u>
Prime cost		49,790
Production overheads:		
Assembling (425 x GH¢12.20)	5,185	
Welding (532 x GH¢16.50)	8,778	
Finishing (1,235 x GH¢5.80)	<u>7,410</u>	<u>21,126</u>
Production		70,916
Profit mark-up ( $\frac{1}{2} \times \text{GH}\text{\textasciicircum}70,916$ )		<u>35,458</u>
Selling		<u><b>106,374</b></u>

**(10 marks)**

### b) Benefits of life cycle costing

- Helps to assess the profitability over the entire life cycle
- Useful for organisations producing products with shorter life cycles
- Helps in earlier actions to generate more revenue or reduce cost
- Better decision will follow from accurate assessment of total cost and revenue
- Encourages longer term thinking and forward planning.

**(5marks)**

**(Total: 20 marks)**

### EXAMINER'S COMMENTS

The question required candidates to calculate overhead absorption rates and prepare the account for a job.

Most candidates performed fairly well except that some failed to attach the absorption base to the figures calculated. For instance the OAR for Assembling department is GHS12.20 per machine hour. If a candidate writes just GHS12.20 without adding the per machine hour the answer does not make sense and it is wrong.

The cost sheet showing the selling price of the job was well attempted.

(b) Candidates demonstrated good knowledge of the life cycle of a product. Some however were unable to bring out clearly the benefits. Attempt was made by some to state benefit specific to each stage of the cycle instead of general benefits.

### QUESTION THREE

(a) The question seeks to test students understanding of how to treat normal and abnormal losses with scrap value and also advise on the decision to sell or process further where joint products are involved.

Accounting for units processed

Units started	6,000
Less normal loss (10%)	600
<b>Expected units</b>	<b>5,400</b>

#### OUTPUT

PEF	3,000
CEF	2,000
<b>Abnormal loss</b>	<b>400</b>

<b>Cost per unit</b>	<b>material GHS</b>	<b>conversion GHS</b>	<b>Total GHS</b>
	(40,000-3960)	32,000	68,040

GHS 68,040/5400 EU

GHS 12.60

#### Income Statement at Split Off point

	<b>PEF(GHS)</b>		<b>CEF(GHSd)</b>
Revenue (3,000 x 17)	51,000	(2000x16)	32,000
COS (3,000x12.6)	<u>37,800</u>	(2,000x12.6)	<u>25,200</u>
Profit	13,200		<u>6,800</u>

Income Statement after further processing			
	PEF (GHS)		CEF (GHS)
Revenue (2850x28)	79,800	(1900x25)	47,500
COS			
Common cost	(37,800)		(25,200)
Further processing cost	(22,500)		(18,000)
PROFIT	19,500		4,300

**Decision; process PEF and sell CEF at split off point.**

**NOTE; units turned out after further processing should make provision for normal loss of 5% but the input cost will be based on units processed. (12 marks)**

**Alternative solution using the incremental approach**

	PEF		CEF
Incremental Revenue			
After proc (GHS28 ×2850)	79,000	(GHS25×1900)	47,500
Split off point ( GHS17×3,000)	51,000	(GHS16×2,000)	32,000
	<b>28,800</b>		<b>15,500</b>
<b>Less incremental cost</b>			
(GHS4+3.5 ×3,000)	22,500	(GHS5+4×2,000)	18,000
<b>PROFIT/LOSS</b>	<b>6,300</b>		<b>(2,500)</b>
Process PEF further and sell CEF at split off point.			

**b)** Relevant cost are future cash flows arising as a direct consequence of a decision.

Relevant must:

- Be cost that will occur in the future
- Cost that will results in cash flows
- Arise as a direct consequence of the decision.

Sunk costs and committed costs are not relevant cost. **(3 marks)**

**c)**

**(i) The controllability principle**

This principle requires that managers of responsibility centres are evaluated based on only items (revenues and costs) that they have over. The principle is implemented by:

1. Eliminating uncontrollable items from the areas for which managers are held accountable
2. Calculating the effect of uncontrollable items so that the performance assessment reports distinguish between controllable and uncontrollable items.

**2.5 marks**

**(ii) Budgetary slacks**

This is the process by which managers seek to obtain budget targets that can easily be achieved by understating revenues and/or overstating costs. Some of the ways in which budgetary slacks arise include the following:

1. Managers avoid risky but profitable projects.
2. Managers negotiate for lower targets
3. Managers dispute performance assessment results

**2.5 marks**

**(Total: 20 marks)**

**EXAMINER'S COMMENTS**

This question was poorly attempted. Candidates failed to understand it as a process costing where joint products could be processed further. The few who understood the requirement did not factor in the abnormal loss and therefore could not treat the scrap value of both the normal and abnormal losses. Others who looked at the question as a decision making model used the incremental prices against the incremental cost without the quantities of the joint products.

