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**CERTIFIED ACCOUNTING TECHNICIAN**

**STAGE 3 EXAMINATIONS**

**S3.2: MANAGEMENT ACCOUNTING**

**DATE: 01 DECEMBER 2022**

**MARKING GUIDE AND MODEL ANSWER**

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**SECTION A:**

QN	Answer	Marks	QN	Answer	Marks
1	D	2	6	D	2
2	B	2	7	D	2
3	D	2	8	B	2
4	C	2	9	A	2
5	B	2	10	B	2

**(Total: 20 Marks)**

**QUESTION ONE**

**Correct Answer: D**

The manager of a profit centre usually has control over how revenue is raised, ie selling prices (item (i)) and over the controllable costs incurred in the centre (item (ii)).

Apportioned head office costs (item (iii)) are uncontrollable from the point of view of the profit centre manager. A responsibility centre manager does not have control over the capital investment in the centre (item (iv)) unless the centre is designated an investment centre.

**QUESTION TWO**

**Correct Answer: B** using High lower method

$$\text{Variable cost} = \frac{FRW 97,850 - FRW 84,865}{15,950 - 13,500} = 5.3 \text{ Per square metre}$$

$$\begin{aligned} \text{Fixed overhead} &= FRW 84, 865 - (FRW5.30 \times 13,500) \\ &= FRW 84,865 - FRW 71,550 = FRW 13,315 \end{aligned}$$

$$\begin{aligned} \text{Overheads on 18,300 square metres} &= FRW 13,315 + (FRW 5.30 \times 18,300) \\ &= FRW 13,315 + FRW 96,990 \\ &= FRW 110, 305 \end{aligned}$$

Other options are wrong like:

A. has only considered that cost at level of activity of 18,300 square metre equals to the costs incurred at level of activity of 15,950 square metre

C. isn't correct as the overheads at 18,300 was computed wrongly as shown below

Total square metre	29,450
Total overheads	182,715

Apportionment rate	6.204244
Total overheads at 18,300 sq	$182,715 \times 6.2042 = 113,538$

### QUESTION THREE

**Correct Answer: D**

The salary is part fixed (FRW 650,000 per month) and part variable (FRW 5,000 per unit).

Therefore, it is a

semi-variable cost and answer D is correct.

Other Options are incorrect

A, B, C does not consider extra payment

### QUESTION FOUR

**Correct Answer: C**

Reorder level = maximum usage\*maximum lead time:  $520 \times 15 = 7,800$  units

Other options are incorrect

B used average daily usage in computation of reorder level

A It is average daily usage multiplied with minimum lead time

C D is the product of average daily usage times average lead time:  $400 \times (15+10)/2 = 5,000$

### QUESTION FIVE

**Correct Answer: B**

Standard time for 180 units*4 minutes	<b>720 equals to 12 hours i.e 720/60</b>
<b>Actual time taken</b>	<b>7</b>
<b>Time saved in hours</b>	<b>5</b>
Basic pay FRW 7hrs*FRW 5,000 per hr	FRW 35,000
Bonus 60%*5 hrs*FRW 5,000	FRW 15,000
Total pay	FRW 50,000

Other Options are wrong like A, C and D

A has only considered basic pay of FRW 35,000 as gross pay, C has only considered Bonus payment.

**QUESTION SIX****Correct Answer: D**

	Production departments		Service centres	
	Mixing	Stirring	Stores	Canteen
	FRW	FRW	FRW	FRW
Allocated and apportioned overheads	216,000	78,800	181,600	47,200
Re-apportioned expense of stores over mixing, stirring and canteen: Ratio: 5:3:2	90,800	54,480	(181,600)	36,320
	<b>306,800</b>	<b>133,280</b>	<b>-</b>	<b>83,520</b>
Re-apportioned expense of canteen over mixing, stirring. Ratio: 6:4	50,112	33,408		(83,520)
<b>Total</b>	<b>356,912</b>	<b>166,688</b>	<b>-</b>	<b>-</b>

Other Options are incorrect like **A** has considered that Mixing overheads as the total overheads for both mixing and stirring

And Option **B** has taken into consideration overheads before re-allocation of service departments to production departments.

Option **C** has taken into consideration overheads after re-allocation of store overheads but before re-allocation of canteen overheads to production department.

**QUESTION SEVEN****Correct Answer: D**

Under absorption costing all associated costs are included in the total cost of a product.

