MAY 2017 PROFESSIONAL EXAMINATIONS
MANAGEMENT ACCOUNTING (PAPER 2.2)
CHIEF EXAMINER'S REPORT, QUESTIONS & MARKING SCHEME

EXAMINER'S GENERAL COMMENTS

The May 2017 Examination questions fall within the approved syllabus of the Institute as well as the marks distribution. The candidates were examined in such areas as break-even analysis, transfer pricing, budgeting and preparation of functional budgets, costing methods, relevant costs, relevant costing, standard costing and variance analysis.

STANDARD OF THE PAPER

In all, calculation questions accounted for 60% of the total marks whilst written questions accounted for 40%.There were no errors identified in the questions and no ambiguities were noted. However, the contents of the questions were found to be involving per the suggested solutions which will be very difficult to complete within 3 hours.

PERFORMANCE OF CANDIDATES

Performance of the candidates is not satisfactory looking at the requirements of the questions. Moderating of the scripts suggests the following as some of the factors accounting for the poor performance:

- Lack of preparation by the candidates - At this level, candidates could not even state and explain some of the most basic principles and concepts in Management Accounting such as cost centres, zero based budgeting, target costing etc. Not even one sub-question could be answered by most of the candidates.
- Poor understanding and expression of the English language - Candidates could not construct one complete and meaningful sentence. Some of the candidates have the idea but cannot put it across in a simple English to be understood.
- Poor presentation of materials or suggested solutions - Most of the candidates could not present the suggested solutions in a structured manner even though there is no one formula in presenting solutions to Management Accounting questions. Most of the candidates could not present statements such as functional budgets and operating statements (Marginal and Absorption) in a structured format.
- Not stating of decisions after arriving at the quantitative analysis of the requirements – Management Accounting questions normally require an advice to management but most of the candidates ignore this requirement in their suggested solutions.

SPECIFIC CONCERNS

- It is surprising that more than 90% of the candidates could not determine the IRR of a project to break even using the B-E Analysis. Worse of all, the net cash flow which is key in B-E analysis could not be determined correctly by 60% of the candidates.

- Most of the candidates did not know the difference in determining operating profits using Marginal Costing and Absorption Costing. About 70% of the candidates did not get the cost of sales under absorption costing correct and were also unable to determine the over/under absorbed overheads under the absorption costing. This shows clearly that at this level candidates cannot determined the difference between profits under the two methods.

- Calculations of basic variances in standard costing were a problem. It is only about 20% of the candidates who could calculate sales, material, labour and overhead variances correctly. Worse of all, most of them could not prepare a simple statement to reconcile the standard profit with the actual profit.

QUESTION ONE

a) Kwame after his National Service and with no hope of securing a job in the formal sector has decided to run a taxi service. The following forecast has been made for the operation of a service between Abisim and Sunyani.
   i) Revenue totaling GH¢300 a week for 52 weeks in a year. This is net of fuel and other variable costs.
   ii) Tyres; four pieces for a year at GH¢120 per unit.
   iii) Maintenance and servicing; GH¢120 per month.
   iv) Salaries GH¢3,000 per year
   v) Insurance GH¢350 per year

   The net cash flow will increase at 5% per annum for the next five years due to inflation. The cost of the vehicle is estimated at GH¢28,000. The project appears quite profitable based on the NPV criteria using the Government policy rate of 26%. However the banks are offering rates far higher than the policy rate.

   Required:
   You are to calculate the break-even rate for the project. **(10 marks)**

b) While managers can use different leadership styles, they all share the task of utilizing information to make decisions that achieve organizational goals. Accounting information for decision making will differ in terms of its details depending on the user.

   Required:
   Explain **THREE** qualities of Management Accounting information. (**3 marks)**

c) Explain in brief the following terminologies as used in performance evaluation, highlighting their managerial objectives and the performance measurement indexes:
   i) Cost centre
   ii) Revenue/profit centre
   iii) Investment centre **(6 marks)**

d) Transfer pricing is the method used to sell a product from one subsidiary to another within a company. It impacts the purchasing behavior of the subsidiaries, and may have income tax implications for the company as a whole.

