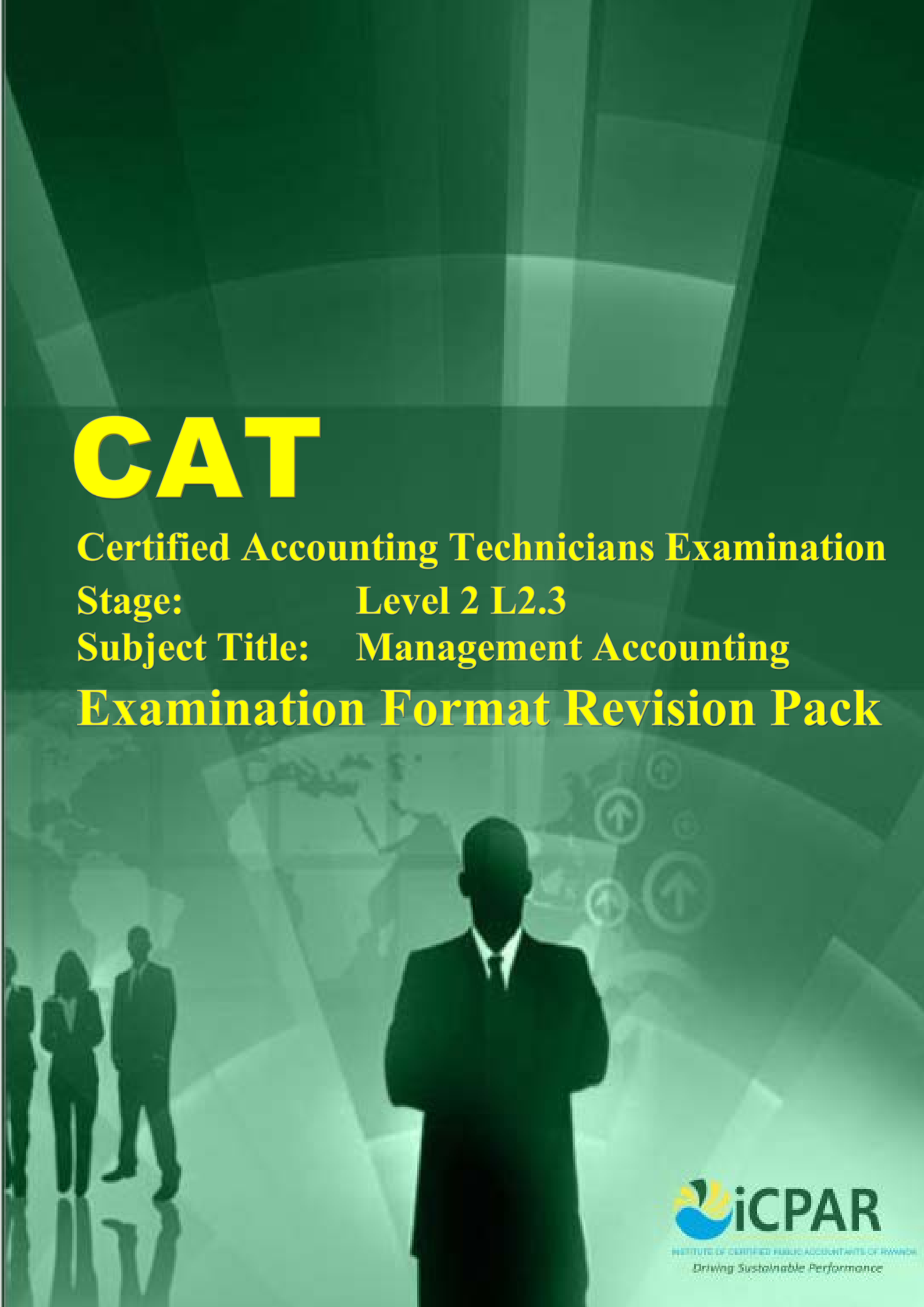
CAT

Certified Accounting Technicians Examination

Stage: Level 2 L2.3

Subject Title: Management Accounting

Examination Format Revision Pack



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INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS OF RWANDA

Driving Sustainable Performance

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MANAGEMENT ACCOUNTING
LEVEL 2

L2.3 Examination Format Revision Questions & Solutions

Section A- Questions 1 and 2 are compulsory. You have to answer Part A **or** Part B **only** of Question 2. (If you provide answers to both Part(s) A and B of Question2, you must draw a clearly distinguishable line through the answer not to be marked. Otherwise, only the first answer to hand for this question will be marked).

Section B – You are required to answer any **three** out of Questions 3 to 6. (If you provide answers to all of Questions 3 to 6, you must draw a clearly distinguishable line through the answer not to be marked. Otherwise, only the first three answers to hand for these four questions will be marked).

TIME ALLOWED:
3 hours, plus 10 minutes to read the paper

INSTRUCTIONS
During the reading time you may write notes on the examination paper but you may not commence writing on your answer book. **PLEASE READ EACH QUESTION CAREFULLY**.

Marks for each question are shown. The pass mark required is 50% in total over the whole paper.

Start your answer to each question on a new page.

You are reminded that candidates are expected to pay particular attention to their communication skills and care must be taken regarding the format and literacy of the solutions. The marking system will take into account the content of the candidates' answers and the extent to which answers are supported with relevant legislation, case law or examples where appropriate.

List on the cover of each answer booklet, in the space provided, the number of each question(s) attempted.

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SECTION A - Questions 1 and 2 are COMPULSORY
QUESTION 1

1. Appliance Machining Ltd. manufactures and distributes a wide range of household appliances. The company is organised into various cost centres and management calculate product cost based on the number of cost centres that a typical product passes through during its production cycle. The company produces one basic dishwasher using five different cost centres for accounting purposes. There are three production departments (Machining, Assembling and Finishing) and two service departments (Materials Handling and Production Control).

Costs for last year, when 2,000 machines were produced, were as follows:

Materials	**RWF**
Machining	240,000
Assembly	160,000
Finishing	40,000
Materials handling	4,000
Wages	
Machining	10,000 hours at RWF3.72 each
Assembly	5,000 hours at RWF2.88 each
Finishing	3,000 hours at RWF3.60 each
Materials handling	RWF8,000
Production control	RWF11,200

Other costs	**RWF**
Machine shop	41,920
Assembly	12,960
Finishing	7,920
Materials handling	8,000
Production control	2,400

It is estimated that the benefit derived from the service departments are as follows:

	Materials handling	**Production control**
Machine shop	60%	40%
Assembly	30%	30%
Finishing	10%	20%
Materials handling	n/a	10%

REQUIRED:

(a) Explain and clearly distinguish between overhead allocation and overhead apportionment in the treatment of production overheads. Support your explanation with a suitable example (non-numeric) in each case. **(5 marks)**

(b) Prepare a schedule showing the overhead only which should be incurred by each of the five departments. **(4 marks)**

(c) Prepare a schedule showing the overhead re-apportioned from the service departments to the production departments. **(4 marks)**

(d) Calculate an overhead absorption rate for each of the three production departments using a rate per unit basis. **(3 marks)**

(e) Prepare a schedule showing the components of total production cost for one dishwasher. **(7 marks)**

(f) Assuming that Appliance Machining Ltd. use "production cost plus" as a pricing mechanism, estimate the selling price using both a margin of 20% and a mark-up of 25%. **(2 marks)**

(Total: 25 marks)

QUESTION 2 - Answer either Part (a) or Part (b)

2.

a) You have just been appointed as a Management Accounting Consultant for Drift Ltd., a medium sized company specialising in the manufacture of small pleasure craft (boats) for direct sale to private individuals who wish to spend their leisure time cruising on the rivers and lakes. The company has no internal management accounting function and has never seen the need to prepare budgets as a business management tool in the past.

REQUIRED:

Prepare a memorandum to the Board of Drift Ltd. recommending the introduction of a budgetary system to aid in the management and direction of the company.

Your memorandum will specifically address the following aspects of introducing a budgetary system:

(i) Briefly describe to the Board two specific objectives of a budgetary system which might assist a company engaged in the manufacture of pleasure craft.

(2 marks)

(ii) Outline and briefly explain the major steps involved in preparing a budget for Drift Ltd. **(10 marks)**

(iii) Suggest two advantages, relating specifically to resource management, that Drift Ltd. can expect to benefit from as a result of preparing a budget.

