



**Association of Accounting Technicians of Sri Lanka**

**Level III Examination - July 2023**

**Suggested Answers**

**(302) MANAGEMENT ACCOUNTING AND FINANCE (MAF)**

**Association of Accounting Technicians of Sri Lanka**

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**Level III Examination - July 2023**

**(302) MANAGEMENT ACCOUNTING AND FINANCE**

**SUGGESTED ANSWERS**

Four (04) compulsory questions  
(20 Marks)

**SECTION - A**

*Suggested Answers to Question One:*

*Chapter 07 - Working Capital Management*

**Working Capital Cycle – 15 days**

	Note	2023
Inventory residence period	1	73
Trade receivables residence period		-
		73
(-) Trade payables settlement period	2	(58.4)
Length of working capital cycle		14.6

**Note 01 - Inventory residence period**

$$\begin{aligned}
 \text{Inventory residence period} &= \frac{\text{Average inventory}}{\text{Cost of sales}} \times 365 \text{ Days} \\
 &= \frac{(125,400+105,000)/2}{576,000} \times 365 \\
 &= \frac{115,200}{576,000} \times 365 \\
 &= \underline{\underline{73 \text{ Days}}}
 \end{aligned}$$

**Note 02 - Payables settlement period**

$$\begin{aligned}
 \text{Payables settlement period} &= \frac{\text{Average payables}}{\text{*Credit Purchases}} \times 365 \\
 &= \frac{(105,486+85,362)/2}{596,400} \times 365
 \end{aligned}$$

$$= \frac{95,424.00}{596,400} \times 365$$

$$= \underline{\underline{58.4 \text{ days}}}$$

\*Credit purchases = 576,000 + 125,400 + 105,000  
= **596,400**

(Total 05 marks)

**Suggested Answers to Question Two:**

**Chapter 01 - Introduction to the Management Accounting, Relevant Cost and Decision Making under risk and uncertainty**

Income Statement under Absorption Costing				Rs.
Sales	19,100*	Rs.650		12,415,000.00
<b>(-) Cost of sales</b>	<b>Qty</b>	<b>Cost</b>		
Opening stock	1,500	490	735,000	
Production variable cost	19,400	490	9,506,000	
	<u>20,900</u>		<u>10,241,000</u>	
Closing stock	1,800	490	(882,000)	
Cost of sales			<u>(9,359,000)</u>	
			3,056,000	
Under absorbed OH			(2,600)	
<b>Gross profit</b>			<u><b>3,053,400</b></u>	
<b>Fixed cost</b>				
Non-production OH			434,000	(434,000)
<b>Profit</b>				<u><u><b>2,619,400</b></u></u>

**W1 - Unit variable production cost**

	Rs.
Direct Material	325
Direct Labour	150
Variable Overhead	<u>15</u>
	<u><b>490</b></u>

**W2 - Over/ Under provision of OH absorption**

		Rs.
Actual overhead		293,600
Absorbed O/H	Rs15/- * 19,400 units	<u>291,000</u>
Under Provision		<u><u>2,600</u></u>

Overhead Absorption Rate =  $\frac{270,000}{18,000} = \underline{\underline{15}}$

(05 marks)

### *Suggested Answers to Question Three:*

#### **Chapter 03 - Different Types of Budgets and Planning & Controlling Vs Budgeting**

	Most Likely (100,000 kg)		Best Case Scenario (145,000 kg)		Worst case Scenario (94,000 kg)	
Sales income	100,000*Rs.350	35,000,000	145,000*Rs.400	58,000,000	94,000*Rs.300	28,200,000
Variable cost	35,000 x 35%	(12,250,000)	58,000 x 32%	(18,560,000)	28,000 x 38%	(10,716,000)
<b>Contribution</b>		<b>22,750,000</b>		<b>39,440,000</b>		<b>17,484,000</b>
Fixed cost		(8,000,000)	8,000,000*90%	(7,200,000)	8,000,000*110%	(8,800,000)
<b>Profit</b>		<b>14,750,000</b>		<b>32,240,000</b>		<b>8,684,000</b>