   Required:
   Describe any **THREE** methods of transfer pricing and discuss their limitations.
   (6 marks)

(Total: 25 marks)

QUESTION TWO

a) One of the key stages of decision making in organisations is the collection of data on alternative cause of action. State and explain **THREE** external and **TWO** internal sources from where data can be collected by a company seeking to add a new product to its production line. **(5 marks)**

b) Diminutive limited is a manufacturing company situated at the Jubilee field that produces chemicals for oil production. The company is preparing its budget for the coming year. It expects to be able to sell 10,000 tonnes of its only product, the "Sparkle Oil" in January 2016. Sales are then expected to rise to 11,000 tonnes in February and 14,000 tonnes in March and then remain stable for the rest of the year.

Diminutive limited aims to carry a finished goods inventory at the end of each month equal to 10% of the following months sales. Each "Sparkle Oil" takes 2 hours labour to make. Diminutive company Limited's 132 production workers are employed on contract that require them to work a minimum of 160 hours per month and are each paid GH¢1,280 per month. Production workers are highly skilled and require a minimum of one year's training. In the short term it is not possible to recruit any more production workers. Any labour hours required in excess of 160 hours per worker are made up by overtime that is paid at basic rate plus overtime premium of 48% of the basic rate.

Required:

i) Prepare the production budget on a monthly basis for the first quarter of 2016. **(3 marks)**

ii) Prepare the labour budget for the first quarter of 2016 showing both hours and labour cost (assume that all production workers work at least 160 hours per month). (**6 marks)**

c) ***Zero based budgeting*** attempts to improve upon Incremental type of budgeting which is perceived to carry over inefficiencies from previous periods. It allows for budget reductions and permits the re-allocation of resources from low to high priority programs. Critics are of the opinion that such approach or process of budgeting can be cumbersome in its execution.

Required:

Identify and explain **THREE** steps in the preparation of Zero based budget. **(6 marks)**

(Total: 20 marks)

QUESTION THREE

a) Bosco Ltd makes and sells one product. Currently, it uses absorption costing to measure profits and inventory values. The budgeted production cost per unit is as follows:

		GH¢
Direct labour	3 hours at GH¢6 per hour	18
Direct materials	4 kilograms at GH¢7 per kilo	28
Production Overhead	(Fixed cost)	20
		66

Normal output volume is 16,000 units per year and this volume is used to establish the fixed overhead absorption rate for each year. Costs relating to sales, distribution and administration are:

Variable	20% of sales value
Fixed	GH¢180,000 per year.

There were no units of finished goods inventory at 1st October 2015. The fixed overhead expenditure is spread evenly throughout the year. The selling price per unit is GH¢140. For the two six-monthly periods detailed below, the number of units to be produced and sold are budgeted as follows:

	Six months ending 31st March 2016	**Six months ending 30th September 2016**
Production	8,500 units	7,000 units
Sales	7,000 units	8,000 units

The entity is considering whether to abandon absorption costing and use marginal costing instead for profit reporting and inventory valuation.

Required:

i) Calculate the budgeted fixed production overhead costs for each of the six-monthly periods. **(3 marks)**

ii) Prepare profit statements for management using:
- marginal costing
- absorption costing **(9 marks)**

iii) Prepare an explanatory statement reconciling the profits under marginal costing with that of absorption costing. **(3 marks)**

b) Wham limited assembles and sells many types of android smart phones. It is considering extending its product range to include window phones. These smart phones produce a better sound quality than traditional key pad (Yam) phones and have a large number of potential additional features not possible with the previous technologies (station scanning, more choice, one touch tuning, station identification text and song identification text etc.).

Android smart phones are produced by assembly workers assembling a variety of components. Production overheads are currently absorbed into product costs on an assembly labor hour basis. Wham limited is considering a target costing approach for its new window phone product.

Required:

i) Briefly describe the ***target costing process*** that Wham limited should undertake in order to successfully introduce its new window phone. **(3 marks)**

ii) Assuming a cost gap was identified in the process, outline possible steps Wham limited could take to reduce the target cost gap. **(3 marks)**

c) Jam limited is introducing life cycle costing to enable it profile the cost of its product through the life cycle, including the pre-production stage. The CEO of the firm has discussed this with you for advice.