(2 marks)
(1 mark for presentation)
(Total: 15 marks)

OR

b) You have been recently appointed as Management Accountant in a medium sized engineering company which has been trading successfully for over fifty years. The company was originally started by two brothers who ran the business with a small skilled workforce growing steadily over the years. In the last five years the original owners have retired and passed the business on to younger family members who have invested heavily in very sophisticated robotic equipment. The new equipment has meant a reduction in the labour intensive nature of the firm and has allowed a significant expansion in the range and type of products the company can produce.

The new Managing Director has given you the following quotation taken from Colin Drury's book entitled

'Management and Cost Accounting':
"*During the 1980s the limitations of traditional product costing systems began to be widely publicised. These systems were designed decades ago when most companies manufactured a narrow range of products, and direct labour and materials were the dominant factory costs. Overhead costs were relatively small and the distortions arising from inappropriate overhead allocations were not significant.*"

REQUIRED:
Prepare a memorandum for the new Managing Director in which you address the following concerns in the context of the engineering company.

(i) An explanation of why activity based costing (ABC) overcomes the limitations of the more traditional product costing systems. **(5 marks)**

(ii) Outline the steps to be followed in implementing an ABC approach to overhead allocation. **(5 marks)**

(iii) Identify two specific advantages and two specific disadvantages of introducing an ABC system into Engineering Company. **(4 mark)**

(1 mark for presentation)

(Total: 15 marks)

SECTION B - Answer any 3 out of 4 questions.

3. The following multiple choice question contains 8 sections, each of which is followed by a choice of answers. Only one of the offered solutions is correct. Each question carries 2.5 marks. Give your answer to each section on the answer sheet provided.

1. Which of the following statements best explains the term “lead time”?

   a) The time taken by sales staff in generating new sales contacts.
   b) The time taken between receiving a delivery and reaching the re-order level of inventory.
   c) The time taken between placing an order and receiving the goods into inventory.
   d) The time taken between receiving an order and receiving payment for the goods.

The following information is to be used for Questions 2 and 3:

Portho Ltd. operate a process costing system and normal loss is expected to be at the rate of 25% of input. All losses have a scrap value of RWF8 per kg and there is no opening or closing work in process for the period.

The following details have been provided:
Material input 3,500 kg costing RWF52,500
Direct labour RWF9,625
Actual output 2,800 kg

2. Calculate the value of actual output in the period.

   (a) RWF44,100
   (b) RWF49,700
   (c) RWF56,525
   (d) RWF58,800

3. Calculate the actual monetary value received for scrapped material in the period.

   (a) RWF3,325
   (b) RWF5,600
   (c) RWF7,000
   (d) RWF8,400

4. Semivee Ltd. wishes to ensure their inventory management costs are minimised and they have provided the following information relating to an item of raw material with an annual usage of 4,000 units:

Purchase price is RWF15 per unit.
Each order incurs a RWF5 administration fee plus a RWF50 delivery charge.
Storage costs comprise a fixed element of 20 cent per unit per annum plus a variable element estimated at 10% of the unit purchase price per annum.

Calculate the optimal reorder quantity to the nearest whole unit.

(a) 153 units
(b) 170 units
(c) 485 units
(d) 509 units

5. Which of the following statements are TRUE with regard to service organisations?

(i) Activity based costing techniques would not be appropriate.
(ii) Direct material costs are unlikely to be high relative to total cost.
(iii) Fixed and indirect costs are more likely to arise than variable or direct costs.

(a) All of the above
(b) (i) and (iii) only
(c) (ii) and (iii) only
(d) None of the above

6. Eclipse Ltd. manufactures a range of very different products using sophisticated automated machinery. They have provided the following information and wish to use the most appropriate basis for absorbing overheads.

Budgeted Information:	
Fixed overheads	RWF180,000
Labour hours	3,000 hrs
Machine hours	10,000 hrs
Units of production	5,000 units
Actual fixed costs	RWF160,000

Calculate the most appropriate pre-determined overhead absorption rate.

(a) RWF16
(b) RWF18
(c) RWF36
(d) RWF60

7. MOS Ltd. has budgeted sales of 5,000 units per month and a contribution of RWF25 per unit.

If the margin of safety is 20%, calculate the budgeted level of fixed costs for the same period.

(a) RWF100,000
(b) RWF125,000
(c) RWF150,000
(d) RWF160,000

8. The following standard cost card is provided for the current financial period:

	RWF per unit
Selling Price	50
Direct Material	4
Direct Labour	16
Fixed Production Overheads	5
Variable Production Overheads	10
Fixed Selling Costs	1
Variable Selling Costs	1
Total Cost	37
Budgeted Sales Units	3,000
Actual Sales Units	3,500

Calculate the sales volume variance assuming a marginal costing system.

(a) RWF9,500 Adv
(b) RWF9,500 Fav
(c) RWF6,500 Adv
(d) RWF6,500 Fav

(Total 20 marks)

4. Ngwenya Ltd. is a small company and plans to start trading on 1st October 2009. The company's business will involve importing computer storage devices and retailing them to the general public and computer repair centres.
The Directors will fund the business by providing RWF100,000 in share capital and will lodge this cash to the company's bank account on the first day of trading. The Directors recognise the importance of ensuring proper management of cash flow and have provided the following estimated information relating to the first four months trading activities.

	Oct 09	**Nov 09**	**Dec 09**	**Jan 10**
Purchases (units)	1,000	1,080	1,320	1,600
Sales (units)	690	930	1,170	1,410

Purchases will cost RWF20 per unit for the first two months but the cost is expected to increase by 10% thereafter and remain at this price for the rest of the budget period. As this is a new company, payment must be cash on delivery for the first two months. However, to compensate for the expected price increase, a one month credit period will be allowed from the time of the increase.

Sales will be at a uniform price of RWF35 per unit with 20% expected to be for cash. The balance will be on credit with 50% of credit customers taking one month's credit and the remaining 50% paying two months after the original sale. No bad debts are expected.

Starting from October 2009, Ngwenya Ltd. will employ two casual staff at a cost of RWF1,000 each per month and Directors' salary of RWF1,400 per month will also be paid. Other trading expenses are estimated to be RWF800 per month (excluding depreciation) and are payable in the following month.

Non-current (fixed) assets will be purchased on 1st October as follows:

	RWF	**Depreciation Method**
Premises	75,000	No depreciation required.
Fixtures and Fittings	10,500	10% per annum straight line.
Motor Vehicle	6,000	25% per annum straight line.

Annual subscription to the local Chamber of Commerce will be paid in January 2010. This will cost RWF600 but covers membership for the twelve calendar months of 2010.

The Directors have arranged for an overdraft facility from their bankers if necessary. Interest on any overdrawn amounts is payable monthly in arrears and is calculated at 10% of the month end deficit. If the overdraft facility is not used in any month then the bank will pay interest to Ngwenya Ltd. on the same terms but at a reduced rate of 5% of the month end surplus.

An interim dividend is to be paid on 31st January 2010 based on 1% of the total sales value recoded for the first four months trading.

Ignore value added tax in your calculations.

REQUIRED:

(a) Prepare a schedule of projected monthly cash receipts for the four month budget period ended 31st January2010. **(8 marks)**

(b) Prepare a schedule of projected monthly payments to inventory suppliers for the four month budget period ended31st January 2010. **(3 marks)**

(c) Prepare a monthly cash budget for the four month period ended 31st January 2010. **(9 marks)**

(Total: 20 marks)

5. Builders Boy Ltd. manufactures a single multi-purpose tool (known as 'The Builder's Boy') used extensively by those involved in the construction industry. Given the current economic climate for this industry the company are examining its projections and plans for the next financial period: the year ending 31st August 2010.

The Directors are concerned about ensuring profitability and survival and have a number of questions and proposals about which they require advice.

The following information has been provided for 'The Builder's Boy' for the year ending 31st August 2010:

- 36,000 units of the product are expected to be sold at a uniform selling price of RWF15 per unit.
- Production costs are budgeted at RWF345,000 of which RWF30,000 are regarded as fixed costs.