Candidates should note that to be able to decide whether a product should be processed further or not the contributions/ profits at split off point are compared with those after further processing. Secondly in apportioning the common cost the scrap value of the normal loss should be subtracted from the material cost. Besides where there is abnormal loss it should be considered in the calculation of the equivalent units.

Since the requirement was on the income statement the process account was not necessary as some candidates did.

(b) The requirement was well understood by most candidates who attempted this question so the answers provided were reasonably correct.

(c) Most candidates demonstrated their understanding of the concepts but some could not describe their application for which reason they could not be awarded the full marks. There were others who could not explain the concepts properly.

## QUESTION FOUR

### (a) Jungle Twist Ltd

#### Standard cost card:

Selling price			GH¢	GH¢
				18.00
Variable Costs:				
Direct material	P	(3 x GH¢2.60)	7.80	
	Q	(2 x GH¢2.50)		5.00
Direct labour		(2 x GH¢0.60)	1.20	
Variable overheads		(2 x GH¢0.50)	1.00	<u>15.00</u>
Standard contribution				<u>3.00</u>

### (i) Sales volume and sales prices variances

#### Sales volume variance

Budgeted sales units		62,500
Actual sales units		<u>58,000</u>
Variance in units		4,500A
Standard contribution margin		<u>GH¢3</u>
Variance		<u>GH¢13,500A</u>

#### Sales price variance

58,000 units should have been sold for (58,000 x GH¢18)		
1,044,000		
But were sold for (58,000 x GH¢17)		
<u>986,000</u>		
Variance		<u>58,000A</u>

3 marks

### (ii) Price and usage variance for each material

#### Material price variances:

##### Material P

Actual purchases should have cost (150,000 x GH¢2.60)		GH¢
390,000		
But did cost		<u>360,000</u>
Variance		<u>30,000F</u>

1/2mk

##### Material Q

Actual purchases should have cost (109,000 x GH¢2.50)		GH¢
272,500		
But did cost		<u>327,000</u>

Variance 54,500A  
1mk

**Material usage variances:**

**Material P**

60,000 units should have used (60,000 x 3kg) 180,000kg  
 But did cost 150,000kg  
 Variance 30,000kgF

Standard price  
GH¢2.60

Variance GH¢78,000F  
1mk

**Material Q**

60,000 units should have used (60,000 x 2kg) 120,000kg  
 But did cost 109,000kg  
 Variance 11,000kgF

Standard price  
GH¢2.50

Variance GH¢27,500F  
1mk

**iii) Mix and yield variance for each material**

**Material mix variance**

Material	Actual materials in standard mix	Actual materials in actual mix	Difference	Standard price	Variance
				GH¢	GH¢
P	155,400	150,000	5,400F	2.60	14,040F
Q	103,600	109,000	5,400A	2.50	<u>13,500A</u>
Total variance					<u>540F</u> 1.5mk

**Material yield variance**

Material	Expected Output	Actual output in standard proportion	Difference	Standard yield Price	Variance
				GH¢	GH¢
P	30,000	36,000	6,000F	2.56	15,360F
Q	21,800	24,000	2,200A	2.56	<u>5,632F</u>
Total variance					<u>20,992F</u> 1.5mk

**Standard yield price**

P (3kg x GH¢2.60) 7.80  
 Q (2kg x GH¢2.50) 5.00  
12.80

**Standard yield price** =  $\frac{12.80}{5} = \text{GH¢}2.56$

(iv) **Labour rate and efficiency variances**

**Labour rate variance**

108,000 hours should have cost (108,000 x GH¢0.60)  
But did cost  
Variance

GH¢  
64,800  
90,400  
**25,600A**  
1.5mk

**Labour rate variance**

60,000 units should have used (60,000 x 2hrs)  
But did cost  
Variance  
Standard price  
Variance

120,000hrs  
108,000hrs  
12,000hrsF  
GH¢0.60  
GH¢7,200F  
1.5mk

(v) **Variable overheads expenditure and variable overheads efficiency variances**

**Variable overheads expenditure variance**

108,000 hours should have cost (108,000 x GH¢0.50)  
But did cost  
Variance

GH¢  
54,000  
82,000  
**28,000A**  
1.5mk

**Variable overheads efficiency variance**

60,000 units should have used (60,000 x 2hrs)  
But did cost  
Variance  
Standard price  
Variance