Required:

As the Management Accountant, state and explain **TWO** cost reduction strategies which the CEO of Jam limited should adopt to reduce the cost throughout the life cycle of its product. **(4 marks)**

(Total: 25 marks)

QUESTION FOUR

a) Straight-to-Heaven church is planning its annual camp meeting in December 2017. The church has four branches and the annual camp meeting is the first major programme after all the head pastors attended a leadership conference on the theme *"Blending faith and Science in Church Decision Making."*

The General overseer of the church wishes to apply the scientific principles learnt at the conference in deciding between two major venues for 2017 annual comp meeting. Hitherto, the general overseer or his wife would veto where annual camp meetings are held. The following information are relevant for the decision.

i) Seven pastors will facilitate the Camp meeting. 'Food 4 All' restaurant will be assigned the responsibility of providing food for the pastors. They have indicated that a meal for a pastor would cost GH¢5. This cost is expected to increase by one-half if a pastor attends the camp with his wife. All pastors will be fed three times daily but only three pastors plan to attend the conference with their wives. Church members will take care of their own feeding but all camp expenses of pastors will be borne by church members.

ii) Water to be served at the camp meeting. 100bags of sachet water at GH¢2 each and 25 boxes of 750mil bottled water at GH¢13 per box.

iii) The church plans to either have the conference at Ahayede (A) or Bonebon (B) camp sites. Accommodation cost per head per day at Ahayede is GH¢2 for the first 400 participants and GH¢1.5 for any additional participant. Bonebon will not charge any fee but the church will have to show appreciation, which will be in the neighbourhood of GH¢2,000 after the camp.

iv) Ahayede Campsite will require the payment of electricity and water bills of GH¢300 and GH¢500 respectively.

v) It is expected that 96 litres of fuel at GH¢3.12 per litre will be needed at Bonebon campsite.

vi) Transportation cost for chairs and canopies will be GH¢400 if the camp is undertaken at Ahayede and GH¢300 if the camp is sited at Bonebon. Each church member's transportation cost will be GH¢3 if Ahayede is chosen as the venue but this figure is expected to double if the camp is taken to Bonebon.

vii) Pastors' appreciation. Apart from the general pastor who will receive GH¢500, each pastor will receive GH¢300 as appreciation support.

viii) The church plans that 700 church members and pastors will take part in the annual camp meeting if it is undertaken at Bonebon while 500 members will attend the camp if it is held at Ahayede even though the two camp sites can each take 1,000 people. The camp will last for 5 days.

Required

i) Using relevant costing, advise management of the church the site they should hold the annual camp meeting. **(8 marks)**

ii) Suggest **TWO** qualitative factors that should be considered on deciding on the venue. **(4 marks)**

iii) Explain the term ***sunk costs*** and identify **THREE** examples of sunk costs. **(3 marks)**

(Total: 15 marks)

QUESTION FIVE

You are the Management Accountant of ABS Limited. The following computer printout shows details relating to June 2017.

	Actual	**Budget**
Sales volume	4,900 units	5,000 units
Selling price per unit	GH¢11.00	GH¢10.00
Production volume	5,400 units	5,000 units
Direct materials		
Quantity	10,600kg	10,000kg
price per kg	GH¢0.60	GH¢0.50
Direct labour		
hours per unit	0.55	0.50
rate per hour	GH¢3.80	GH¢4.00
Fixed overhead		
Production	GH¢10,300	GH¢10,000
Administration	GH¢3,100	GH¢3,000

ABS Limited uses a standard absorption costing system. There was no opening or closing work-in-progress

Required

Prepare a statement which reconciles the budgeted profit with the actual profit for June 2017, showing individual variances in much detail. **(15 marks)**

MARKING SCHEME

QUESTION ONE

a) The guiding rate is the internal rate of return. Any borrowing rate greater than that, will render the venture unprofitable.

Calculation of cash flow

	GH¢	GH¢
Receipt (300×52)		15,600.00
Less		
Tyres	480.00	
Maintenance (120×12)	1,440.00	
Salaries	3,000.00	
Insurance	350.00	
		(5,270.00)
Net Cash Flow		**10,330.00**

Yr.	Cash flow	DF (26%)	DCF	DF (30%)	DCF
0	(28,000.00)	1.00	(28,000)	1.00	(28,000)
1	**10,330**	0.794	8,202.02	0 .769	7,943.77
2	10,846.5	0.630	6,833.30	0 .592	6,421.13
3	11,388.83	0.500	5,694.41	0.455	5,181.92
4	**11,**958.27	0.397	4,747.43	0.350	4,185.40
5	12,556.18	0.315	3,955.20	0.269	3,377.61
NPV			**1,432.36**		**(890.17)**