Other options are wrong like **A, B, C** they ignore the share of fixed cost and indirect cost

**QUESTION EIGHT****Correct Answer: B**

	<b>FRW</b>
Selling price of job	1,690,000
Less profit margin (30/130)	390,000
Total cost of job	1,300,000
Less overhead	694,000
Prime cost	606,000

Other Options are wrong like **D** has only deducted margin

And Option A has considered that selling price equals to prime costs

Option C has considered that prime cost equals to the margin

### QUESTION NINE

**Correct Answer: A**

Good production = input – normal loss – abnormal loss

$$= (2,500 - (2,500 \times 10\%) - 75) \text{ kg}$$

$$= 2,500 - 250 - 75$$

$$= 2,175 \text{ kg}$$

Other options are wrong like:

D has only considered the abnormal loss incurred

B has only considered normal loss incurred

C has assumed that no loss incurred during processing

### QUESTION 10

**Correct Answer: B**

The total direct materials variance can be found by comparing the flexed budget figures with the

Actual figures. FRW

Total materials cost should have been 150,000

But was 140,000

Variance 10,000 (F)

Option A is wrong as it has stated that it is adverse yet actual cost is less than flexed budget

Option C is not correct as it does not specify whether it is adverse or favorable

**SECTION B**

**QUESTION 11**

**Marking guide**

**Marks**

- Award 0.5 mark each for calculation of overhead absorption rate, max 2 Marks **2**
  - Award 2 marks for well computed total cost under Direct labor hours method **2**
  - Award 2 marks for well computed total cost under Direct machine hours method **2**
  - Award 2 marks for well computed total cost under materials percentage method **2**
  - Award 2 mark for well computed total cost under direct wages percentage method **2**
- (Total: 10 Marks)**

**Model Answer**

Overhead absorption rates:

1. Direct labor hours:  $\text{FRW } 150,000,000 / 20,000 = \text{FRW } 7,500$  per labor hour
2. Direct machine hour:  $\text{FRW } 150,000,000 / 5,000 = \text{FRW } 30,000$  per machine hour
3. Direct material %:  $(\text{FRW } 150,000,000 / 200,000,000) * 100 = 75\%$  of material cost
4. Direct wages %:  $(\text{FRW } 150,000,000 / 100,000,000) * 100 = 150\%$  of direct wages

**TOTAL COST OF JOB No 1234**

1. Direct labor hours method

		<b>FRW "000"</b>
Direct materials		12,000
Direct wages		5,000
<b>Prime costs</b>		<b>17,000</b>
Overheads	900*7,500	6,750
<b>Total cost</b>		<b>23,750</b>

2. Direct machine hours method

		<b>FRW "000"</b>
Direct materials		12,000
Direct wages		5,000
<b>Prime costs</b>		<b>17,000</b>
Overheads	250*30,000	7,500
<b>Total cost</b>		<b>24,500</b>

	FRW "000"
Direct materials	12,000
Direct wages	5,000
<b>Prime costs</b>	<b>17,000</b>
Overheads	12,000*75% 9,000
<b>Total cost</b>	<b>26,000</b>

	FRW "000"
Direct materials	12,000
Direct wages	5,000
<b>Prime costs</b>	<b>17,000</b>
Overheads	150,000*5,000/100,000 7,500
<b>Total cost</b>	<b>24,500</b>

### QUESTION 12

	Marks
Award 1 mark for the calculation of contribution of each product	3
Award 1 for each correct figure shown in the analysis made on whether to drop SHIRT Product or not	4
Award 3 marks for decision made showing that SHIRT should not be stopped as it could result into reducing overall profit by 50%	3
<b>Total</b>	<b>10</b>

### Model Answer

DESCRIPTION	PRODUCTS			TOTAL (FRW'000)
	VIP SUITS (FRW'000)	SHIRTS (FRW'000)	ROBES (FRW'000)	
Variable costs @75%	150,000	150,000	90,000	390,000
Fixed costs @25%	50,000	50,000	30,000	130,000
<b>Total costs</b>	<b>200,000</b>	<b>200,000</b>	<b>120,000</b>	<b>520,000</b>

**Marginal cost statement**

DESCRIPTION	PRODUCTS			
	VIP SUITS (FRW'000)	SHIRTS (FRW'000)	ROBES (FRW'000)	TOTAL (FRW'000)
Sales	250,000	180,000	150,000	580,000
Less variable costs	150,000	150,000	90,000	(390,000)
Contribution	100,000	30,000	60,000	190,000
Less fixed costs				(130,000)
Net profit				60,000