(05 marks)

### *Suggested Answers to Question Four:*

#### **Chapter 04 - Standard Costing & Variance Analysis**

(a)

- 1 A standard costing system is a tool for planning budgets, managing and controlling costs, and evaluating cost management performance.
- 2 Standard Costing systems help in planning operations and gaining insights into the probable impact of managerial decisions on cost levels and profits.
- 3 The primary purpose to using a standard costing system is that it can be used for product costing, for controlling cost, and for decision-making purposes.

(b)

- 1 Controversial materiality limit for variances.
- 2 None reporting of certain variances.
- 3 Low morale for some workers.
- 4 Decision on standard raw material price where prices vary due to seasonal effects and bulk purchase discounts are received.
- 5 As setting standard is a time consuming activity, adequate time is required to set standards.
- 6 Expenses to be incurred on establishing and maintaining standard.
- 7 Maintenance of realistic and up to date standards.

(05 marks)

**End of Section A**

*Suggested Answers to Question Five:*

**Chapter 03 - Different Types of Budgets and Planning & Controlling Vs Budgeting**

Cash Budget	Jul-23	Aug-23	Sep-23
<b>Receipts</b>			
Advance receipt –(W1)	1,750,000	750,000	900,000
Final payment – (W1)	1,000,000	1,300,000	1,750,000
Interest income @ 6%	1,000	7,205	11,441
<b>Total receipt</b>	<b>2,751,000</b>	<b>2,057,205</b>	<b>2,661,441</b>
<b>Payments</b>			
Supplier settlement – (W2)	1,000,000	700,000	800,000
Delivery charges (W3)	300,000	300,000	390,000
Salaries	180,000	180,000	180,000
Administration expenses – (W4)	30,000	30,000	30,000
<b>Total payments</b>	<b>1,510,000</b>	<b>1,210,000</b>	<b>1,400,000</b>
Net cash flows	1,241,000	847,205	1,261,441
Balance at beginning of the month	200,000	1,441,000	2,288,205
Balance at end of the month	1,441,000	2,288,205	3,549,646

**W1 - Advance and final settlement**

	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23
Sales	2,000,000	2,600,000	3,500,000	1,500,000	1,800,000
Advance receipt 50%	1,750,000	750,000	900,000		
Final settlement 50%	1,000,000	1,300,000	1,750,000		

**W2 - Payments to suppliers**

	Jun-23	Jul-23	Aug-23	Sep-23
Purchase	1,000,000	700,000	800,000	800,000
Payment to suppliers with 30D credit		1,000,000	700,000	800,000

**W3 - Delivery charge**

	Jun-23	Jul-23	Aug-23	Sep-23
Delivery charge @ 15%	300,000	300,000	390,000	525,000
Payment with 30D credit		300,000	300,000	390,000

**W4 - Administration expenses**

	Jun-23	Jul-23	Aug-23	Sep-23
Admin cost	30,000	30,000	30,000	30,000
Cash payment @ 20%	6,000	6,000	6,000	6,000
Credit payment @ 80% in 30days		24,000	24,000	24,000
<b>Total payment</b>	<b>6,000</b>	<b>30,000</b>	<b>30,000</b>	<b>30,000</b>

(Total 10 marks)

**Suggested Answers to Question Six:**

**Chapter 01 – Introduction to the Management Accounting, Relevant Cost and Decision Making under risk and uncertainty**

**Raw material A**

Product	Budgeted Qty	Raw material A (Kg)	Total Requirement Kg
W	45,000	0.10 1,600/16,000	4,500
X	40,000	0.20 3,200/16,000	8,000
Y	15,000	0.25 4,000/16,000	3,750
<b>Total requirement</b>			<b>16,250</b>
Availability of raw material A			(12,500)
<b>Shortage</b>			<b>3,750</b>