IRR= 26%+ (1432.36÷2322.53)4
= 26+2.47= 28.47%

(10 marks)

b) **Qualities of Management Accounting Information**

- **Relevance**
  Information should be timely and bear on the decision-making process by possessing predictive or confirmatory (feedback) value.
- **Faithful Representation**
  Information must be truthful; complete, neutral, and free from error.
- **Comparability**
  Even though different companies may use different accounting methods, there is still sufficient basis for valid comparison.
- **Consistency**
  Deviations in measured outcomes from period to period should be the result of deviations in underlying performance (not accounting quirks).
- **Verifiability**
  Different knowledgeable and independent observers reach similar conclusions.

- **Timeliness**
  Available in sufficient time to be capable of influence.
- **Understandability**
  Clear and concise to those with reasonable business knowledge.

(Any 3 points for 3 marks)

c) **(i) Costs Centre**
Costs centres are responsibility centres where the managers have authority only to incur costs. These centres only incur costs but do not directly generate revenues. Managers of such costs centres are therefore evaluated based on their ability to control costs. That is, the manager's ability to meet the goals of budgeted controllable costs becomes the main focus. The evaluation reports for the centre compare the actual controllable costs with flexed controllable costs budget data.

(**2 marks)**

(ii) Profit centres
Managers have responsibility to incur costs as well as generate revenues. Managers of these centres are therefore evaluated based on the profitability of their centres. To evaluate the performance of managers of profit centres, information on controllable costs and revenues are gathered. Fixed costs must be distinguished between direct and indirect costs. The profitability of these centres is measured by the controllable margin (contribution less controllable fixed costs) (**2 marks)**

(iii) Investment centres
In addition to incurring costs and expenses and generating revenues, have control over investment decisions (acquisition and disposal of long term assets). Managers of investment centres are evaluated both on the profitability of the centres they manage and the rate of return on the funds invested. Since investment centre managers have control or significant influence over investment funds, the primary basis for evaluating the performance of the managers is the return on investment.

(**2 marks)**

(d)
Market-based transfer prices
Under this method, transfer prices are based on readily determinable and available market prices. The method is particularly applicable under competitive and efficient market conditions. This is applicable where there is an open market for the intermediate product of the selling division.
Limitations
- Appropriate Market Price may not Exist:
- Excess Production Capacity

Marginal cost transfer prices
Under this method, transfer prices are based on variable costs. This is applicable under short term and in cases of one-off transactions and where the division is purely a cost centre.

Limitations

- Long-term pricing. The method is completely unacceptable for long-term price setting, since it will result in prices that do not capture a company's fixed expenses.
- Ignores market prices. Marginal cost pricing sets prices at their absolute minimum. Any company routinely using this methodology to determine its prices may be giving away an enormous amount of margin that it could have earned if it had instead set prices at or near the market rate.
- Customer loss. If a company routinely engages in marginal cost pricing and then attempts to raise its prices, it may find that it was selling to customers who are extremely sensitive to price changes, and who will abandon it at once.

Full cost transfer prices (Absorption costing)

Full costs transfer prices are based on total costs; fixed and variable costs. This method is suitable when dealing with purely cost centres and for costing routine transactions. The method is also used when the entity is operating under the long run.

Limitations

- Ignores competition. A company may set a product price based on the full cost plus formula and then be surprised when it finds that competitors are charging substantially different prices.
- Ignores price elasticity. The company may be pricing too high or too low in comparison to what buyers are willing to pay. Thus, it either ends up pricing too low and giving away potential profits, or pricing too high and achieving minor revenues.
- Product cost overruns. Under this method, the engineering department has no incentive to prudently design a product that has the appropriate feature set and design characteristics for its target market (see the target costing method). Instead, the department simply designs what it wants and launches the product.

Cost-plus a mark-up transfer prices

Cost-plus mark-up based prices are based on costs and a profit element. This method is applicable when dealing with profit centres where in addition to the recovery of costs, divisional profitability is a prime objective.

Limitations

- Product cost overruns. Under this method, the engineering department has no incentive to prudently design a product that has the appropriate feature set and design characteristics for its target market (see the target costing method). Instead, the department simply designs what it wants and launches the product.
- Contract cost overruns. From the perspective of any government entity that hires a supplier under a cost plus pricing arrangement, the supplier has no incentive to curtail its expenditures - on the contrary, it will likely include as many costs as possible in the contract so that it can be reimbursed. Thus, a contractual arrangement should include cost-reduction incentives for the supplier.
- Ignores replacement costs. The method is based on historical costs, which may have changed. The most immediate replacement cost is more representative of the costs incurred by the entity.