**If SHIRT product line is dropped, then the position would be as under:**

Contribution VIP SUITS product	FRW 100,000
Contribution ROBES product line	60,000
Less fixed cost	130,000
<b>Net profit</b>	<b>30,000</b>

By dropping the SHIRTS product line, the profit drops by 50% since its contribution of FRW 30,000 goes away while its fixed costs remain the same. Therefore, the SHIRT product should not be stopped. KKG should maintain the production of SHIRT Product



## SECTION C

### QUESTION 13

#### Marking guide

	Marks
Award 0.5 mark for each sales quantity and value shown on sales budget excluding totals	4
Award 0.5 mark for each collect figure shown in the production budget excluding totals	5
Award 0.5 mark for correct quantities shown on M1, M2, M3 for each product A, B, C in material budget usage Award 1 mark for well shown product A, B, C in material budget usage	6
Award 0.5 mark for each correct figure in material purchase budget	5
<b>Total</b>	<b>20</b>

#### Model Answer

##### i. Sales budget

Product	Quantity	Price	Value
A	1,000	100	100,000
B	2,000	120	240,000
C	1,500	140	210,000
<b>TOTAL</b>	<b>4,500</b>	-	<b>550,000</b>

##### ii. Budget of production quantities

Description	Products			TOTAL
	A	B	C	
Monthly sales	1,000	2,000	1,500	4,500
Closing stock required at the month end	1,100	1,650	550	3,300
<b>Total quantities required</b>	<b>2,100</b>	<b>3,650</b>	<b>2,050</b>	<b>7,800</b>
Less stock available at month start	(1,000)	(1500)	(500)	(3000)
<b>Production quantities required</b>	<b><u>1,100</u></b>	<b><u>2,150</u></b>	<b><u>1,550</u></b>	<b><u>4,800</u></b>

### iii. Budget of material usage in quantities

Production quantities required	Products	Material M1		Material M2		Material M3		Total quantities
		Units per product	Quantity	Units per product	Quantity	Units per product	Quantity	
1,100	A	4	4,400	2	2,200	-	-	6,600
2,150	B	3	6,450	3	6,450	2	4,300	17,200
<u>1,550</u>	C	2	<u>3,100</u>	1	<u>1,550</u>	1	<u>1,550</u>	<u>6,200</u>
<u>4,800</u>			<u>13,950</u>		<u>10,200</u>		<u>5,850</u>	<u>30,000</u>

### iv. Budget of material purchased

Description	Material M1	Material M2	Material M3	Total
Budget of material usage	13,950	10,200	5,850	30,000
Closing stock required	<u>31,200</u>	<u>24,000</u>	<u>14,400</u>	<u>59,600</u>
	<b>45,150</b>	<b>34,200</b>	<b>20,250</b>	<b>89,600</b>
Less stock available at month start	(26,000)	(20,000)	(12,000)	(58,000)
<b>Materials to be purchased</b>	<b>19,150</b>	<b>14,200</b>	<b>8,250</b>	<b>31,600</b>
Unit price	4	6	9	
<b>Value of materials to be purchased</b>	<b>76,600</b>	<b>85,200</b>	<b>74,250</b>	<b>236,050</b>

## QUESTION 14

### Model answer

	Marks
Award 0.5 for each correct figure shown in the cash budget excluding subtotals and totals	18
Award two marks for working on debtor's collection	2
<b>Total</b>	<b>20</b>

### Tourism Ltd's cash budget for seven months ending 31 December 2021

	June	July	August	September	October	November	December
	FRW	FRW	FRW	FRW	FRW	FRW	FRW
Bal b/d	180,000	153,000	203,000	274,000	345,000	437,000	440,000
Cash sales	96,000	102,000	120,000	120,000	108,000	108,000	120,000

