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**CERTIFIED ACCOUNTING TECHNICIAN  
STAGE 3 EXAMINATIONS**

**S3.2: MANAGEMENT ACCOUNTING**

**DATE: THURSDAY 30, MAY 2024**

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**INSTRUCTIONS:**

- 1. Time allowed: 3 hours.**
- 2. This examination has three sections: A, B and C.**
- 3. Section A has 10 multiple choice questions equal to 2 marks each.**
- 4. Section B has 2 questions equal to 10 marks each.**
- 5. Section C has 3 questions equal to 20 marks each.**
- 6. All questions are compulsory.**
- 7. The question paper should not be taken out of the examination room.**

## SECTION A

### QUESTION ONE

**Which one of the following is not a limiting factor in an organization producing CCTV Cameras?**

- A Limited production capacity of plant
- B Availability of raw materials
- C Scarcity of skilled labour
- D Limited demand for CCTV cameras

**(2 Marks)**

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### QUESTION TWO

**Which of the following is responsible for adverse material usage variance?**

- A Excessive wastage of materials
- B Poor quality of materials
- C Faulty handling
- D All of the above

**(2 Marks)**

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### QUESTION THREE

A manager of a leading company in transport sector in Rwanda has commenced investigating variances emanating from the differences between the approved budget estimates and actual performance for the financial year ended 31<sup>st</sup> December 2021.

**Which of the following explains to the manager the importance of investigating budget variances?**

- A To establish the root cause of variances to enable management put in place mitigation plans.
- B To increase resource allocation to various functions in the company.
- C To form the basis of apportioning production overheads to cost units
- D To form the basis of applying for a further credit from lending institutions.

**(2 Marks)**

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### QUESTION FOUR

**Which of the following statement is Correct?**

- A In absorption costing, fixed production cost is absorbed into the cost of units
- B In marginal costing, closing inventories are valued at full production cost
- C In marginal costing, fixed cost is absorbed into unit cost
- D In absorption costing, fixed production cost is treated as period cost

**(2 Marks)**

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### QUESTION FIVE

**Which of the following shows an inventory method to be recommended when dealing with perishable products.**

- A Last In First Out
- B First In First Out
- C A and B are correct
- D None of the above

**(2 Marks)**

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## QUESTION SIX

The following issues relates to quality management aspect in production

- (i) Material losses and wastages.
- (ii) Defective or inferior quality products
- (iii) Machine repairs and maintenance
- (iv) Time spent idling when production is not taking place

**Which of the above comprises of direct consequences of poor or lack of quality control measures during production?**

- A (i)(ii)(iii)
- B (ii)(iii)(iv)
- C (iii)(iv)(i)
- D (iv)(i)(ii)

**(2 Marks)**

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## QUESTION SEVEN

A company currently has the following operating statement

Sales revenue for the period (250,000 units)	24,000,000
Direct material cost (FRW)	(12,000,000)
Direct labour cost (FRW)	(4,000,000)
Production overheads (fixed cost FRW 1,000,000)	<u>(4,000,000)</u>
<b>Net profit</b>	<b><u>4,000,000</u></b>

**If currently the company is operating at 75% of the plant capacity what will be the effect on the net profit if the production capacity was increased to 90%?**

- A The net profit will increase by 15%
- B The net profit remains the same.
- C The net profit will increase by FRW 2,000,000.
- D The net profit will increase by FRW 1,000,000

**(2 Marks)**

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## QUESTION EIGHT

The following are costs of production of goods or services.

**Which one of the following sets comprises of indirect costs only?**

- (i) The purchase and delivery of raw materials which are converted into finished goods.
- (ii) The cost of other consumables like fuel, and oil.
- (iii) The cost of utilities like water, and electricity.
- (iv) Cost of labour for cleaners, drivers, security personnel etc.

- A (i) (ii) and (iii)
- B (ii) (iii) and (iv)
- C (iii) (iv) and (i)
- D (iv) (i)and (ii)

**(2 Marks)**

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**The following information relates to question 9 and 10**

TURATSINZE Group, a company located in Muhanga manufactures adobe bricks. It's the company policy to remunerate employees according to the work done or the number of bricks produced with no payment on damaged bricks. During the month of April 2023, the following data were extracted for payroll preparation.

Name of employee	Bricks produced	Pay rate per brick	Damages
ISHIMWE	3000	FRW 100	60
CLAUDE	2500	FRW100	0

**QUESTION NINE**

**Which of the following is Ishimwe's pay?**

- A FRW 360,000
- B FRW 300,000
- C FRW 294,000
- D None of the above

**(2 Marks)**

**QUESTION 10**

**Which of the following is the total salary expenses for TURATSINZE Group?**

- A FRW 544,000
- B FRW 610,000
- C FRW 594,000
- D None of the above

**(2 Marks)**

## SECTION B

### QUESTION 11

The following is the standard cost card for Kamage Ltd for the year ended 31<sup>st</sup> December 2021.

#### **Production cost per unit**

Direct material cost 10 kgs @ 150 per kg	1,500
Direct labour cost 8 hours @ 125 per hour	1,000
Variable production overhead cost 5 hours @ 100	500
Fixed production overhead cost	<u>300</u>
Total production cost per unit	3,300
Profit per unit	<u>700</u>
Selling price per unit	<u>4,000</u>

#### **Additional information**

1. The company projected to produce 10,000 units and sell 9,200 units for the year ended 31<sup>st</sup> December 2021.
2. There was no opening inventory as at 1<sup>st</sup> January 2021
3. Non-manufacturing costs include; selling cost of FRW 200 per unit sold and fixed marketing cost of FRW 1,000,000.