**Raw material B**

Product	Budgeted Qty	Raw material B (Kg)	Total Requirement Kg
W	45,000	0.25 1,250/5,000	11,250
X	40,000	0.20 1,000/5,000	8,000
Y	15,000	0.15 750/5,000	2,250
<b>Total required qty</b>			<b>21,500</b>
<b>Total requirement</b>			<b>(24,000)</b>
<b>Excess</b>			<b>(2,500)</b>

	<u>W</u>	<u>X</u>	<u>Y</u>
Selling Price	3,900	5,400	6,500
<b>(-) Variable cost</b>			
Material A	1,600	3,200	4,000
Material B	1,250	1,000	750
Processing labour	200	200	320
Packing labour	40	40	40
Variable OH	100	120	150

Total variable cost	(3,190)	(4,560)	(5,260)
Contribution	710	840	1,240
Raw material A	0.10	0.20	0.25
Contribution- Per raw material A	7,100	4,200	4,960
Ranking	<b>1</b>	<b>3</b>	<b>2</b>

Product	Production	Raw material	Total
	Plan	A	Requirement
W	45,000	0.10	4,500
Y	15,000	0.25	3,750
X	21,250	0.20	4,250
			<u>12,500</u>

(10 marks)

**Suggested Answers to Question Seven:**

**Chapter 05 - Sources of Capital and Cost of Capital**

(a) 
$$K_e = \frac{D_0 (1+g)}{P_0} + g$$

$$K_e = \frac{8*(1+0.1)}{35.2} + 10\%$$

$$K_e = \underline{\underline{35\%}}$$

(02 marks)

(b) 
$$K_p = \frac{D_0}{P_0} * 100$$

$$K_p = \frac{2.10}{10} * 100$$

$$K_p = \underline{\underline{21\%}}$$

(02 marks)

(c) 
$$IRR = A + \frac{NPVa}{NPVa - NPVb} * (B-A)$$

$$= 10\% + \frac{31.32}{31.32 - (4.61)} * 20\% - 10\%$$

$$= 0.10 + 0.8717 * 0.10$$

$$= \underline{\underline{18.72\%}}$$

(03 marks)

(d)

Source	Market Value Rs.	Weightage %	COC %	WACC
	Mn			
Ordinary shares	528	40%	35%	14 %
Preference shares	400	30%	21%	6.30%
Debentures	400	30%	18%	5.62%
<b>Total</b>	<b>1,328.00</b>			<b>25.86%</b>

*(03 marks)*  
*(Total 10 marks)*



**End of Section B**



*Suggested Answers to Question Eight:*

**Chapter 04 - Standard Costing & Variance Analysis**

(a)

$$\begin{aligned}\text{Direct Material Cost Variance} &= \text{Standard Cost on Actual Production} - \text{Actual Cost} \\ &= (1,000 \times 26,000) - 26,010,400 \\ &= \underline{\underline{10,400 A}}\end{aligned}$$

(02 marks)

(b)

$$\begin{aligned}\text{DL Rate Variance} &= \text{Actual Hours (Standard Rate} - \text{Actual Rate)} \\ \text{Production} &= 12,480 (800 - 825) \\ &= \underline{\underline{312,000 A}}\end{aligned}$$

$$\begin{aligned}\text{Supportive} &= 41,600 (500 - 580) \\ &= \underline{\underline{3,328,000 A}}\end{aligned}$$

$$\begin{aligned}\text{Total DLRV} &= 312,000 A - 3,328,000 A \\ &= \underline{\underline{3,640,000 A}}\end{aligned}$$

(02 marks)