Negotiated Transfer Price

This is a price that is established as a result of discussions between the buying and selling divisions. Here, selling and buying divisions will only agree to the transfer price only if the profits of their respective divisions increase as a result of the transfer. This method of determining prices has various advantages: First, divisional autonomy is maintained. Second, managers of divisions have better cost versus benefit information. Where idle capacity exists for the selling division.

Limitations

- **Sub-optimal**: The agreed transfer price may depend on the negotiating skills and bargaining powers of the managers involved. The final result may not always be optimal
- **Conflicts**: Rather than agreement on transfer prices, negotiations can lead to conflict between divisions and may require top-management mediation.
- **Defeat of Performance evaluation criteria**: Transfer prices dependent on Manager's negotiations skill will defeat the very purpose of performance evaluation.
- **Time and Cost:** Negotiations are time consuming for the managers involved, particularly when the number of transactions and interdependencies are large.

(3 marks for Explanation, 3 marks for Limitations)

(6 marks)

(Total: 25 marks)

QUESTION TWO

a) The following are some of the sources from where data can be collected

Internal;

- Accounting records ; information on the existing costs and their behavior can be obtained
- Production schedules. This will provide information on the products that are being produced with respect to their technical details.
- Information can also be obtained from the technical department with respect to state of the machinery and capacity utilization.
- Human resource record will make available the labour status, the trend in the labour market and type of skills needed by the company.

(Any 2 points for 2 marks)

External

- Government policy on labour: e.g. Current minimum wage, permissible maximum hours an employee can work.
- Industry information from trade bulletins
- Prices of similar products or substitutes to be collected from business journals or collected from source through survey
- Information about the technical features of the new product can be obtained from the internet
- Ministry of Trade and Industry can provide data on market size of the product

(Any 3 points for 3 marks)

(5 marks)

bi) **Production budget for the three months in 2016**

Months	**January**	**February**	**March**
Production Units:	Units	Units	Units
Budgeted sales	10,000	11,000	14,000
Add closing stock	1,100	1,400	1,400
Opening stock	(1,000)	(1,100)	(1,400)
Production requirement	**10,100 units**	**11,300 units**	**14,000 units**

(3 marks)

ii) Labour Cost Budget for the three months in 2016

Months	**January**	**February**	**March**
Labour Hours:	Hours	Hours	Hours
Production Requirement	10,100 units	11,300 units	14,000 units
Labor Hours (2 hours x production) (A)	20,200	22,600	28,000
Standard Hours Available (132 x 160) (B)	21,120	21,120	21,120
Over time required (A - B)	0	1,480	6,880
Labour Cost:	GH¢	GH¢	GH¢
Basic rate payment (₵1,280.00 x 132)	168,960.00	168,960.00	168,960.00
1,480 / 160 x ₵1,280.00 x 1.48	0	17,523.00	0
6,880 / 160 x 1,280.00 x 1.48	0	0	81,459.00
Total labor cost	**168,960.00**	**186,483.00**	**250,419.00**

(6 marks)

c) **Formulation of Zero Base Budget steps:**

- Identification of "Decision Units"
- Preparation of "Decision Packages"
- Prioritization of decision packages within a decision unit.
- Prioritization of decision packages of various decision units.
- Allocate resources.
- Monitor and evaluate.

Decision Unit: Each cost center can be a decision unit. Decision units should be a particular activity or a group of activities that can be independent and meaningfully identified and evaluated. Decision units should not overlap. The decision units should be discrete entities for management purposes, e.g. sites or programs.

Decision Package: A decision package is a document, which identifies a discrete activity, function or operation within a Decision Unit for evaluation and comparison with other activities. Each decision package should be "standalone" containing the following information:
Identification data - program/activity for which the package is made.
Objective of the decision unit.

Objective of the decision package.
"
Feasibility Assessment:
Is the program required?
Is the program technically feasible?
Is the program operationally viable?
Is the program sound?