- Selling and distribution costs are budgeted at RWF114,000 of which RWF39,000 are regarded as variable costs.
- Administration costs are budgeted at RWF36,000 fixed cost plus RWF 6,000 variable giving a total of RWF42,000.

REQUIRED:

a) Calculate the break even point in units and the margin of safety based on the original budgeted data noted above.

(5 marks)

b) Provide a brief explanation of the term "Margin of Safety".

(1 mark)

c) Calculate the expected impact on profitability of a reduction in sales demand of 25%.

(3 marks)

d) Builders Boy Ltd. is considering a new marketing campaign to introduce the tool to the home DIY market and reduce reliance on the construction industry in general. The relevant cost of the new campaign is estimated at RWF30,000. Calculate the revised breakeven point and the number of additional unit sales required to cover the additional outlay.

(3 marks)

e) Alternatively the company is considering two options which may allow it to concentrate solely on the construction industry:

Option A: Offering a sales commission of RWF1 per unit to staff.
Option B: Reduce the current selling price by RWF1 per unit.

Option A is expected to increase sales by 20% whereas Option B will achieve an increase of 30%. However, Option B will also require an additional fixed cost for advertising of RWF5,000.

Advise the company which option would provide the higher profit and support your answer with appropriate calculations.

(8 marks)
(Total: 20 marks)

6. Sabi Ltd. manufactures fake "designer style" clothing in its factory in Kigali. The Manager has just received the following report on production activity for July 2009. This information relates to one single product the "Snazzy Suit".

	Standard	**Actual**
Sales of Snazzy Suit (units)	12,500	12,500
Selling price per unit	RWF100	RWF105
Raw material used	50,000 m	49,250 m
Raw material cost	RWF10 per m	RWF11 per m
Labour time	37,500 hrs	36,000 hrs
Rate of payment	RWF9 per hr	RWF9.25 per hr
Variable overhead (overhead absorption rate)	Based on 50% of labour cost	Actual cost RWF173,500
Fixed overhead (No absorption basis provided)	RWF200,000	RWF210,000

REQUIRED:

(a) Prepare a statement showing the budgeted profit or loss for July 2009.

(3 marks)

(b) Prepare a statement showing the actual profit or loss for July 2009.

(3 marks)

(c) Prepare an Operating Statement reconciling the budgeted and actual profit and calculate all variances in as much detail as the information permits.

(14 marks)
(Total: 20 marks)

END OF PAPER

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SUGGESTED SOLUTIONS

SOLUTION 1

Part (a)

The concepts of allocation and apportionment relate to how overhead are "shared out" over cost centres and/or products. The can be distinguished as follows:

- Allocation is used where the overhead cost is specifically attributable to a particular cost centre. Eg. Salary of a supervisor who is only responsible for one single cost centre.
- Apportionment is used where the overhead cost is shared over several cost centres when allocation is not feasible or possible. Eg. Salary of a supervisor who is responsible for a number of cost centres.

(5 marks)

Part (b)

Tutorial Note:

Materials and wages incurred by the production departments may be assumed to be direct costs and therefore excluded from the overhead distribution. However, any wages or materials incurred in the service departments are in automatically indirect as they apply to cost centres which are indirect in themselves.

Overhead Incurred by each cost centre

	Total RWF	**Machining RWF**	**Assembly RWF**	**Finishing RWF**	**Materials Handling RWF**	**Prod. Control RWF**
Ind. Materials	**4,000**				**4,000**	
Ind. Wages	**19,200**				**8,000**	**11,200**
Other	**73,200**	**41,920**	**12,960**	**7,920**	**8,000**	**2,400**
	96,400	**41,920**	**12,960**	**7,920**	**20,000**	**13,600**

(4 marks)

Part (c)

Service department re-apportionment.

	Total RWF	Machining RWF	Assembly RWF	Finishing RWF	Materials Handling RWF	Prod. Control RWF
From Part (b)		**41,920**	**12,960**	**7,920**	**20,000**	**13,600**
Production Control		**5,440**	**4,080**	**2,720**	**1,360**	**(13,600)**
Materials Handling		**12,816**	**6,408**	**2,136**	**(21,360)**	
	96,400	**60,176**	**23,448**	**12,776**	**-**	**-**

(4 marks)

Part (d)

	Machining	Assembly	Finishing	Total
Total Departmental Overhead	**60,176**	**23,448**	**12,776**	**96,400**
Units Produced	**2,000**	**2,000**	**2,000**	**2,000**
OAR per Dishwasher	**RWF 30.09**	**RWF 11.72**	**RWF 6.39**	**RWF 48.20**

(3 marks)

Part (e)

Unit production cost of a dishwasher

	Machining RWF	Assembly RWF	Finishing RWF	Total RWF
Direct Materials	**240,000**	**160,000**	**40,000**	**440,000**
Direct Wages	**37,200**	**14,400**	**10,800**	**62,400**
Production Overheads	**60,176**	**23,448**	**12,776**	**96,400**
	337,376	**197,848**	**63,576**	**598,800**
Units Produced				**2,000**
Cost Per Unit				**299.40**

Alternative layouts are acceptable for this section provided the workings and end result are clear to follow. **(7 marks)**

Part (f)

A ***margin*** is always based on sales prices whereas a ***mark-up*** is always based on original cost (in this case production cost). In this example both answers are the same although they are calculated differently as follows:

A Margin of 20% implies that cost = 80%. Therefore RWF299.40/0.8 = RWF374 (rounded)

A Mark-up of 25% implies an add on of that amount. Therefore RWF299.40 + 25% = RWF374 (rounded).

Tutorial Note:
This is a deliberate test of terminology which is commonly misunderstood within the business community.

(2 marks)
(Total: 25 marks)

SECTION B ANSWER EITHER PART (A) OR PART (B)
SOLUTION 2

Part (a)

MEMORANDUM

To: Board of Drift Ltd
From: Management Accounting Consultant
Subject: Introduction of a Budgetary System
Date: xxth August 2009

Further to your request for additional guidance on the introduction of a budgetary system to assist the Board in the management and direction of the company, please find attached our memorandum recommending the objectives, steps to be followed and specific resource management advantages to be gained from budgets.

Objectives
The objectives of a budgetary system can be varied and may include, but not be limited to:

- ***Planning*** annual operations
- ***Coordinating*** the activities of the various parts of the organisation and ensuring that the parts are in harmony with each other
- ***Communicating*** plans to the various managers
- ***Motivating*** managers to strive to achieve organisational goals
- ***Controlling*** activities
- ***Evaluating*** the performance of managers

From the viewpoint of Drift Ltd. the most important of these are likely to be coordination and communication of activities and plans in the short-term to ensure organisational objectives are achieved. In the longer term, the other objectives will also increase in importance.

(2 marks available)

Steps in Budget Preparation

The process of developing a budget for the enterprise is a detailed one and will follow a set structure with its own administrative support. A ***budget committee*** will be established to oversee the budgeting process. This committee will be made up of senior managers representing the major segments of the business involved in the budgets. The budget committee will appoint a ***budget officer***, decide on ***budget centres*** and prepare the ***budget manual*** which will contain the objectives and procedures involved in the process.

The first step in implementing a successful budgetary system is to establish the ***principal budget factor***. This is the feature or aspect of the organisation which will restrict activity or performance in a given period. In theory Drift Ltd. should be able to make and sell as many pleasure boats as it wishes. However, in practice there will always be limitations on the quantities produced and sold. These limitations are often outside of the organisation's control and therefore the budget should plan to make the best use of the resources available whilst still working within the limitations of its environment. In most organisations, the principle limitation (budget factor) is sales demand.

The key stages in the budget preparation cycle are as follows:

1. Communicating details of the budget policy and guidelines to those people responsible for budget preparation.
2. Determining the factor that restricts output (principle budget factor).
3. Prepare the budget for the principle budget factor (normally assumed to be sales).
4. Prepare draft budgets for all other aspects of the organisation (e.g. material purchase; labour requirements; boat production; etc.).
5. Negotiation of budgets with superiors.
6. Coordination and review of budgets.
7. Final acceptance of budgets in the form of a Master Budget.
8. Ongoing monitoring and review of budgets compared to actual.