	June	July	August	September	October	November	December
	FRW	FRW	FRW	FRW	FRW	FRW	FRW
Debtors' payment	63,000	64,000	67,000	77,000	80,000	74,000	72,000
Shares issued					40,000		
Compensation					20,000		
<b>Total cash available</b>	<b>339,000</b>	<b>319,000</b>	<b>390,000</b>	<b>471,000</b>	<b>593,000</b>	<b>619,000</b>	<b>632,000</b>
Payment							
Suppliers's payment	(110,000)	(90,000)	(90,000)	(80,000)	(130,000)	(140,000)	(60,000)
Income tax				(20,000)			
Administrative cost	(26,000)	(26,000)	(26,000)	(26,000)	(26,000)	(26,000)	(26,000)
Office equipment						(13,000)	
Retained money	(50,000)						
<b>Total payment</b>	<b>(186,000)</b>	<b>(116,000)</b>	<b>(116,000)</b>	<b>(126,000)</b>	<b>(156,000)</b>	<b>(179,000)</b>	<b>(86,000)</b>
<b>Cash balance</b>	<b>153,000</b>	<b>203,000</b>	<b>274,000</b>	<b>345,000</b>	<b>437,000</b>	<b>440,000</b>	<b>546,000</b>

### Working

#### Debtors' payment computation

	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
	FRW	FRW	FRW	FRW	FRW	FRW	FRW	FRW	FRW
Sales	150,000	160,000	160,000	170,000	200,000	200,000	180,000	180,000	200,000
Debtors of 30% of previous sales			48,000	48,000	51,000	60,000	60,000	54,000	54,000
Debtors of 10% of sales for the last two months			15,000	16,000	16,000	17,000	20,000	20,000	18,000
<b>Total cash from customers</b>			<b>63,000</b>	<b>64,000</b>	<b>67,000</b>	<b>77,000</b>	<b>80,000</b>	<b>74,000</b>	<b>72,000</b>

**QUESTION 15****Marking guide**

		<b>Marks</b>
Q15(a) (i)	Award 0.5 mark for each figure of joint cost apportioned using sales value to A, B, C products	1.5
	Award 0.5 for each selling cost shown	1.5
Q15 (a) (ii)	Award 0.5 mark for each figure of joint cost apportioned using physical unit to A, B, C products	1.5
	Award 0.5 for each selling cost shown	1.5
<b>Sub total</b>		<b>6</b>
<b>Q15 (b) (i), Award marks on FIFO method valuation as below</b>		
01-Oct-20	Opening stock	0.5
05-Oct-20	Purchase of eggs	0.5
08-Oct-20	Sales of 300 eggs	0.5
10-Oct-20	Purchase of eggs	1
12-Oct-20	Purchase of eggs	1
15-Oct-20	Sales of 500 bags of eggs	1
19-Oct-20	Purchase of eggs	1
26-Oct-20	Sales of 500 bags of eggs	1
30-Oct-20	Sales of 500 bags of eggs	1
30-Oct-20	Closing stock	0.5
<b>Subtotal</b>		<b>8</b>
<b>Q15) B) ii) gross profit determination</b>		
	Award 1.5 marks for sales (either in working or posted straight forward in PL	1.5
	Award 1.5 marks for purchase (either in working or posted straight forward in PL	1.5
	Award 1 mark for opening stock shown in P/L	1
	Award 1 mark for closing stock shown in P/L	1
	Award 1-mark gross profit shown	1
<b>Subtotal</b>		<b>6</b>
<b>Grand total</b>		<b>20</b>

**Model answers****Q15, a) i)****Apportionment on sales value**

Product	Sales value	Apportionment	Joint costs apportioned
	<b>FRW</b>		<b>(FRW)</b>
<b>A</b>	24,000,000	$(24,000,000/57,000,000) * 35,000,000$	14,737,000
<b>B</b>	18,000,000	$(18,000,000/57,000,000) * 35,000,000$	11,053,000
<b>C</b>	15,000,000	$(15,000,000/57,000,000) * 35,000,000$	9,210,000
<b>TOTAL</b>	<b>57,000,000</b>		<b>35,000,000</b>

**Profit statement**

Description	A	B	C	TOTAL
	<b>FRW</b>	<b>FRW</b>	<b>FRW</b>	<b>FRW</b>
<b>Sales value</b>	24,000,000	18,000,000	15,000,000	57,000,000
<b>Less appportioned costs</b>	14,737,000	11,053,000	9,210,000	35,000,000
<b>Selling costs</b>	4,800,000	3,600,000	3,000,000	11,400,000
<b>Profit</b>	<b>4,463,000</b>	<b>3,347,000</b>	<b>2,790,000</b>	<b>10,600,000</b>

**Q15, a) ii)****Apportionment by physical units**

Product	Weight	Apportionment	Joint cost apportioned
			<b>FRW</b>
<b>A</b>	180	$180/570 * 35,000,000$	11,052,632
<b>B</b>	240	$240/570 * 35,000,000$	14,736,842
<b>C</b>	150	$150/570 * 35,000,000$	9,210,526
<b>TOTAL</b>	<b>570</b>		<b>35,000,000</b>