#### **Required:**

- a. Prepare marginal costing profit statement (5 Marks)
  - b. Prepare absorption costing profit statement (5 Marks)
- (Total: 10 Marks)**

### QUESTION 12

Brian after participating in different campaigns organized by Rwanda Development Board (RDB) on the initiative of made in Rwanda, made a decision to invest in modern agriculture by leasing machines to different cooperatives across the country.

Brian was informed that the machine will cost FRW 40,000,000.

The machine will operate for 4 years with an annual fixed maintenance fee of FRW 500,900 paid at the end of each of the four years.

The first year's cash inflows are expected to be FRW 9,800,500 with a consistent annual growth rate of 3% for the subsequent years.

#### **Required:**

**Brian is yet to make a decision on the investment and advise him on whether to invest in or reject. Assume a cost of capital of 10%. (Refer to the present value table at the end of the question paper).**

**(Total: 10 Marks)**



## SECTION C

### QUESTION 13

a) Belyse Enterprises Ltd whose financial year ended 31<sup>st</sup> December 2022 is a printer of text books that are mainly used by primary and secondary schools in Rwanda. Their budgeted and actual information for the year ended 31<sup>st</sup> December, 2022 is provided below:

Budget:

Production / Sales units		200,000
	Frw 000	Frw 000
Sales revenue		3,000,000
Variable costs:		
Direct materials (Frw 300 per kg)	900,000	
Direct labour (Frw 5,000 per hour)	600,000	
Variable overheads (Frw 800 per labour hour)	800,000	<u>2,300,000</u>
Contribution		700,000
Fixed overheads		<u>200,000</u>
Profit		<u>500,000</u>

Actual results:

Production / Sales units		195,000
	Frw 000	Frw 000
Sales revenue		3,250,000
Variable costs:		
Direct materials (Frw 320 per kg)	944,000	
Direct labour (Frw 4,500 per hour)	562,500	
Variable overheads (Frw 830 per labour hour)	788,500	<u>2,295,000</u>
Contribution		955,000
Fixed overheads		<u>250,000</u>
Profit		<u>705,000</u>

Required:

Calculate the following variances:

- (i) Sales price variance (2 Marks)
- (ii) Sales volume variance under marginal costing (2 Marks)
- (iii) Material price variance (2 Marks)
- (iv) Material usage variance (2 Marks)
- (v) Labor rate variance (2 Marks)
- (vi) Labor efficiency variance (2 Marks)
- (vii) Variable overhead expenditure variance (2 Marks)
- (viii) Variable overhead efficiency variance (2 Marks)

b) Explain the following types of standards

- i. **Ideal standards** (1 Mark)
  - ii. **Attainable standards** (1 Mark)
  - iii. **Current standards** (1 Mark)
  - iv. **Basic standards** (1 Mark)
- (Total: 20 Marks)**

**QUESTION 14**

a) **Discuss an accountant’s ethical required standards and resolutions in case of ethical conflicts while exercising management accountant responsibilities.** (10 Marks)

b) Chich Ltd is involved in provision of IT and internet services to support customers’ computers such that they keep running in busy seasons. Over the past ten months, Chich Ltd incurred the following costs. The activity is measured on basis of direct labour hours.

Month	Direct labour hours	Cost “FRW 000”
January	2,550	21,450
February	2,850	22,800
March	2,700	25,050
April	2,400	21,000
May	2,250	21,450
June	1,950	19,500
July	1,650	19,200
August	2,100	21,300
September	1,800	18,000
October	1,550	15,000

**Required:**

**Using the high-low method, determine:**

- i. Variable cost per hour (2 Marks)
  - ii. The fixed components of service costs (4 Marks)
  - iii. The total labour cost of November if total direct labour hours will be 2,000 (4 Marks)
- (Total: 20 Marks)**

## QUESTION 15

- a) Distinguish between incremental budgets and zero-based budget (2 Marks)
- b) Explain any three reasons for preparing a budget (6 Marks)
- c) The following information was extracted from the sales and purchases of Rusizi Ltd for the year ended 31<sup>st</sup> December, 2022.

Period	Sales Frw 000	Purchases Frw 000	Salaries Frw 000	Rent Frw 000
June	30,000	22,000	3,000	4,500
July	28,000	21,500	3,000	4,500
August	35,000	24,000	3,000	4,500
September	16,000	9,800	3,000	4,500
October	36,000	26,400	3,000	4,500
November	40,000	28,800	3,000	4,500
December	54,000	32,000	3,000	4,500

### Additional information:

- Closing cash balance on the 30<sup>th</sup> June 2022 was FRW 20,000,000.
- It is the company's policy to receive 60% of cash from sales in the month of sales and the balance in two equal instalments after one and two months respectively.
- For purchases 75% is paid for in the month of purchase and the balance after one month.
- 25% of rent is paid one month in arrears after its due.
- Electricity bill is FRW 500,000 per month.

### Required:

Prepare Rusizi Ltd cash budget for the six months ended 31<sup>st</sup> December, 2022 (12 Marks)  
(Total: 20 Marks)



**Present value interest factor of FRW1 per period at i% for n periods, PVIF(i,n)**

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239

**Present value interest factor of FRW1 per period at i% for n periods, PVIF(i,n)**

Period	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065

**Present value interest factor of an (ordinary) annuity of FRW1 per period at i% for n periods, PVIFA(i,n).**

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606

**Present value interest factor of an (ordinary) annuity of FRW1 per period at i% for n periods, PVIFA(i,n).**

Period	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327
12	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675



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