(10 marks available)

Advantages
An effective budgetary process can lead to numerous advantages for the organisation. These stem mainly from the activity of planning and the foresight it provides to assist in the management and direction of the organisation. It allows the managers to foresee problems in advance and ensure contingency plans are put in place before the problems become critical. In the case of Drift Ltd two advantages relating specifically to their resources might be:

- Budgets will help ensure optimal usage of resources to ensure waste is minimised and the best possible use is made from all the resources the company has at its disposal.
- Budgets will help identify constraints or scarce resources so that plans can be put in place to minimise the impact of expected shortages of resources.

(2 marks)

If you require any further assistance or advice, please do not hesitate to contact our office.

Yours faithfully,

M Accountant.

(1 mark for presentation)
(Total: 15 marks)

Part (b)

MEMORANDUM

To: Managing Director, Engineering Company
From: Management Accountant
Subject: Activity Based Costing (ABC)
Date: xxth August 2009

Further to your request for further information regarding activity based costing compared to traditional forms of overhead allocation. The following memorandum details a response to the queries you raised in the context of our Engineering Company.

ABC versus Traditional Costing

The primary function of the management accountant is the prompt presentation of meaningful reports and
statements to management to facilitate planning, control and decision making. Activity Based Costing (ABC) is a relatively "modern" technique having been developed in the United States during the 1960s. It is a technique that re-examines a problem that has faced management accountants for decades i.e. How to ensure each cost unit receives a fair share when allocating and absorbing overhead costs.

The traditional cost accumulation method has been based upon absorption costing and the treatment of overhead usually follows a set procedure. Costs are first accumulated to cost centres and then absorbed into products using pre-determined overhead absorption rates (OARs) which are typically based on labour or machine hours.

Whilst the traditional methods have their merits and are perfectly suitable for many enterprises, some
commentators have claimed that to say all overheads can be applied to products based on labour / machine hours alone is far too simplistic an approach. In more sophisticated businesses characterised by flexible and rapidly changing product ranges; traditional techniques have proved to be less than adequate. This is particularly relevant to Engineering Company given the expansion of recent years.

To say that a realistic and meaningful product cost can be built up using merely one or two OARs does not reflect the range of different costs that might be involved in a modern enterprise. Using OARs that may be arbitrary does not instil confidence in the accuracy of product costing systems and may lead to inaccurate pricing decisions.

Activity Based Costing (ABC) offers a workable and more effective insight into overhead allocation and recovery and essentially results in a fairer share of overhead being applied to cost units (i.e. products). The basic principle of ABC is that it is impossible to link costs to products without a detailed consideration of the activities that cause the costs. Hence ABC conducts a detailed review of the activities that are required to produce products and assumes that products with greater use of activities should bear a greater degree of the costs involved

(5 marks available)

Outline Steps to Establish an Activity Based Costing System:
There are a number of steps to be followed in implementing an ABC system and it is important to that ensure that due care and attention is given to the data collection and design of the system. All enterprises are different and the ABC system has to reflect and capture the range of operations and activities that apply to our particular organisation and reflect the cause and effect relationship in our activities.

Step 1: Identify major activities involved in producing output.
Step 2: Identify factors that influence the level of cost for each activity.

e.g.	**Activity:**	**Cost Driver:**
	Purchasing	Number of Purchase Orders
	Material Handling	Number of Production Runs
	Production Scheduling	Number of Production Runs
	Dispatch	Number of Dispatches

Step 3: Collect costs into cost pools. This is similar in principle to assigning costs to cost centres with a traditional absorption costing system.
Step 4: Calculate a cost driver rate. e.g. RWF10 per order placed to cover overhead costs of the Purchasing department.
Step 5: Charge support overheads to products based on their usage of that activity e.g. if a product required three separate purchase orders for raw materials then it would be charged with RWF30 (3 x RWF10) to cover the purchasing department overheads.

(5 marks available)

Advantages and Disadvantages:
The benefits and pitfalls of introducing a new system will always depend on the organisation, its management and workforce and their capacity for dealing with change. Some of the aspects that might be considered are as follows:

Advantages:
1. The provision of more accurate product costing in the new multi-product environment that now has a large amount of non-volume related overheads.
2. Focuses management attention not alone on costs, but on the activities that drive the costs.
3. Aids the management decision-making system in the areas of pricing, product mix and customer profitability.

Disadvantages:

1. As ABC is a relatively new technique there is little guarantee that it will contribute to company profitability and close monitoring will be required. This may produce a greater drain on the resources of the new management team.
2. While the information is useful for current control, it is historically based and hence may not always be useful for future strategic decisions.
3. If not applied properly it will just be a costly exercise that does not benefit the enterprise.

(4 marks available)

If you require any further assistance or advice, please do not hesitate to contact my office.

Yours faithfully,
M Accountant.

(1 mark for presentation)
(Total: 15 marks)

SECTION C - ANSWER ANY 3 OUT OF 4 QUESTIONS
SOLUTION 3 – Multiple Choice Section

1. Answer (c). The time taken between placing an order and receiving the goods into inventory.

2. Answer (d).

Portho Ltd. – Process Account

	Kgs	RWF		Kgs	RWF
Materials	**3,500**	**52,500**	**Actual Output**	**2,800**	**58,800**
Labour		**9,625**			
Abnormal Groin	**175**	**3,675**	**Normal Loss**	**875**	**7,000**
	3,675	**65,800**		**3,675**	**65,800**

Cost per unit $= \frac{52,500 + 9,625 - 7,000}{3,500 - 875}$

= RWF21 per unit of output.

3. Answer (b). Actual scrap = 3,500 – 2,800 = 700 kg x RWF8 = RWF5,600.

4. Answer (d).

Economic Order Quantity (EOQ)

$$EOQ = \sqrt{\frac{2\,d\,c}{h}}$$

d = annual demand in units
c = cost of making one order
h = Cost of holding one unit for one year

Applying the formula to Semivee Ltd:

$$\text{EOQ Raw Material} = \sqrt{\frac{2 \times 4{,}000 \times (50 + 5)}{(15 \times 10\%) + 0.20}}$$

$$= \sqrt{\frac{440{,}000}{1.70}} = 509 \text{ units (approx)}$$

5. Answer (a). All statements are true.

6. Answer (b).

Machine hours are most appropriate as production is machine intensive.
Hence, overhead RWF180,000 / 10,000 hrs = OAR RWF18 per machine hour.

7. Answer (a).
   A margin of safety of 20% is equal to 1,000 units per month. Therefore breakeven point is (5,000 – 1,000) = 4,000 units per month. At BEP contribution is equal to fixed cost therefore, at a contribution per unit of RWF25 this gives fixed costs of RWF100,000.

8. Answer (b).

	RWF Per Unit
Selling Price	**50**
Direct Material	**4**
Direct Labour	**16**
Variable Production Overheads	**10**
Variable Selling Costs	**1**
Marginal Cost	**31**
Contribution	**19**
Variance in Units (3,000 – 3,500)	**500 Fav**
Sales Volume Variance	**RWF 9,500 Fav**

(8 x 2.5 marks = 20 marks)

SOLUTION 4

Part (a)

Ngwenya Ltd. Projected Cash Receipts for P/E 31st March 2010.

	Oct 09	Nov 09	Dec 09	Jan 10	Total
Units Sold	690	930	1,170	1,410	
Sales Value @ RWF35	24,150	32,550	40,950	49,350	14,700
Cash Sales (20%)	4,830	6,510	8,190	9,870	29,400
Credit Sales (80%)	19,320	26,040	32,760	39,480	117,600
Cash Inflows					
- **From Cash Sales**	4,830	6,510	8,190	9,870	
- **1 Month Credit**	-	9,660	13,020	16,380	
- **2 Months Credit**	-	-	9,660	13,020	
	4,830	**16,170**	**30,870**	**39,270**	**91,140**

(8 marks)

Part (b)

Ngwenya Ltd. Projected Cash Payments for Inventory for P/E 31st March 2010.

	Oct 09	Nov 09	Dec 09	Jan 10	Total
Units Purchased	1,000	1,080	1,320	1,600	
Cost @ RWF 20	20,000	21,600	-	-	41,600
Cost @ RWF 22	-	-	29,040	35,200	64,240
Payment Timing	20,000	21,600	-	29,040	70,640

(3 marks)

Part (c)

Ngwenya Ltd. Projected Cash Budget for P/E 31st March 2010.