The benefit-cost analysis:
Benefit /output (tangible) at existing/threshold/optimum level.
Tangible costs at the existing/threshold and optimum level.
Yearly phasing of the proposed expenditure.
Consequence of non-funding.
Alternatives considered

Ranking/Prioritization
The following are examples of criteria for ranking a decision package:
Statutory/Legally committed active programs.
Emergent programs arising from national events.
Advancement of knowledge or using innovative methods
Application of knowledge - proven methods for raising output.
Development of Technology based solutions
Welfare/safety issues
Facilitation of policy/decision making

Funding Decisions
Once all the decision packages have been ranked on the basis of pre-determined criteria, the funding decisions for the cost of total decision packages is made. While funding a decision package, it is necessary for management to indicate also the level at which activity/program should be carried out existing, threshold, or optimum level.

Monitoring & Evaluation
Since all the decision packages have to compete for funding, only those, which are most relevant to the organization, are funded. The monitoring and evaluation is done on the basis of the content and particularly the outputs described in the decision packages with fixed accountability.

(Any 3 points for 6 marks)

(Total: 20 marks)

QUESTION THREE

(a) Budgeted production overhead expenditure = Normal production volume × Absorption rate per unit
= 16,000 units × GH¢20 = GH¢320,000.
Since expenditure occurs evenly throughout the year, the budgeted production overhead expenditure is GH¢160,000 in each six-month period.

i) Workings	GH¢per unit
Direct material	18
Direct labour	28
	46
Sales, distribution, administration (20% × GH¢140)	28
Marginal cost of sale	74

(3 marks)

ii) Marginal costing

	6 months to 31 March		**6 months to 30 September**	
Units sold		7,000		8,000
	GH¢	GH¢	GH¢	GH¢
Sales at GH¢140		980,000		1,120,000
Marginal cost of sales at GH¢74		518,000		592,000
Contribution		462,000		528,000
Production (GH¢320,000/2)	160,000		160,000	
Other (GH¢180,000/2)	90,000		90,000	
Total Fixed costs		250,000		250,000
Profit		**212,000**		**278,000**

(4 marks spread evenly using ticks)

Absorption costing

The fixed overhead absorption rate is based on the normal volume of production. Since budgeted output in each six-month period is different from the normal volume, there will be some under- or over-absorption of production overhead in each six-month period.

	6 months to 31 march		**6 months to 30 September**	
Units sold		7,000		8,000
	GH¢	GH¢	GH¢	GH¢
Sales at GH¢140		980,000		1,120,000
Marginal cost of sales at GH¢66		462,000		528,000
		518,000		592,000
Production overhead absorbed (8,500x GH¢20 : 7,000x GH¢20)	170,000		140,000	
Actual production overhead	160,000		160,000	
Over/ (under) absorbed of overheads		10,000		(20,000)
		528,000		572,000

Sales, distribution, admin				
Variable (7000x GH¢28: 8000x GH¢28)	196,000		224,000	
Other	90,000		90,000	
		286,000		**314,000**
Profit		**242,000**		**258,000**

(5 marks spread evenly using ticks)

iii) Reconciliation of profit figures

Six months to 31 March 2016

Increase in inventory (8,500 – 7,000 units)	1,500 units
Production overhead absorbed in these units (absorption costing)	GH¢20 per unit
Therefore absorption costing profit higher by	GH¢30,000

Six months to 30 September 2016

Reduction in inventory (7,000 – 8,000 units)	1,000 units
Production overhead absorbed in these units (absorption costing)	GH¢20 per unit
Therefore absorption costing profit lower by	GH¢20,000

The difference in reported profits is due entirely to differences in the valuation of inventory (and so differences in the increase or reduction in inventory during each period).

(3 marks)

bi)

Target costing process include:

Identification of a product

Target costing begins by specifying a product an organization wishes to sell. This will involve extensive customer analysis, considering which features customer's value and which they do not. Ideally only those features valued by customers will be included in the product design.

Determination of the selling price

The price at which the product can be sold at is then considered. This will take in to account the competitor products and the market conditions expected at the time that the product will be launched. Hence a heavy emphasis is placed on external (competitor) analysis before any consideration is made of the internal cost of the product.

Determination of the target cost

From the above price a desired margin is deducted. This can be a gross or a net margin. This leaves the cost target. An organization will need to meet this target if their desired margin is to be met. Costs for the product are then calculated and compared to the cost target mentioned above.

