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**CERTIFIED PUBLIC ACCOUNTANT  
FOUNDATION LEVEL 2 EXAMINATIONS  
F2.1: MANAGEMENT ACCOUNTING  
FRIDAY: 7 JUNE 2019**

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**INSTRUCTIONS:**

1. **Time Allowed: 3 hours 15 minutes** (15 minutes reading and 3 hours writing).
2. This examination has **seven** questions and only **five** questions are to be attempted.
3. Marks allocated to each question are shown at the end of the question.
4. Show all your workings

## QUESTION ONE

Daily Focus Limited (DFL) is a tabloid newspaper that started operations in Rwanda in June, 2015 with focus on the youths and sports. DFL imports its newsprint paper and other materials from South Africa and Kenya respectively.

DFL operates a system that prepares both financial and cost accounts independently. A review of their management accounts for quarter ended 31 March, 2019 revealed that the profit as per cost accounts differed significantly from that as per financial accounts despite use of the same data set. Management resolved to adopt a new system that integrates the financial and cost accounts.

The following is DFL's list of balances as at 31 December 2018:

	Debit	Credit
	Frw '000'	Frw '000'
Equity shares Frw 1,000 per share		5,000
Accumulated profit		1,200
Trade & other receivables	700	
Trade & other payables		2,250
Property, plant & machinery	2,600	
Stocks held in stores:		
Newsprint	1,150	
Work in progress	2,000	
Cash and cash equivalents	2,000	

The following information relates to the quarter that ended 31 March 2019:

	Frw '000'
Newsprint purchased on credit	2,400
Labour costs incurred as a result of production	445
Manufacturing overheads recovered	160
Selling and distribution overheads paid in cash	212
Cost of finished goods	3,200
Factory cost of goods sold	3,200
Finished goods sold on credit	4,100
Collections from credit customers	610
Payments to suppliers	420

Newsprint issued to production is 60% of quarterly purchases.

Manufacturing overheads incurred are 40% of quarterly labour cost.

**REQUIRED:**

- (a) Distinguish between interlocking accounting and integrated accounting systems. **(2 Marks)**
- (b) Explain any **two** reasons why profit as per cost accounts differs significantly from profit as per the financial accounts. **(4 Marks)**
- (c) Using integrated accounting system, prepare DFL's trial balance as at 31 March, 2019. **(14 Marks)**
- (Total 20 Marks)**

**QUESTION TWO**

Bikindi Processing Factory (BPF) located in Nyabihu processes milk into different products. BPF buys raw milk from the local dairy farmers and processes it into pasteurized milk and non-pasteurized milk products which are then sold to supermarkets in Kibaye, Nyabihu and Gisenyi. BPF's production level is dependent on local dairy farmers' supply capacity. BPF produces at optimum capacity of 250,000 litres of milk per quarter during peak seasons. Their production cost budget for the quarter ended 31 March, 2019 based on production levels of 175,000 litres and 225,000 litres as shown below:

Production levels (litres)	175,000	225,000
	Frw '000'	Frw '000'
Raw milk supplies	52,500	67,500
Direct labour	7,000	9,000
Variable production overheads:		
Utilities	4,900	6,300
Maintenance	4,200	5,400
Other variable overheads	350	450
Fixed production overheads:		
Depreciation	1,800	1,800
Indirect wages	800	800
Other fixed overheads	600	600

Actual production for the quarter was 200,000 litres and the production costs incurred were as follows:

Details	Frw '000'
Raw milk supplies	62,000
Direct labour	7,920
Utilities	5,400
Maintenance	4,900
Other variable overheads	419
Depreciation	1,750
Wages-indirect	830
Other fixed overheads	531

**REQUIRED:**

- (a) Using flexible budgeting, prepare a product cost statement showing the variances for the quarter ended 31 March, 2019. **(10 Marks)**
- (b) Explain the difference between zero-based budgeting and incremental budgeting. **(4 Marks)**
- (c) Explain any **three** limitations of budgeting. **(6 Marks)**
- (Total 20 Marks)**

**QUESTION THREE**

- (a) Olive Industries Limited (OIL) has just commenced business in Kigali majoring in the manufacture of radios and television sets. OIL received an order for production of 1,000 television sets of 32 inch type. OIL uses batch costing and has coded this order as B2019. OIL uses two departments A and B to manufacture television sets.