	Oct 09	Nov 09	Dec 09	Jan 10	Total
Inflows					
Sales Receipts	4,830	16,170	30,870	39,270	91,140
Share Capital	100,000				100,000
Interest Rec'd	-	-	-	195	195
	104,830	16,170	30,870	39,465	191,335
Outflows					
Suppliers	20,000	21,600	26,400	29,040	70,640
Premises	75,000	-	-	-	75,000
Fix. & Fittings	10,500	-	-	-	10,500
Motor Vehicle	6,000	-	-	-	6,000
Casual Wages	2,000	2,000	2,000	2,000	8,000
Directors Salary	1,400	1,400	1,400	1,400	5,600
Other Expenses	-	800	800	800	2,400
Subscription	-	-	-	600	600
Interim Div.	-	-	-	1,470	1,470
Interest Paid	-	1,007	2,071	-	3,078
	114,900	26,807	6,271	35,310	183,288
Surplus / (Deficit)	(10,070)	(10,637)	24,599	4,155	8,047
Opening Bal	0	(10,070)	(20,707)	3,892	
Closing Bal	(10,070)	(20,707)	3,892	8,047	

(9 marks)
(Total: 20 marks)

SOLUTION 5

Part (a)

Cost Analysis	**Fixed**	**Variable**	**Total**
Production Costs	30,000	315,000	345,000
Selling & Distribution Costs	75,000	39,000	114,000
Administration Costs	36,000	6,000	42,000
	141,000	360,000	501,000

Selling price per unit	RWF15
Variable cost per unit (360,000/36,000) =	RWF10
Contribution earned per unit sold	RWF5

Breakeven point in units = $\frac{\text{Fixed Costs}}{\text{Contribution}} = \frac{\text{RWF141,000}}{\text{RWF5}}$ = 28,200 units

Margin of Safety:

Budgeted production	=	36,000 units
Breakeven point	=	28,200 units
Difference	=	7,800 units

Margin of Safety = 7,800 units or 7,800/36,000 = 21.66%

(5 marks)

Part (b)

Explanation:

The margin of safety is the amount by which sales can fall as a percentage of the original budget before the company is in danger of becoming loss making.

(1 mark)

Part (c)
A fall in demand of 25% will yield sales of 27,000 units instead of 36,000 units.

Expected contribution from new sales level (27,000 x RWF5)	=	RWF135,000
Fixed costs (no change)	=	RWF141,000
Expected loss as a result of fall in demand		RWF6,000

(3 marks)

Part (d)
Extra costs incurred RWF30,000 / RWF5 contribution = 6,000 extra units required.
Old BEP = 28,200 units plus extra units required 6,000 => New BEP = 34,200 units

Alternatively: Fixed cost + new costs (141,000 + 30,000) = 171,000
171,000 / 5 contribution = 34,200 units required. **(3 marks)**

Part (e)

Option A (Sales commission):

Revised sales levels (36,000 + 20% extra)	=	43,200 units
Revised contribution (5 – 1 commission)	=	RWF4 per unit
Expected contribution (43,200 x 4)	=	172,800
Fixed costs (no change)	=	141,000
Option A expected profit		RWF31,800

Option B (Price reduction):

Revised sales levels (36,000 + 30% extra)	=	46,800 units
Revised contribution (5 – 1 price drop)	=	RWF4 per unit
Expected contribution (46,800 x 4)	=	187,200
Fixed costs (141,000 + 5,000 advertising)	=	146,000
Option B expected profit		RWF41,200

Advice:
Option B should be chosen as it gives the higher revised profit. **(8 marks)**

Tutorial Note:
It is worth noting that Option A is unlikely to be recommended even if option B did not exist. Current profit (ignoring all potential changes) would be as follows:

Contribution (36,000 x 5)	=	*180,000*
Fixed costs	=	*141,000*
Profit expected at the moment	=	*RWF39,000*

Option A would result in an expected profit of RWF31,800 which would be a reduction on current profitability levels expected. This however assumes that current expectations can actually be met and considering the challenging economic circumstances facing the construction industry this may not be realistic.

(Total: 20 marks)

SOLUTION 6

Part (a)

Statement of Budgeted Profit or Loss for month ended 31st July 2009

			Budgeted RWF
Sales	(12,500 x 100)		1,250,000
Less:			
Raw Material	(50,000 x 10)	500,000	
Direct Labour	(37,500 x 9)	337,500	
Variable Overhead Absorbed	(337,500 x 50%)	168,750	
Fixed Cost	(Given)	200,000	
			1,206,250
Budgeted Profit			43,750

(3 marks)

Part (b)

Statement of Actual Profit or Loss for month ended 31st July 2009

			Actual RWF
Sales	(12,500 x 100)		1,312,500
Less:			
Raw Material	(49,250 x 11)	541,750	
Direct Labour	(36,000 x 9.25)	333,000	
Variable Overhead Absorbed	(Given)	173,500	
Fixed Cost	(Given)	210,000	
			1,258,250
Actual Profit			54,250

(3 marks)

Part (c)

Workings:

Sales Price:	Did sell (12,500 x 105)	1,312,500
	Expected	1,250,000
		62,500 (F)

No sales volume variance.

Material Price:	Did cost (49,250 x 11)	541,750
	Expected (49,250 x 10)	492,500
		49,250 (A)

Material Usage:	Did use	49,250 m
	Expected	50,000 m
		750 m
		x 10
		7,500 (F)

Labour Rate:	Did pay	333,000
	Expected (36,000 x 9)	324,000
		9,000 (A)

Labour Efficiency:	Did take	36,000 hr
	Expected	37,500 hr
		1,500 hr
		x 9
		13,500 (F)

Variable Overhead Rate:	Did Spend	173,500
	Expected (36,000 x 9 x 50%)	162,000
		11,500 (A)

Variable Overhead Efficiency:	Did take	36,000 hr
	Expected	37,500 hr
		1,500 hr
		x 4.50
		6,700 (F)

Fixed Overhead:	Did spend	210,000
	Expected	200,000
		10,000 (A)

No further breakdown of the fixed overhear variance is possible as no absorption basis is provided.

Sabi Ltd. - Operating Statement for M/E 31st July 2009.

	Adverse	**Favourable**	**Total**
Original Budgeted Profit for Period			43,750
Variances:			
Sales Price		62,500	
Material Price	49,250		
Material Usage		7,500	
Labour Rate	9,000		
Labour Efficiency		13,500	
Variable Overhead Rate	11,500		
Variable Overhead Efficiency		6,750	
Fixed Overhead Expenditure	10,000		
	79,750	90,250	10,500
Actual Profit for Period			54,250

(14 marks)
(Total: 20 marks)

END OF SOLUTIONS

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MANAGEMENT ACCOUNTING

LEVEL 2

L2.2 EXAMINATION FORMAT REVISION QUESTIONS & SOLUTIONS

NOTES
Answer Questions 1 and 2
and three out of Questions 3, 4, 5 and 6.

TIME ALLOWED:

3 hours, plus 10 minutes to read the paper.

INSTRUCTIONS:

During the reading time you may write notes on the examination paper but you may not commence writing in your answer book.

Marks for each question are shown. The pass mark required is 50% in total over the whole paper.

Start your answer to each question on a new page.

You are reminded that candidates are expected to pay particular attention to their communication skills and care must be taken regarding the format and literacy of the solutions. The marking system will take into account the content of the candidates' answers and the extent to which answers are supported with relevant legislation, case law or examples where appropriate.

List on the cover of each answer booklet, in the space provided, the number of each question(s) attempted

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SECTION A This question is COMPULSORY

1. ABA Ltd commenced production for the first time on 1st January 2011 making and selling one single product. The following information has been extracted by the Management Accountant from the original budgeted data prepared for the first financial quarter as part of the company's forecast plans for this product:

Direct material per unit	5 kg @ RWF2 per kg
Direct labour per unit	2 hrs @ RWF10 per hr
Variable production overhead	RWF12,000 per month
Fixed production overhead	RWF18,000 per month

Each unit is sold at a fixed price of RWF60.

All overheads are absorbed to the products on a per unit basis and are calculated by the Management Accountant using the budgeted production level of 1,500 units per month.