Determination of the cost gap
If it appears that this cost cannot be achieved then the difference (shortfall) is called a cost gap. This gap would have to be closed, by some form of cost reduction, if the desired margin is to be achieved.

(Any 3 points for 3 marks)

bii)

Steps to close the target cost gap. This include:

Review features (Value engineering)
Remove features from the new window phones that add to cost but do not significantly add value to the product when used by the customer. This should reduce cost but not the achievable selling price. This can be referred to as value engineering or value analysis.

Team approach (brainstorming)
Cost reduction works best when a team approach is adopted. Wham limited should bring together members of the marketing, design, assembly and distribution teams to allow discussion of methods to reduce costs. Open discussion and brainstorming are useful approaches here.

Review the whole supplier chain
Each stage in the supply chain should be reviewed, possibly with the aid of staff questionnaires, to identify areas of likely cost savings. Areas which are identified by staff as being likely cost saving areas can then be focused on by the team. For example, the questionnaire might ask 'are there more than five potential suppliers for this component?' Clearly a 'yes' response to this question will mean that there is the potential for tendering or price competition.

Review component costs
Wham limited should look at the significant costs involved in components. New suppliers could be sought or different materials could be used. Care would be needed not to damage the perceived value of the product. Efficiency improvements should also be possible by reducing waste or idle time that might exist. Avoid, where possible, non-standard parts in the design.

Assembly workers
Productivity gains may be possible by changing working practices or by de-skilling the process. Automation is increasingly common in assembly and manufacturing and Wham limited should investigate what is possible here to reduce the costs. The learning curve may ultimately help to close the cost gap by reducing labour costs per

unit. Clearly reducing the percentage of idle time will reduce product costs. Better management, smoother work flow and staff incentives could all help here. Focusing on continuous improvement in production processes may help.

Overheads

Productivity increases would also help here by spreading fixed overheads over a greater number of units. Equally ,Wham limited should consider an activity based costing approach to its overhead allocation, this may reveal more favorable cost allocations for the new window phone product or ideas for reducing costs in the business.

(Any 3 points for 3 marks)

c) Life cycle costing is the profiling of cost over a products life, including the pre-production stage. Cost reduction may be achieved through the following means:

Target costing

The target cost is a product cost estimate derived by subtracting a desired profit margin from a competitive market price. The target cost may be less than the planned initial product cost, but will be expected to be achieved by the time the product reaches the mature production stage. At the maturity stage. The target cost may be higher than planned, hence management will want to put in place measures to target cost to an acceptable level as a one off measure. For instance, each stage in the supply chain may be reviewed, possibly with the aid of staff questionnaires, to identify areas of likely cost savings.

Value analysis

Value analysis is systematic inter-disciplinary examination of factors affecting the cost of a product or service, in order to devise means of achieving the specified purpose most economically at the required standard of quality and reliability. Value analysis will aim to eliminate non- value added activities– those that do not add value to the product in the eyes of its customers. Example goods returns and order correction, by so doing, cost associated with each stage of the product, would have been contained to an acceptable level.

(2 points for 4 marks)
(Total: 25 marks)

QUESTION FOUR

a)

i)

COSTS UNDER THE TWO CAMP SITES

	AHAYEDE GH¢	BONEBON GH¢
Food	637.50	637.50
Water	525	525
Accommodation	4,750	2,000
Utility	800	-
Fuel	-	299.50
Transportation of chairs	400	300
" Members	1,500	4,200
Pastors' appreciation	2,300	2,300
TOTAL	**10,912.50**	**10,262.00**

(6 marks evenly spread using ticks)

DECISION; Camp must be held at Boneben **(2 marks)**

NOTE; Alternative solution is to exclude the irrelevant costs i.e. food, water and pastors' appreciation.

i) Qualitative factors to consider in deciding on the venue

- Can the venue guarantee proper safety and security of participants?
- Is there any competing events in the venue for the days for which the camp meeting is planned?
- Is the church having a contingency plan in the event of poor weather?
- Proximity of venue to participants and how it will encourage attendance.

(Any 2 points for 4 marks)

ii) Sunk costs and examples

A sunk cost is a cost that has already been incurred and thus cannot be recovered. A sunk cost differs from future costs that a business may face, such as decisions about inventory purchase costs or product pricing. Sunk costs (past costs) are excluded from future business decisions, because the cost will be the same regardless of the outcome of a decision.