The budgeted costs for B2019 are set out below:

Details	Department A	Department B
Direct material cost (Frw '000')	99,500	
Direct labour (hours)	8,000	12,000
Direct expenses (Frw '000')	19,500	10,200

Factory overheads are absorbed on the labour hour basis. The overhead absorption rate is Frw 500. Each labour hour costs Frw 1,200 and Frw 1,400 for departments A and B respectively and OIL uses a cost plus markup of 25% in setting prices

**REQUIRED:**

Determine the selling price of a television set.

**(6 Marks)**

- (b) Nvuye Distillers Limited (NDL) makes wine which goes through a single process. Materials are always added at the start of the process. At the beginning of May 2019, NDL had opening work in progress of 8,000 litres of wine which were 40% complete with the following costs except materials that had been fully utilised.

	Frw '000'
Materials	30,000
Conversion	12,000
Production overheads	4,200

During the month, NDL introduced additional 44,000 litres of material valued at Frw 123,200,000 to the process. NDL incurred conversion costs and production overheads amounting to Frw 54,488,000 and Frw 22,480,000 respectively during the process. At the end of the month, NDL had closing work in progress amounting to 6,400 litres which were 60% and 40% complete with respect to conversion and production overheads respectively.

**REQUIRED:**

Using the first in first out (FIFO) method, prepare for NDL for the month of May 2019: a

- (i) Statement of equivalent production. **(3 Marks)**
- (ii) Statement of cost per litre. **(2 Marks)**
- (iii) Statement of closing stock. **(2 Marks)**
- (iv) Process account. **(3 Marks)**
- (c) Explain any **four** advantages of job costing to an organisation **(4 Marks)**  
**(Total 20 Marks)**

**QUESTION FOUR**

- (a) Sibomana is a commercial farmer in Gakenke dealing in fruit growing on a large scale. Sibomana grows oranges, passion fruits and apples which are sold in kilograms. He applies fertilizers for the fruits to grow well. Sibomana has estimated that the budgeted quantity of fertilizers available for the period ending 31 July 2019 is 7,000 litres.

The following information is also available for the three types of fruits.

Details	Oranges	Passion fruits	Apples
Total sales revenue (Frw '000')	3,750	4,500	5,400
Total variable cost (Frw '000')	2,400	3,600	3,840
Fertilizers required per kg produced (litres)	0.25	0.5	2
Estimated sales demand (kg)	2,000	4,000	2,400

**REQUIRED:**

- (i) Calculate the shortfall in fertilizer requirements. **(2 Marks)**
- (ii) Determine the production mix that will maximise contribution. **(6 Marks)**
- (iii) Determine the contribution lost as a result of the production mix in (i) above. **(2 Marks)**
- (iv) State any **four** features of relevant costs. **(4 Marks)**

- (b) Iradukunda Junior School (IJS) is in its second year of operation with both pre-primary and primary levels. IJS made losses in the previous academic year though management believes that these losses will be for a short while. Management has just laid the strategies on how to attract more pupils. The management accountant was tasked to find the number of pupils each level will need to breakeven as this will be the initial target for the marketing team.

The following information relates to the year that ended 31 December 2018.

	Pre-Primary	Primary
Number of Pupils	100	120
	Frw '000'	Frw '000'
Revenue (school fees collections)	15,000	12,000
Variable cost	9,000	8,400
Fixed cost	12,000	9,000

### REQUIRED:

- (i) Determine the number of pupils required for each level to breakeven. **(3 Marks)**
- (ii) Determine the total revenue if the school targets a profit of Frw 1,000,000 and Frw 900,000 in Pre-primary and Primary levels respectively. **(3 Marks)**

**(Total 20 Marks)**

### QUESTION FIVE

Burera Paints Limited (BPL) specialises in the production of wall paint that it packs in 4 litre tins. The paint is mainly sold to customers in Northern Province although BPL plans to expand to the Southern Province.

BPL's projected production/ sales output for the month of April 2019 was 10,000 tins and the relevant budgeted costs for each tin produced was as follows.

Material requirements:

	kg	Price per kg (Frw)
Titanium dioxide	2	1,000
Solvents	1.5	1,500
Resin	0.5	2,000

Producing a litre of paint requires 0.5 labour hours at Frw 2,000 per labour hour but 10% of labour hours are anticipated to be idle. Variable production overheads are absorbed at 60% of labour cost.

BPL budgeted to operate at full capacity in April 2019 and the budgeted selling price per tin was Frw 15,000.