For the months of January, February and March, the following data has been gathered:

	January	**February**	**March**
Units produced	1,200	1,480	1,530
Units sold	1,000	1,400	1,670

You may assume that the fixed production overheads are incurred evenly over the year and that there was no difference between budgeted and actual costs during the quarter under review.

Because the company has only commenced trading, the Management Accountant is unsure which method of costing the company should adopt for internal quarterly reporting to the directors. She has asked you to prepare the following information for the forthcoming Board meeting.

Required:

(a) Calculate the unit cost of the product using both an absorption costing and a marginal costing approach.

(4 marks)

(b) Prepare operating statements for the months of January, February and March using absorption costing and marginal costing. (Totals for the quarter are not required). Any under/over absorption should be clearly shown.

(16 marks)

(c) Briefly explain why the monthly profits reported under each costing method differ from each other and what the implications are in the long term.

(5 marks)

SECTION B - Answer EITHER part (a) OR part (b).

2.

a) Flatlock Ltd. have just commenced business as a small company manufacturing high-tech computer components for a sector of the IT industry which is subject to continuous rapid technological advances.

You have been engaged as a management accounting consultant to assist with the start-up operations.

The Managing Director is considering implementing a stock control system for raw material management. He remembers a number of abbreviations, which are in common use regarding stock management, but he has forgotten their actual meaning and purpose.

The abbreviations are: FIFO / LIFO / EOQ / JIT / TQM.

Required:

Prepare a brief report advising the Managing Director in which you:

(i) Explain the purpose and operation of the FIFO and LIFO stock management systems and outline their implications for profit reporting.

(6 marks)

(ii) Explain the purpose and principle features of EOQ; JIT and TQM systems.

(6 marks)

(iii) Recommend which stock management system from those discussed in your answer to (i) and (ii) above would be most suitable to be applied to Flatlock Ltd and give a clear reason for your choice.

(2 marks)

(1 mark for presentation)
(Total 15 marks)

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

You have just been appointed to a brand new role as Management Accountant in Engeeneous 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.

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 Engeeneous 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 three different headings .

(6 marks)

ii. For each of the three key headings of planning, control and decision making; outline one Management Accounting technique which might lead to stronger commercial success for the company. **(6 marks)**

iii. Outline any two qualitative (non-financial) issues that you as Management Accountant should consider when providing information for decision making in Engeeneous Ltd

(2 marks)
(1 mark for presentation)
(Total: 15 marks)

SECTION C - Answer any 3 out of 4 questions

3.

The following multiple choice question contains 8 sections, each of which is followed by a choice of answers. Only one of the offered solutions is correct. Each question carries 2.5 marks. Give your answer to each section on the answer sheet provided.

1. A market research report has been received today together with an invoice for RWF10,000 being the amount now due for the research. You will use the report to decide whether or not to launch a new product. Which of the following statements is true today concerning the potential product launch?

   a) The relevant cost of the market research is RWF10,000
   b) The relevant cost of the market research is RWF0.
   c) Market research is never relevant to accounting calculations.
   d) The cost will only be relevant if we choose to launch the new product.

2. When the term "contribution" is used in a management accounting context which of the following statements is true?

   a) This relates to charitable donations allowable as a business expense.
   b) This term is only ever used by companies engaged in Marginal Costing.
   c) This term is an important and useful concept for companies engaged in short term decision making.
   d) None of the above.

3. A manufacturer uses 600 units of a product per annum. The variable cost of placing an order amounts to RWF70 and the variable cost of holding one unit for one month amounts to 0.70 RWF. The optimal recommended order size (to the nearest unit) to minimise associated costs is:

   a) 35
   b) 50
   c) 100
   d) 600

4. Buz Ltd absorbs fixed overhead costs on a unit basis. For the month just ended, the fixed overhead expenditure was budgeted at RWF150,000 but was actually RWF148,000. The budgeted production level was 50,000 units and 49,000 units were actually manufactured.

   a) Fixed overheads were over-absorbed by RWF2,000, due to the difference between budgeted and actual expenditure.
   b) Fixed overheads were under-absorbed by RWF3,000, due to the shortfall in actual production at RWF3 per unit.
   c) Fixed overheads were over-absorbed by RWF3,000, due to the difference between budgeted expenditure and 49,000 units at RWF3 per unit.
   d) Fixed overheads were under-absorbed by RWF1,000, due to the difference between budgeted and actual expenditure and the production shortfall of 1,000 units.

5. If the selling price per unit is RWF10, fixed costs are RWF750,000 and the break-even point is 100,000 units, what is the total contribution to sales ratio?

   a) 75%
   b) 50%
   c) 25%
   d) 10%

The following data is to be used for questions 6 and 7.

A company incurs the following costs at various activity levels:

Activity level (units)	Total Cost (RWF)
5,000	250,000
7,500	312,500
10,000	400,000

6. Estimate the variable cost per unit?

   a) RWF25
   b) RWF30
   c) RWF35
   d) RWF40

7. The budgeted activity for the next period is 15,000 units. Calculate the total costs . expected for the next period

   a) RWF450,000
   b) RWF550,000
   c) RWF625,000
   d) None of the above as dependable estimates are not possible.

8. Croker Ltd uses process costing techniques for its monthly valuations of output. There are no stock holdings and raw material input for the month was 2,000 units costing RWF5 each. Conversion costs were RWF17,400 and 150 units were recorded as actual losses. Normal losses are expected to be 10% of input and can be sold as scrap for RWF2 each.
   The value of one unit of output using process costing principles (rounded to the nearest cent) is:

   a) RWF15.00
   b) RWF15.22
   c) RWF13.70
   d) RWF14.65

(Total: 20 marks)

4. A manufacturer of light fittings is preparing budgets and has provided the following draft figures:

Sales Forecast (units)

January	6,000
February	7,500
March	8,500
April	7,000
May	6,500

The standard selling price per unit is RWF50.

Each light fitting uses 2kg of steel at a cost of RWF15 per kg and it is company policy to have stocks of steel at the end of each month to cover 50% of next months production requirements. It is expected that at the start of January there will be 5,800kg of steel in stock.

At the start of January it is expected that there will be 750 units of light fittings in stock and it is policy to have stocks at the end of each month to cover 10% of the following month's sales.

10% of sales are for cash with the balance on credit of one month. All purchases are paid for in the month following purchase. The Trial Balance on 1st January contained the following figures: Bank RWF10,000 (DR); Debtors RWF250,000 (DR) and Creditors RWF210,000 (CR).

Required

(a) Prepare a production budget (in units) for the first four months of the year.

(6 Marks)

(b) Prepare raw material (steel) usage and purchases budgets for the first three months of the year.

(8 Marks)

(c) Prepare a cash budget showing the receipts and payments for the first three months of the year.

(6 marks)
(Total: 20 marks)

5. Lynchberg Ltd. has provided you with the following budgeted and actual data for the period ending 30th April 2011.

   The standard cost information at the beginning of the period was based on an expected activity of 10,000 units

Direct Material :	The specification per unit produced is 12kg @ RWF10 per kg.
Direct Labour :	The standard time allowed per unit is 8 hours @ RWF6 per hour.
Overheads :	All overheads are variable in nature and for the period they are budgeted at RWF160,000. Company policy is to absorb overheads at a predetermined rate per labour hour.

Selling Price is expected to be RWF200 per unit.

At the end of the period the actual results were as follows:

Sales Revenue:	RWF2,880,000 representing 12,000 units sold.
Material:	160,000 kg were used at a cost of RWF1,440,000.
Labour:	108,000 hours were worked at a cost of RWF756,000.
Overheads:	Actual expenditure RWF240,000.

Required

(a) Prepare a standard cost card showing the cost and profit per unit and the overall budgeted profit for the period.

(3 Marks)

(b) Calculate the actual profit for the period.

(2 Marks)

(c) Prepare a statement reconciling the budgeted profit and the actual profit and in doing so, calculate, in as much detail as possible, relevant variances for Material, Labour, Overheads and Sales. **(12 Marks)**

(d) Explain what you understand by the term "inter-relationship between variances" and provide a simple example. **(3 Marks)**

(**Total: 20 marks)**

6. Procession Ltd operates a process costing system and manufactures one single product (the Procixs) using raw material X. The process involves continuous chemical reactions and hence cannot be halted to facilitate period end stock takes. The following information relates to March 2011.

