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**CERTIFIED PUBLIC ACCOUNTANT(CPA)**  
**FOUNDATION LEVEL 2 EXAMINATIONS**  
**F2.1: MANAGEMENT ACCOUNTING**

**FRIDAY: 8 JUNE 2018**

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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.

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## QUESTION ONE

- (a) With help of graphical illustrations, distinguish between the Accountants' model and the Economists' model of cost-volume-profit analysis.

**(6 Marks)**

- (b) Safe Way Transporters Limited (SWTL) operates a fleet of buses along the Gisagara -Kamonyi route. The company charges Frw 6,000 per passenger per trip and each bus trip averages to 65 passengers. SWTL incurs a variable cost of Frw 3,200 per passenger per trip and its annual fixed costs are estimated at Frw 146,000,000. Since its incorporation, SWTL has been loss making but recently it hired new station managers who are expected to turnaround this performance.

Budget estimates for the next accounting period indicate that SWTL is targeting a net profit after tax of Frw 24,000,000 and intends to make a total of 1,100 trips. SWTL pays corporation tax at 30% per annum.

### REQUIRED:

Determine the:

- (i) number of trips that SWTL should make in order to break even with the above target profit. **(2 Marks)**
- (ii) breakeven revenue assuming no target profit. **(2 Marks)**
- (iii) margin of safety in revenue at the budgeted activity level. **(2 Marks)**
- (c) Premium Suppliers Limited (PSL) is a small business unit in Kigali that operates both a butcher and a dairy supply business selling meat and milk to local customers in Kigali. PSL sells each kilogram of meat at Frw 2,250 and each litre of milk at Frw 650.

The Management Accountant at PSL has, however, advised that the firm would make more revenue if it starts further processing its products. It has been established that if further processed, a kilogram of meat can be sold at Frw 2,950 while a litre of milk can fetch Frw 950.

PSL will however incur Frw 275 and Frw 70 to further process each kilogram of meat and each litre of milk respectively. It is also estimated that the firm will need to hire 2 modern refrigerators at Frw 220,000 and Frw 180,500 for preserving meat and milk respectively, and would incur packaging expenses of Frw 130 for each kilogram of meat and litre of milk further processed.

The cost data for PSL indicates that the firm's daily average sales amount to 1,200 kilograms and 1,500 litres of meat and milk respectively.

### REQUIRED:

With relevant calculations, advise Premium Suppliers Limited on which product(s) to further process.

**(8 Marks)**

**(Total 20 marks)**

## QUESTION TWO

- (a) Explain the accounting treatment for the following under process costing:

- (i) Normal loss **(1 Mark)**
- (ii) Abnormal loss **(1 Mark)**
- (iii) Abnormal gain **(1 Mark)**

- (b) Huye Limited produces a single product, 'Premium Wine' and operates a process costing system to track costs throughout the production process. The company has provided the following information in respect to process 2 for the month of May, 2018.

Opening work in progress 20,000 litres with the following values and degrees of completion.

Cost element	Frw '000'	Degree of completion
Input material	38,500	100%
Additional material	11,000	60%
Direct Labour	9,000	40%
Production overheads	4,200	20%

Units transferred from process 1 were 135,000 litres valued at Frw 540,000,000 and output transferred to process 3 was 121,500 litres. Huye Limited incurred the following process costs during the month.

Cost element	Frw
Direct material	67,567,500
Direct labour	54,500,000
Production overheads	42,617,000

Units scrapped were 5,000 litres with the following degrees of completion.

Direct material	100%
Direct labour	40%
Production overheads	50%

Huye Limited normally provides for normal wastage at 2% of production and scrapped units are realised at Frw 6,000 per litre. Closing stock during the period amounted to 30,000 litres with the following levels of completion.

Direct material	60%
Direct labour	40%
Production overheads	15%

### REQUIRED:

Using average cost method, prepare a statement of:

- (i) equivalent production. **(4 Marks)**
- (ii) cost per unit. **(2 Marks)**
- (iii) closing stock. **(2 Marks)**
- (iv) abnormal profit/ loss. **(2 Marks)**
- (v) finished goods. **(1 Mark)**

(Note: Round off to 2 decimal places)

- (c) Huye Limited operates a uniform employee remuneration structure for all its employees under which it pays a bonus rate of 10% of the basic salary to each employee if the company exceeds its monthly performance targets. The Chief Finance Officer has however advised that the company needs to adopt either the Rowan or Halsey schemes of bonus payments in order to minimise operational costs.

The following details relate to three employees Kamanzi, Twinemanzi and Rusiira for the month of May, 2018 (when the company did exceed target performance).