(c)

$$\text{Direct Labour Mix Variance} = \text{Standard rate} [ (\text{Actual hours} \times \text{Standard mix}) - (\text{Actual hours} \times \text{Actual mix}) ]$$

$$\begin{aligned}\text{Production} &= 800 (54,080 \times 0.5/2) - (54,080 \times 12,480 / 54,080) \\ &= 800 (13,520 - 12,480) \\ &= \underline{\underline{832,000 F}}\end{aligned}$$

$$\begin{aligned}\text{Supportive} &= 500 (54,080 \times 1.5/2) - (54,080 \times 41,600 / 54,080) \\ &= 500 (40,560 - 41,600) \\ &= \underline{\underline{520,000 A}}\end{aligned}$$

$$\text{TDL MV} = 832,000 F - 520,000 A = \underline{\underline{312,000 F}}$$

(d) **Direct Labour Yield Variance** = Standard rate [ (Standard hours x Standard mix) – (Actual hours x Actual mix) ]

$$\begin{aligned}\text{Production} &= 800 (52,000 \times 0.5/2) - (54,080 \times 0.5 / 2) \\ &= 800 (13,000 - 13,520)\end{aligned}$$

Supportive = 800 (52,000 x 1.5/2) - (54,080 x 1.5 /2)  
 = 416,000 A

= 500 (39,000 - 40,560)

= 780,000 A

Total TL YV = 416,000 A – 780,000 A = 1,196,000 A

**Direct labour yield variance**

Labour	SHSM	AHSM	Variance Hrs.	Std Rate	Yield variance
Pro. Labour	13,000	13,520	520A	800	416,000 A
	0.5*26,000				
Supp. Labour	39,000	40,560	1,560A	500	780,000 A
	1.5*26,000				
Total	<u>52,000</u>	<u>54,080</u>	-		<u>1,196,000 A</u>
					<i>(Total 10 marks)</i>

**Suggested Answers to Question Nine:**

**Chapter 06 - Capital Investments Appraisal**

(a)

Machine X 99

	0	1	2	3	4
	(25,000)	-	-	-	-
Scrap Value	4,000	-	-	-	-
Sales	-	50,000 (100 x 500)	56,000 (100 x 1.12 x 500)	62,720 (125.44 x 500)	70,246 (140.49 x 500)
Variable Cost	-	(18,000) (100 x 180)	(20,160) (112 x 180)	(22,579) (125.44 x 180)	(25,288) (140.49 x 180)
Fixed Cost	-	(8,000)	(8,000)	(8,000)	(8,000)
Income Tax ( W-1)	-	(5,325)	(6,477)	(7,767)	(9,212)
<b>Net Cash Flow</b>	<b>(21,000)</b>	<b>18,675</b>	<b>21,363</b>	<b>24,374</b>	<b>27,746</b>
DFC @ 20%	1	0.833	0.694	0.578	0.482
<b>Net Present Value</b>	<b>(21,000)</b>	<b>15,556</b>	<b>14,826</b>	<b>14,088</b>	<b>13,373</b>

NPV = 36,843

**Workings : (W – 1) Income Tax**

**(Rs.'000)**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Profit before Dep.	24,000	27,840	32,141	36,958
Capital Allowance	(6,250)	(6,250)	(6,250)	(6,250)
	17,750	21,590	25,891	30,708
<b>Tax @ 30%</b>	<b>5,325</b>	<b>6,477</b>	<b>7,767</b>	<b>9,212</b>

**Machine Y 23**

	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
Initial Investment	(40,000)	-	-	-	-	
Scrap Value	4,000	-	-	-	-	
Sales	-	50,000	56,000	62,720	70,246	78,675 (157.35 x 500)
Variable Cost	-	(17,800) (178 x 100)	(19,936) (178 x 112)	(22,328) (178 x 125.44)	(25,007) (178 x 140.49)	(28,008) (157.35 x 178)
Fixed Cost	-	(8,000)	(8,000)	(8,000)	(8,000)	(8,000)
	(36,000)	24,200	28,064	32,392	37,239	42,667
Income Tax ( W-1)	-	(4,260)	(5,419)	(6,718)	(8,172)	(12,800)
	(36,000)	19,940	22,645	25,674	29,067	29,867
DFC @ 20%	<b>1</b>	<b>0.833</b>	<b>0.694</b>	<b>0.578</b>	<b>0.482</b>	<b>0.4018</b>
<b>Net Present Value</b>	<b>(36,000)</b>	<b>16,610</b>	<b>15,716</b>	<b>14,840</b>	<b>14,016</b>	<b>12,001</b>