- Opening work-in-progress at 28th February - 15,000 units.
  - 100% complete for materials RWF51,700
  - 60% complete for labour RWF31,740
  - 60% complete for overheads RWF13,380
  - All overheads are variable

- During the month 40,000 units of Procixs were started.
- 100,000 kg of material X costing RWF106,400 were input to the process.

- 60,000 labour hours were worked at a cost of RWF93,000.
- The variable overhead incurred was RWF74,400.
- Normal loss is 10% of units started.
- Loss has a scrap value of 0.50 rwf per unit and is not identified until the end of the process.
- 36,000 units were output to finished goods.
- Closing stock of work-in-progress was 12,000 units.
  - 100% complete for materials.
  - 60% complete for labour and overhead.

Required

(a) Prepare the process account for the month of March 2011. You may assume that Procession Ltd operates a FIFO stock management system.

(13 marks)

(b) Prepare the Abnormal Loss / Gain Account for the month of March 2011.

(2 marks)

(c) Prepare the Scrap Account for the month of March 2011.

(2 marks)

(d) Explain how abnormal gains and losses are treated in the calculation of equivalent units of production.

(3Marks)
(Total: 20 marks)

END OF PAPER

SUGGESTED SOLUTIONS

SOLUTION 1

Part (a)
Unit cost of product (RWF):

		Absorption	**Marginal**
Direct material per unit	5kg @ RWF2 per kg	10	10
Direct labour per unit	2 hrs @ RWF10 per hr	20	20
Variable production overhead	RWF12,000 / 1,500 units	8	8
Fixed production overhead	RWF 18,000 / 1,500 units	12	N/A
		50	38

(4 marks)

Part (b)

Operating Statement – Absorption Costing

		January	**February**	**March**
Sales		60,000	84,000	100,200
Production Cost of Sales				
Opening Stock		-	10,000	14,000
Production Cost	(W1)	60,000	74,000	76,500
Closing Stock	(W2)	(10,000)	(14,000)	(7,000)
		50,000	70,000	83,500
Sales less Production Cost of Sales		10,000	14,000	16,700
(Under) / Cost Absorption	(W3)	(3,600)	(240)	360
Profit		6,400	13,760	17,060

Operating Statement – Marginal Costing

		January	February	March
Sales		60,000	84,000	100,200
Production Cost of Sales				
Opening Stock		-	7,600	10,640
Production Cost	(W1)	45,600	56,240	58,140
Closing Stock	(W2)	(7,600)	(10,640)	(5,320)
		38,000	53,200	63,460
Contribution		22,000	30,800	36,740
Less fixed cost		(18,000)	(18,000)	(18,000)
Profit		4,000	12,800	18,740

Working 1: Production Cost

		Actual Units	Absorption (RWF50 per unit)	Marginal (RWF38 per unit)
Production	- Jan	1,200	60,000	45,600
	- Feb	1,480	74,000	56,240
	- March	1,530	76,500	58,140

Working 2: Closing Stock

	January	February	March
Opening Stock	-	200	280
Units produced	1,200	1,480	1,530
	1,200	1,680	1,810
Units sold	1,000	1,400	1,670
Closing Stock	200	280	140
@ Absorption Cost RWF50	10,000	14,000	7,000
@ Marginal Cost RWF38	7,600	10,640	5,320

Working 3: Under / Over Absorption

	January	**February**	**March**
Expected Production	1500	1500	1500
Actual	1200	1480	1530
Change (+ / -)	-300	-20	+30
Fixed O/H Absorp. Rate	RWF12	RWF12	RWF12
(Under) / Over Absorbed	(3,600)	(240)	360

(16 marks)

Part (c)
Profits are different under each method due to the inclusion of fixed overheads in the closing inventory figures under absorption profit but not under marginal costing calculations.

In the long term this will not matter as eventually all inventory will be sold and hence there will be no closing inventory to distort the calculations. In addition, the distortion only arises when there is a change in the quantity of inventories over the period. Hence, if there is no difference between the opening and closing inventory quantities, there will be no difference between the profit calculated under each method.

(5 marks)
(Total : 25 marks)

SECTION B : Answer EITHER part (a) OR part (b)

Part (a)

REPORT

To: Managing Director, Flatlock Ltd
From: Management Accounting Consultants
Subject: Stock Control Abbreviations
Date: xxth August 2011

Further to your request for information on stock control abbreviations. The following is a brief outline of the role and purpose of the abbreviations mentioned by you. We have also distinguished between them where this is relevant.

FIFO
This stands for First In First Out and it is a method used in setting a price for stocks as they are issued to the production process. It results in issues being priced at historic values and leaves a closing stock value based on the most recent receipts of goods. In times of changing prices this technique produces more satisfactory closing stock valuations.

(2 marks)

LIFO
This stands for Last In First Out and it is also a method used in setting a price for stocks as they are issued to the production process. This technique results in issues being priced at current values and hence leaves a closing stock value based on the oldest (most historic) receipts of goods. In times of changing prices this technique produces more satisfactory valuations for issues as they will always be based on the most up to date values. Closing stock valuations however may bear little resemblance to the true cost of actual closing stock in the warehouse.

(2 marks)

Profit Reporting
Both methods will produce different closing stock valuations which in turn will directly impact on the reported profit for the period. The method showing the higher closing stock value will also result in a higher reported profit. In times of rising prices, LIFO traditionally reports older (and hence lower) stock values with a corresponding lower profit figure. For this reason LIFO is not normally acceptable for external profit reporting despite the fact that it remains in common use for internal reporting purposes.

(2 marks)

EOQ
This stands for Economic Order Quantity. This is a mathematical model which seeks to minimise the costs associated with ordering / holding stock by recommending an optimal number of units to be ordered at a time. It assumes that annual demand and associated costs can be calculated accurately and are not subject to any uncertainties. It also fails to take account of the possible effect of bulk discount opportunities.

(2 marks)

JIT
This stands for Just in Time. This is a philosophy of Japanese origin which suggests that the firm should not hold any stocks at all and rather should receive them "just in time" as they are needed for production. This will eliminate all holding and inward inspection costs and relies heavily on strong dependable supplier relationships and high quality products.

(2 marks)

TQM
This stands for Total Quality Management. This is also of Japanese origins and expands on the concepts of JIT. It has been described as a complete management philosophy rather than a set of procedures. It advocates a policy of total quality in everything the firm does and is not limited to stock control alone. TQM suggests "get it right first time – all the time". It also recognises that there may be an unacceptable level of cost involved in eradicating defects entirely. Therefore it may allow a firm to budget for an acceptable level of defects whilst keeping the cost of detection at a reasonable level.

(2 marks)

Recommendation
Flatlock Ltd operates in the IT industry and in a sector which is subject to rapid change as a result of technological advancement and requires a high dependence on quality. Hence the company should minimise its risks from either stock-outs or obsolescence due to holding excessive amounts of stock. JIT would be the most suitable system to address the risks identified. This system would also help ensure the requisite levels of quality due to the focus on supplier quality controls.

(2 marks)

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

Yours sincerely,

MA Consultants.

1 mark available for Report format.
(Total : 15 marks)

Part (b)

MEMORANDUM

To: Managing Director, Engeeneous Ltd
From: New Management Accountant
Subject: Role of Management Accounting
Date: xxth August 2011

Further to my recent appointment as Management Accountant to Engeeneous Ltd. The following is a brief outline of the role and importance of management accounting to companies like Engeeneous Ltd 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 V 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.

(2 marks for each heading to a maximum of 6)

Suggested Management Accounting Techniques:

Planning:
Management accountants will be heavily involved in producing the budgets within a company. These vary 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 organised 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 optimise the company's commercial performance.

Decision Making:
Management accountants use techniques such as break even analysis 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.

(2 marks for each heading to a maximum of 6)

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

(2 marks available)
1 mark available for Memorandum format.
(Total : 15 marks.)

Section C - Answer any 3 out of 4 questions

SOLUTION 3

1. Answer (b). There is no relevant cost. The cost of commissioning the report is now a committed or sunk cost and is not relevant for the launch.

2. Answer (c). Contribution is used in marginal costing, but also has many applications in general decision making eg when dealing with a limiting factor.