	Kamanzi	Twinemanzi	Rusiira
Standard production time (hours)	300	300	300
Time taken to complete production (hours)	280	292	274
Wage rate per hour (Frw)	5,000	4,800	5,200

**REQUIRED:**

Advise management on the best bonus payment scheme to adopt.

**(6 Marks)**  
**(Total 20 Marks)**

**QUESTION THREE**

- (a) Rwagasana Beauty Products Limited (RBPL) manufactures a range of products including lotions, jelly and perfumes which are packed in tins of 500 grams each. Over the years, the company has been applying full costing absorbing production overheads on the basis of direct labour hours. The company now wishes to adopt activity-based costing (ABC) as management is convinced that the new system will give appropriate cost values that will help in proper product pricing.

The following per unit cost information has been obtained from the cost accounts of RBPL for the month of May, 2018.

	Super Jelly	Premium Cream	Herbal Jelly
Direct material (Frw)	1,200	1,450	850
Direct labour (Frw 250 per hour)	600	650	450

Production for the month was 8,000 tins, 10,000 tins and 6,000 tins for Super Jelly, Premium Cream and Herbal Jelly respectively. RBPL incurred production over heads amounting to Frw 14,480,000 which are analysed as follows:

	Frw
Machine running costs	4,400,000
Machine set up costs	4,240,000
Ordering costs	3,600,000
Material handling costs	<u>2,240,000</u>
	<u>14,480,000</u>

RBPL has also provided the following additional information in respect to cost drivers:

	Super Jelly	Premium Cream	Herbal Jelly
Total material movements	10	15	5
Order size (tins)	500	1,000	600
Per unit production runs	2	2	1
Number of set ups per unit	3	5	2

**REQUIRED:**

Using the ABC technique; determine the unit selling price of each product assuming RBPL targets a profit of 20% on cost.

**(16 Marks)**

- (b) (i) Explain any **two** causes of over and under absorption of overheads.  
(ii) Describe the accounting treatment of over and under absorbed overheads.

**(2 Marks)**

**(2 Marks)**

**(Total 20 Marks)**

**QUESTION FOUR**

- (a) (i) Explain any **two** features of relevant costs for decision making.  
(ii) Virunga Designers produces men's suits for all age groups and has provided the following cost and production data for the month of May, 2018.

**(2 Marks)**

Number of suits	Total cost (Frw'000')
250	21,420
270	22,930
310	25,951
340	28,217
350	28,972
420	34,258
<u>1,940</u>	<u>161,749</u>

Due to the increased demand for Virunga Designers' suits, management intends to increase its production from 1,940 suits in May to 2,400 suits in June, 2018.

**REQUIRED:**

Using regression analysis, forecast the total cost for the month of June, 2018.

**(8 Marks)**

- (b) Gusiira Furniture Works (GFW) specialises in production of high quality furniture for both export and the domestic market. Among its products are office chairs which are sold at Frw 6,500 per chair. The company currently operates at 80% capacity producing 20,000 chairs per year and incurs the following costs per chair.

Cost element	Frw '000'
Direct material	2,600
Direct labour	1,100
Variable production overheads	900

Additionally, GFW incurs fixed costs of Frw 16,700,000 per annum regardless of the level of output.

GFW has received an order from an investor in Burundi for the supply of 4,900 chairs at Frw 6,000 per chair. Kamanzi, a management accountant at GFW has advised that this order will increase variable cost by 20% and would require hiring extra work force at Frw 1,200,000.

**REQUIRED:**

- (c) With relevant computations, advise GFW on whether to accept the offer.  
Explain any **four** factors a firm needs to consider in a divestment decision.

**(6 Marks)**

**(4 Marks)**

**(Total 20 Marks)**

**QUESTION FIVE**

Umutetsi Ltd (UL) is a manufacturer of strong car tents which are sold at Frw 150,000 per tent. UL is in the process of preparing its budgets for the third quarter of the financial year 2018 and has provided the following cost data for the month of May, 2018.

Cost per tent	Frw
Direct materials (6 metres at Frw 12,500 per meter)	75,000
Direct labour (5 hours at Frw 2,000 per hour)	10,000
Variable overhead 50% of direct labour	

Additional information:

- (i) Opening inventory is estimated to be 200 tents valued at Frw 150000 per tent.  
(ii) Closing inventory of raw material and finished goods for each month is 10% and 20% of production and sales demand for the following month respectively.

- (iii) The marketing manager has estimated that during the third quarter of 2018, demand in July will be 500 tents which will grow at a rate of 20% per month but expected sales demand for the month of October will be 860 tents.