The actual performance results for the month were as follows:

Production (tins)	11,000
Sales (tins)	9,800
Selling price per tin (Frw)	14,800

BPL used 0.75 labour hours at Frw 1,800 per labour hour to produce a litre of paint during the month but 8% of the labour hours were idle.

Material usage and applicable costs:

	kg	Price per kg (Frw)
Titanium dioxide	18,000	1,200
Solvents	17,000	1,450
Resin	6,000	1,800

The actual variable production overheads were Frw 36 million.

**REQUIRED:**

- (a) Calculate the following variances for the month of April 2019.
- (i) Material price and Material usage. **(4 Marks)**
  - (ii) Labour rate, Labour efficiency and Labour idle time. **(5 Marks)**
  - (iii) Sales price and Sales volume. **(4 Marks)**
  - (iv) Variable overheads expenditure and Variable overheads efficiency. **(2 Marks)**
- (b) Explain any **five** factors that BPL should consider before investigating variances. **(5 Marks)**  
**(Total 20 Marks)**

**QUESTION SIX**

Kabera Manufacturers Limited (KML) makes three products, Gumboots, African sandals and Canvas. A traditional product costing system is being used at present, but the company is considering immediate adoption of activity-based costing (ABC) system.

Details of the three products per pair for the last quarter are as follows:

	Gumboots	African sandals	Canvas
Labour hours	3	2	5
Direct material (Frw)	3,000	1,000	1,000
Selling price (Frw)	7,100	4,000	9,750

KML's budgeted production for June 2019 was 650, 1,000 and 210 pairs of Gumboots, African sandals and Canvas respectively.

The estimated direct labour cost per hour is Frw 500 while production overheads are estimated at Frw 4 million. They are absorbed on the basis of labour hours. In addition, they are analysed as follows:

Set up costs	10%
Material handling costs	18%
Machining costs	60%
Inspection costs	12%

The following total activity volumes are associated with each product line for the quarter

	Gumboots	African Sandals	Canvas
No. of set ups	16	18	6
No. of movement of materials	37	7	56
No. of inspections	6	56	3
Machine hours	4	5.3	10

**REQUIRED:**

- (a) Determine each product's profit per carton using:
- (i) Absorption costing technique. **(5 Marks)**
  - (ii) Activity based costing system. **(12 Marks)**
- (b) Explain any **three** advantages of using Just in time (JIT) system. **(3 Marks)**
- (Total 20 Marks)**

**QUESTION SEVEN**

Kirezi Beauty Cosmetics (KBC) imports and supplies body perfumes to residents in Gisagara province. These perfumes are sold in standard size of 300 ml per bottle. KBC sells each body perfume at Frw 12,500 after incorporating a markup of 20%.

The weekly sales demand and relevant costs for the month of May 2019 are provided as below:

Week	Sales (bottles)	Total cost (Frw '000')
1	120	1,390
2	200	2,150
3	140	1,580
4	<u>240</u>	<u>2,530</u>
	<u>700</u>	<u>7,650</u>

KBC has resolved to increase its selling price per bottle of the body perfume by 4% in June 2019 owing to the ever increasing demand for its perfumes. The expected sales for June 2019 were projected at 840 bottles.

**REQUIRED:**

- (a) (i) Using regression analysis, determine KBC's profit in the month of June 2019. **(8 Marks)**
- (ii) Using computations, show the effect on KBC's profit if selling price and variable cost per unit reduced by 4% and 5% respectively? **(3 Marks)**
- (b) Rubavu Millers Limited (RML) specialises in production and supply of wheat flour in the Western Province. RML has experienced a lot of staff exists since its incorporation in 2017. The human resource records for RMLs for year 2018 revealed that the company had 200 employees at the start of the year and 310 employees at 31 December, 2018.

During the year 2018, the number of employees who resigned from the company were 40 and management decided to recruit 150 employees in the same period of which 40 employees were specifically recruited as replacements for those who departed the company.

RML dismissed 60 employees in 2018 on account of staff ethical issues as they were found guilty of misappropriation of funds worth Frw 13,750,000 collected from sale of wheat flour.

**REQUIRED:**

- (i) Using flux method, determine the labour turnover rate for RML for year 2018. **(2 Marks)**
- (ii) Explain any **three** problems associated with high labour turnover to organisations like RML. **(3 Marks)**
- (iii) Discuss any **four** ethical responsibilities of management accountants. **(4 Marks)**
- (Total: 20 Marks)**