3. Answer (c). Using the Economic Order Formula with demand of 600, order cost of RWF70 and holding cost of RWF8.40 (70c x 12 mths) per unit per year.

4. Answer (d).

Absorbed (49,000 @ RWF		RWF147,000
Actual overhead	=	RWF148,000
Under absorbed		RWF 1,000

5. Answer (a). At BEP, contribution equals fixed costs ie RWF750,000. Sales are (100,000 @ RWF10) = RWF1m. Hence
   Contribution to sales ratio is 75%.

6. Answer (b) using the High/Low method to estimate the variable element. An increase of 5,000 units results in an increase of RWF150,000 this implies a variable cost of RWF30 per unit.

7. Answer (d). The new budgeted activity is 15,000 units and this is well outside the range of data provided hence we can have no confidence on any calculations without further information on the possible existence of step costs.

8. Answer (a).

	RWF
Raw Material (2,000 x 5)	10,000
Scrap Value of Normal Loss (200 x 2)	(400)
Conversion Costs	17,400
	27,000
Good Output Expected (2,000 – 200)	1,800 units
Cost per unit of Good Output	RWF15.00

(8 x 2.5 marks = 20 marks)

SOLUTION 4

Part (a) - Production budget (in units) for the first four months of the year.

	Jan	**Feb**	**Mar**	**Apr**
Sales	6,000	7,500	8,500	7,000
Closing Stock	750	850	700	650
Opening Stock	(750)	(750)	(850)	(700)
Production	6,000	7,600	8,350	6,950

(6 marks)

Part (b) - Raw material usage and purchases budgets for the first three months of the year.

	Jan	**Feb**	**Mar**	**Apr**
Production	6,000	7,600	8,350	6,950
Usage (kg)	@ 2 kg	@ 2 kg	@ 2 kg	@ 2 kg
	12,000	15,200	16,700	13,900
Closing Sto	7,600	8,350	6,950	
Opening Stock	(5,800)	(7,600)	(8,350)	
Purchases (kg)	13,800 @ RWF15	15,950 @ RWF15	15,300 @ RWF15	
Purchases (RWF)	207,000	239,250	229,500	

(8 marks)

Part (c) - Cash budget showing the receipts and payments for the first three months of the year.

RWF000	**Jan**	**Feb**	**Mar**
Receipts			
- Cash	30	37.5	42.5
- Credit	250	270	337.5
	280	307.5	380
Purchases	210	207	239.25
Surplus	70	100.5	140.75
Opening Bal	10	80	180.5
Closing Bal	80	180.5	321.25

(6 marks)
(Total : 20 marks)

SOLUTION 5

Part (a)

Standard Cost Card for Lynchberg Ltd.

		RWF
Sales Price		200
Less:		
Materials (12 kg @ RWF10)	120	
Labour (8 hrs @ RWF6)	48	
Overheads (8 hrs @ RWF2)	16	
		184
Standard Profit per unit		16
Budgeted Profit (RWF16 x 10,000 units)		RWF160,000

(3 marks)

Part (b)

Actual Profit

		RWF000
Sales		2,880
Less:		
Materials	1,440	
Labour	756	
Overheads	240	
		2,436
Actual Profit		444

(2 marks)

Part (c)

Profit Reconciliation Statement with Variance Analysis

				RWF000
Budget Profit per Part (a)				160
Sales	Price	Actual	240	
		Expected	200	
			40 x 12000	480F
	Volume	Actual	12000	
		Expected	10000	
			2000 x 16	32F
Materials	Price	Actual	1440	
		Expected	1600	
			160	160F
	Usage	Actual	160K	
		Expected	144K	
			16 x 10	160A
Labour	Rate	Actual	756	
		Expected	648	
			108	108A
	Efficiency	Actual	108	
		Expected	96	
			12 x 6	72A

Overhead	Rate	Actual	240	
		Expected	216	
			24	24A
	Efficiency	Actual	108	
		Expected	96	
			12 x 2	24A
Actual Profit per Part (b)				444

(12 marks)

Part (d)
Variances, like ratios, should never be viewed in isolation when being interpreted. Inter-relationship between variances means that there is often a natural connection between variances which are calculated. This connection may become apparent when management are seeking explanations to variances which have arisen in a period. Identifying these connections helps provide assurance that the reasons being suggested are logical and are more likely than not to be correct.

Examples might include:

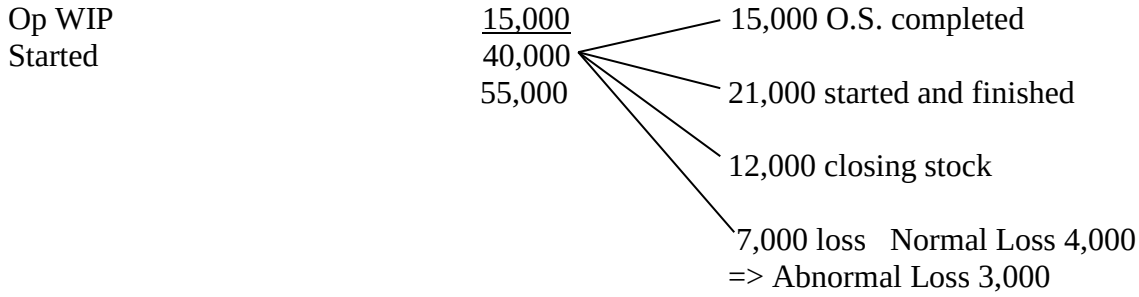
- A favourable labour efficiency variance being linked to an adverse rate variance. The reason behind these might be the introduction of a bonus scheme which improved productivity but increased the amount paid in wages.
- A favourable material price variance may be due to buying a lower grade (and hence cheaper) material. This would logically be linked to an adverse usage variance as a result of higher wastage due to the poorer quality of the raw material.

(3 marks)
(Total : 20 marks)

SOLUTION 6

Part (a)

Physical Unit Flow: Units:



Statement of Equivalent Units:

	Materials	**Conversion Costs (Labour and Overheads)**	
Opening Stock	-	6,000	(40% remaining)
Started and Finished	21,000	21,000	
Normal Loss	-	-	
Abnormal Loss	3,000	3,000	
Closing Stock	12,000	7,200	
Total Equivalent Units	36,000	37,200	

Calculation of Costs:

	Materials	**Conversion Costs**
	106,400 - 2,000 (4,000 @ .50RWF)	93,000 + 74,400
	36,000	37,200
Cost per Equivalent Unit:	RWF2.90 (material)	RWF4.50 (conversion)

Statement of Valuation:

Opening Stock 15,000 units B/F	Mats	51,700	
	Lab	31,740	
	Overhead	13,380	
		96,820	
To complete:	6000 @ 4. 50	27,000	
	Total		123,820
Normal Loss	Scrap Value (4,000 @ .50RWF)		2,000
Started and Finished	21,000 @ (2.90 + 4.50)		155,400
Abnormal Loss	3,000 @ (2.90 + 4.50)		22,200
Closing Stock	12,000 @ 2.90 material		34,800
	7,200 @ 4.50 conversion		32,400
			67,200

Process Account for Procixs for March 2011

	Units	**RWF**		**Units**	**RWF**
Opening WIP	15000	96820	*Finished Output*	36000	279220
Materials	40000	106400	*Normal Loss*	4000	2000
Labour	-	93000	*Abnormal Loss*	3000	22200
Overheads	-	74400	*Closing WIP*	12000	67200
	55000	370620		55000	370620

(13 marks)

Part (b)

Abnormal Loss Account for Procixs for March 2011

	RWF		**RWF**
Process A/C (Normal loss)	22200	Scrap A/C (3000 units @ .50RWF)	1500
		Profit & Loss A/C	20700
	22200		22200

(2 marks)

Part (c)

Scrap Account for Procixs for March 2011

	RWF		**RWF**
Process A/C (Normal loss)	2000		
Abnormal Loss A/C	1500		
		Bank (7000 units @ .50RWF)	3500
	3500		3500

(2 marks)

Part (d)

Abnormal gains and losses are both included in the Statement of Equivalent units whereas normal losses are excluded.

Care should be taken to consider the degree of completion of the abnormal results in the same way as assigning equivalent units based on the degree of completion of the closing stock for the period.

(3 marks)
(Total : 20 marks)

END OF SOLUTIONS