**REQUIRED:**

Prepare the following functional budgets for the third quarter:

- |       |  |                         |
|-------|--|-------------------------|
| (i)   | Sales revenue  | <b>(3 Marks)</b>        |
| (ii)  | Production (units).  | <b>(6 Marks)</b>        |
| (iii) | Production cost.   | <b>(3 Marks)</b>        |
| (iv)  | Raw material utilization.                                    | <b>(3 Marks)</b>        |
| (b)   | Explain any five objectives of budgeting in an organization. | <b>(5 Marks)</b>        |
|       |  | <b>(Total 20 Marks)</b> |

**QUESTION SIX**

- (a) Explain the meaning of the following types of standards:

- |       |         |                 |
|-------|---------|-----------------|
| (i)   | Basic.  | <b>(1 Mark)</b> |
| (ii)  | Current | <b>(1 Mark)</b> |
| (iii) | Ideal.  | <b>(1 Mark)</b> |

- (b) Premium Cakes Limited (PCL) is a reputable company that specialises in baking cakes of a standard size. The company's customer base comprises of the middle and low income earners. Their standard cost card for each cake comprises of the following:

Cost element	Frw
Direct materials:	
Yeast (5 kg each Frw 1,500)	6,000
Sugar (0.5 kg each Frw 1,200)	600
Margarine (1 kg each Frw 1,200)	1,200
Direct labour 5 hours each Frw 1,000 per hour	5,000

The actual production and cost data for the month of April, 2018 was as follows:

Production	1,000 cakes
Material cost and utilisation:	
Yeast	5,250 kg at Frw 7,612,500
Sugar	490 kg at Frw 1,250 per kg
Blue band	1,150 kg at Frw 1,050 per kg

PCL incurred Frw 5,240,000 for 4,800 direct labour hours. Total overheads incurred were Frw 2,000,000 but PCL had budgeted to incur overheads of Frw 2,600,000 out of which 40% was variable. All overheads are absorbed based on direct labour hours.

**REQUIRED:**

Compute the following variances:

- |       |                                |                  |
|-------|--------------------------------|------------------|
| (i)   | Material usage.                | <b>(2 Marks)</b> |
| (ii)  | Labour rate.                   | <b>(2 Marks)</b> |
| (iii) | Labour efficiency.             | <b>(2 Marks)</b> |
| (iv)  | Variable overhead expenditure. | <b>(2 Marks)</b> |
| (v)   | Variable overhead efficiency.  | <b>(2 Marks)</b> |
| (vi)  | Fixed overhead expenditure.    | <b>(2 Marks)</b> |

- (c) Explain the any five factors an organization needs to consider before investigating variances. **(5 Marks)**  
**(Total 20 marks)**

## QUESTION SEVEN

- (a) (i) Distinguish between marginal and absorption costing techniques. **(2 Marks)**  
 (ii) Explain any **four** arguments in favour of the marginal costing technique. **(4 Marks)**
- (b) Gametex Limited manufactures three types of chess buttons, i.e. Rooks, Kings and Pawns which are produced through a joint process. In May, 2018 the company incurred total joint process costs of Frw 11,200,000 to produce the buttons. The normal wastage during the production process was 10% and the following information relates to each type of buttons.

Buttons	Units produced	Unit selling price (Frw)
Rooks	111,200	47
Kings	37,500	55
Pawns	112,000	45

### REQUIRED:

Prepare for Gametex Limited's profit statements clearly showing profit from each type of buttons using:

- (i) Physical units method. **(3 Marks)**  
 (ii) Sales value method. **(3 Marks)**
- (c) Rwizi Construction Company Limited (RCCL) entered into an agreement with Ngoma District Local Government to construct a building to serve as district headquarters. Construction work commenced on 1 January, 2018 and was estimated to take 12 months to get completed. The following data relating to the construction work was extracted from the books of RCCL for the month of April, 2018.

Particulars	Frw'000'
Agreed contract sum	2,500,000
Direct wages paid	200,000
Materials issued 1 January, 2018	475,000
Accrued direct wages	10% of direct wages paid
Materials returned to stores	15,000
Plant & equipment at cost 1 January, 2018	120,000
Direct expenses paid	14,750
Accrued direct expenses	1,400
Installation cost for plant & equipment	2,500
Value of plant & equipment t 30 April, 2018	112,000
Materials on site t 30 April, 2018	45,400
Value of work certified 30 April, 2018	725,500
Value of completed work pending certification	42,500
Cash received from Ngoma District Local Government	574,600

**REQUIRED:**

- (i) Prepare for RCCL the contract account for the construction works for the four months period ending 30 April, 2018.  
**(5 Marks)**
- (ii) Prepare an extract of the statement of financial position for RCCL as at 30 April, 2018.  
**(3 Marks)**

**(Total 20 marks)**

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**END OF QUESTION PAPER**