**Profit statement**

Description/Products	A	B	C	TOTAL
	<b>FRW</b>	<b>FRW</b>	<b>FRW</b>	<b>FRW</b>
<b>Sales value</b>	24,000,000	18,000,000	15,000,000	57,000,000
<b>Less appportioned costs</b>	11,052,632	14,736,842	9,210,526	35,000,000
<b>Selling costs</b>	4,800,000	3,600,000	3,000,000	11,400,000
<b>Profit</b>	<b>8,147,368</b>	<b>(336,842)</b>	<b>2,789,474</b>	<b>10,600,000</b>

**Q15, b) i) FIFO**

Date	PURCHASES			ISSUES			STOCK		
	Quantity	Price	Amount	Quantity	Price	Amount	Quantity	Price	Amount
1-Oct							200	14,000	2,800,000
5th oct	400	15,000	6,000,000				200	14,000	2,800,000
							400	15,000	6,000,000
8th Oct				200	14,000	2,800,000			
				100	15,000	1,500,000	300	15,000	4,500,000
10th Oct	600	16,500	9,900,000				300	15,000	4,500,000
							600	16,500	9,900,000
12th Oct	700	17,000	11,900,000				300	15,000	4,500,000
							600	16,500	9,900,000
							700	17,000	11,900,000
15th Oct				300	15,000	4,500,000			
				200	16,500	3,300,000	400	16,500	6,600,000
							700	17,000	11,900,000
19th Oct	500	18,000	9,000,000				400	16,500	6,600,000
							700	17,000	11,900,000
							500	18,000	9,000,000
26th Oct				400	16,500	6,600,000			
				400	17,000	6,800,000	300	17,000	5,100,000
							500	18,000	9,000,000

Date	PURCHASES			ISSUES			STOCK		
	Quantity	Price	Amount	Quantity	Price	Amount	Quantity	Price	Amount
30th Oct				300	17,000	5,100,000			
<b>Closing stock</b>				<b>200</b>	<b>18,000</b>	<b>3,600,000</b>	<b>300</b>	<b>18,000</b>	<b>5,400,000</b>

**Or FIFO sheet could be prepared as follow**

Date	PURCHASES			ISSUES			STOCK	
	Quantity	Price	Amount	Quantity	Price	Amount	Quantity	Amount
1-Oct							200	2,800,000
5th oct	400	15,000	6,000,000				600	8,800,000
8th Oct				200	14,000	2,800,000	400	6,000,000
				100	15,000	1,500,000	300	4,500,000
10th Oct	600	16,500	9,900,000				900	14,400,000
12th Oct	700	17,000	11,900,000				1,600	26,300,000
15th Oct				300	15,000	4,500,000	1,300	21,800,000
				200	16,500	3,300,000	1,100	18,500,000
19th Oct	500	18,000	9,000,000				1,600	27,500,000
26th Oct				400	16,500	6,600,000	1,200	20,900,000
				400	17,000	6,800,000	800	14,100,000
30th Oct				300	17,000	5,100,000	500	9,000,000
<b>Closing stock</b>				<b>200</b>	<b>18,000</b>	<b>3,600,000</b>	<b>300</b>	<b>5,400,000</b>

**b. Gross profit under FIFO methods**

Description	FIFO
Sales	40,100,000
Purchases	36,800,000
Opening stock	2,800,000
Less closing stock	(5,400,000)
Cost of goods sold	34,200,000
<b>Gross profit</b>	<b>5,900,000</b>

**Working for sales**

		FRW
8 October 2020	300*17	5,100
15 October 2020	500*18	9,000
26 October 2020	800*20	16,000
30 October 2020	500*20	10,000
<b>Total sales</b>		<b>40,100</b>

**Working for purchase**

		Quantity	Unity cost	Value
				FRW
05-Oct-20	Purchase of eggs	400	15,000	6,000,000
10-Oct-20	Purchase of eggs	600	16,500	9,900,000
12-Oct-20	Purchase of eggs	700	17,000	11,900,000
19-Oct-20	Purchase of eggs	500	18,000	9,000,000
<b>Total purchase</b>				<b>36,800,000</b>

**END OF MARKING GUIDE AND MODEL ANSWERS**