120,000hrs  
108,000hrs  
12,000hrsF  
GH¢0.50  
GH¢6,000F  
1.5mk  
(15 marks)

(c) **Balanced Scorecard**

The balanced scorecard is a strategic management technique for communicating and evaluating the achievement of the strategy and mission of an organisation. It comprises an integrated framework of financial and non-financial performance measures that aim to clarify, communicate and manage strategy implementation. The concept translates an organisation's strategy into objectives and performance measurements for the following four perspectives:

### **Financial perspective**

The financial perspective considers how the organisation appears to shareholders. That is, the way the organisation creates value for its shareholders. The balanced scorecard identifies three core financial themes that will drive the business strategy: *revenue growth and mix, cost reduction and asset utilisation*.

### **Customer perspective**

The customer perspective considers how the organisation appears to customers. The customer perspective should identify the customer and market segments in which the business units will compete. There is a strong link between the customer perspective and the revenue objectives in the financial perspective. If customer objectives are achieved, revenue objectives should be too.

### **Internal perspective**

The internal perspective requires focus on the things the organisation must excel at to achieve its financial and customer objectives. The value chain process consists of three processes: the innovation process, the operations process and the post-sales process.

### **Learning and growth perspective**

The learning and growth perspective requires the organisation to ask itself whether it can continue to improve and create value. If an organisation is to continue having loyal, satisfied customers and make good use of its resources, it must keep learning and developing.

**(4 marks)**

**(Total: 20 marks)**

### **EXAMINER'S COMMENTS**

This question was well attempted by most candidates. The following areas are however to be noted

- (i) Under sales margin variance the focus is on the change in contribution/profit not on the price of the product. Since in calculating the contribution /profit the unit cost is held constant the difference in the standard contribution/profit and the actual contribution/profit is the same as the difference in the standard price and actual price for which reason most candidates use the prices in the formula instead of the contributions/prices. When that happens, the answer for the sales price variance will be the same as if the contribution/profit was used but the sales volume variance is almost always wrong.
- (ii) The yield variance posed a little challenge to some candidates. It is always easier to look at the yield from an output point which will not separate the finished product into the various inputs. However, if the input approach is to be used then it is assumed that the standard mix will be maintained for both standard quantities and actual quantities. In that case the standard quantity of actual production is compared with



actual quantity of actual production to arrive at the yield variances which are multiplied by the standard prices.

(b) Most students were able to clearly state and explain the key performance indicators under the balanced score card hence they were awarded the full marks.

## QUESTION FIVE

(a) i) At breakeven using NPV , PV of cash inflow should be equal to cash outlay.

GHS 250,000.00 = cash flow x annuity factor (15 % for 10 years)

$$250,000 = CF \times 5.019$$

$$CF = 250,000 / 5.019$$

$$= \text{GHS } 49,810.72$$

**(4 marks)**

ii) If cost of capital increases to 20% the Cash Inflow will have to increase

$$250,000 = CF \times AF \text{ (20\% for 10 years)}$$

$$250,000 = CF \times 4.192$$

$$CF = 250,000 / 4.192$$

$$= \text{GHS } 59,637.40$$

$$\% \text{ increase} = \frac{59,637.40 - 49,810.72}{49,810.72}$$

$$0.197 \text{ } 19.7\%$$

**(4 marks)**

iii) If cash inflow decreases to GHS 45,000.00 at 15% cost of capital it will take a longer time to breakeven

$$250,000 = 45,000 \times AF$$

$$AF = 250,000 / 45,000$$

$$= 5.556$$

5.556 will lie between years 12 and 13

$$\text{Yr } 12 = 5.421, \quad \text{Yr } 13 = 5.583$$

$$\text{IF } 0.162 = 1 \text{ yr}$$

$$0.135 = 0.135 / 0.162$$

$$= 0.833 \times 12$$

$$= 10 \text{ months}$$

Therefore it will take 12 years 10 months to breakeven

**(4 marks)**

(b) Reasons that may account for unsuccessful implementation of Budgetary control system

- Lack of clear organizational objectives
- Unclear definition of responsibilities
- Lack of top management support
- Lack of involvement by staff
- Poor monitoring and feedback system
- Too much exercise of discretionary powers by top management.
- Lack of understanding of the entire concept and process

**(Any 4 points for 8 marks)**

**(Total: 20 marks)**

#### **CONCLUSION:**

Most of the candidates may have spent more time on question one because it was relatively easier. They may not have been adversely affected because some of the questions that required calculation did not demand too much time. Candidates are advised to properly apportion their time to give equal attention to all questions.