(1 mark)

Here are several examples of sunk costs:

- **Marketing study**. A company spends GH¢50,000 on a marketing study to see if its new product will succeed in the marketplace. The study concludes that the product will not be profitable. At this point, the GH¢50,000 is a sunk cost. The company should not continue with further investments in the product, despite the size of the earlier investment.

- **Research and development**. A company invests GH¢2,000,000 over several years to develop a left-handed smoke shifter. Once created, the market is indifferent, and buys no units. The GH¢2,000,000 development cost is a sunk cost, and so should not be considered in any decision to continue or terminate the product.
- **Training**. A company spends GH¢20,000 to train its sales staff in the use of new tablet computers, which they will use to take customer orders. The computers prove to be unreliable, and the sales manager wants to discontinue their use. The training is a sunk cost, and so should not be considered in any decision regarding the computers.
- **Hiring bonus.** A company pays a new recruit GH¢10,000 to join the organization. If the person proves to be unreliable, the GH¢10,000 payment should be considered a sunk cost when deciding whether the individual's employment should be terminated.

(Any 3 points for 2 marks)
(Total: 15 marks)

QUESTION FIVE

(a) ABS Limited: Budget/actual reconciliation statement

	GH¢	GH¢
Sales Price		10.00
Input costs		
Materials 2kg @ GH¢0.5	1.00	
Labour 0.5 hours @ GH¢4	2.00	
Fixed Production overhead	2.00	
		(5.00)
		5.00

			GH¢	
Budgeted Profit [(5,000×GH¢5) -3,000]			22,000	
Sales volume profit variance (100*GH¢5)			500	(A)
Budgeted Profit on actual sales			21,500	
Variances	GH¢(F)	GH¢(A)		
Direct material				
Price (GH¢6,360 - GH¢5,300)		1,060		
Usage (GH¢5,300-GH¢5,400)	100			
Direct labour				
Rate (GH¢11,286 - GH¢11,880)	594			
Efficiency (GH¢11,880-GH¢10,800)		1,080		
Fixed Production				
Expenditure (GH¢10,300 - GH¢10,000)		300		
Volume (GH¢10,000-GH¢10,800)	800			
Sales price (4,900×GH¢1)	4,900			
Administrative cost expenditure Variance		100		
	6394	2,540	3,854	(F)
			25,354	

Actual profit

	GH¢	GH¢
Actual Sales Revenue		53,900
Actual costs		
Materials	6,360	
Labour 0.5 hours @ GH¢4	11,286	
Fixed Production overhead	10,300	
	27,946	
Stock increase (500 units×GH¢5)	2,500	
		25,446
		28,454
Fixed administration		(3,100)
Actual profit		**25,354**

Calculation of variances

i) Sales Margin Price = (std. profit – act.profit) AQ
(5 -6) 4900 = GH¢ 4900 F

ii) Sales Margin Volume = (BQ –AQ) Std. profit
(5000 – 4900) 5 = GH¢ 500 A

iii) Direct Material Price = (SP –AP) AQ
(0.50 -0.60) 10,600 = GH¢ 1060 A

iv) Direct Material Usage = (SQ- AQ)SP
(10,800-10600) 0.50 = GH¢ 100 F

v) Direct Labour Rate = (SR –AR) AH
(4- 3.80) 2970 = GH¢ 594 F

vi) Direct Labour Efficiency = (SH –AH) SR
(2,700 – 2970) 4 = GH¢ 1080 A

vii) Fixed Overhead Expenditure = (BOH –AOH)
(10,000-10,300) = GH¢ 300 A

viii) Fixed Overhead Volume Capacity = (BH-AH) SR
(2,500-2,970) 4 = GH¢ 1880 F

ix) Fixed Overhead Volume Efficiency = (SH – AH) SR
(2,700 - 2970) 4 =GH¢ 1080 A

Note fixed overhead volume variance = vol. capacity + vol. efficiency.

(Total: 15 marks evenly spread using ticks)

CONCLUSION

Way Forward

- Tuition should be made a requirement for registering for the professional examinations.
- Recommended manuals and text books should be made known to the candidates.
- No exemptions should be given to graduates but to start at the knowledge level before the application and professional levels.
- Cost Accounting syllabus should be broadened to enable candidates have a good understanding of the principles, concepts and methods of cost and management accounting to prepare them for the next level.