**NPV = 37,183**

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**Workings – Income Tax**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Profit	24,200	28,064	32,392	37,239	42,667
Capital Allowance	(10,000)	(10,000)	(10,000)	(10,000)	-
	14,200	18,064	22,392	27,239	42,667
Tax @ 30%	4,260	5,419	6,718	8,172	12,800

**(12 marks)**

**(b)**

	<b>Machine X99</b>	<b>Machine Y23</b>
NPV	36,843	37,183
Annuity Factor	2.5887	2.9906
$1-(1+r)^{-n}/r$		
<b>Annualized NPV</b>	<b>14,242</b>	<b>12,440</b>

It is recommended to invest in Machine X99.

**(03 marks)**  
**(Total 15 marks)**

## Suggested Answers to Question Ten:

(A)

### Chapter 02 - Process Costing and Digital Costing

	QTY	Rs.		QTY	Rs.
Opening WIP	3,460	3,615,370	Closing WIP	3,100	3,528,730
Direct Material	25,000	20,350,000	Normal Loss	1,500	315,000
Direct Labour	-	8,547,000	Finished Goods	23,700	31,023,300
Overheads	-	2,564,100	Abnormal Loss	160	209,440
	<b>28,460</b>	<b>35,076,470</b>		<b>28,460</b>	<b>35,076,470</b>

### Statements of Equivalent Units and Cost

	Material	Labour	Overhead	Total
Abnormal Loss	160	160	160	160
Finished Goods	23,700	23,700	23,700	23,700
Closing WIP	3,100	2,170	1,240	-
Equivalent Unit	26,960	26,030	25,100	
Cost				
Opening WIP	2,800,120	693,650	121,600	-
During the Month	20,350,000	8,547,000	2,564,100	-
Normal loss	(315,000)	-	-	-
	22,835,120	9,240,650	2,685,700	-
<b>Cost Per Unit</b>	<b>847</b>	<b>355</b>	<b>107</b>	<b>= 1,309</b>

### Costing WIP

**Material**  $847 \times 3,100 = 2,625,700$

**DL**  $355 \times 2,170 = 770,350$

**OH**  $107 \times 1,240 = \underline{132,680}$

3,528,730

(14 marks)

(B)

### Chapter 01 - Introduction to the Management Accounting, Relevant Cost and Decision Making under risk and uncertainty

(a)

		W1	W2
02	Market Research	Sunk cost	Sunk cost
03	Marketing Budget	5,000,000	5,000,000
04	Salary	5,000,000	6,000,000

05	Training	2,100,000	2,400,000
06	Machine Rentals	15,050,000	18,650,000
07	Other Fixed Cost	4,500,000	4,900,000
		<b>31,650,000</b>	<b>36,950,000</b>

(05 Marks)

(b)

$$\begin{aligned}
 \text{Combined PE Ratio} &= \frac{\text{Com. Contribution}}{\text{Com. Sales}} \times 100 \\
 &= \frac{(1,185 \times 2) + (1,450 \times 1)}{(2,900 \times 2) + (3,750 \times 1)} \\
 &= \frac{3,820}{9,550} \times 100 \\
 &= \underline{40\%}
 \end{aligned}$$

$$\begin{aligned}
 \text{BEP in Sales} &= \frac{\text{Fixed Cost}}{\text{Cum. PV Ratio}} \\
 &= \frac{68,600,000}{40.00\%} \\
 &= \underline{171,500,000}
 \end{aligned}$$

Product	BEP Sales
W1	171,500,000 * 5,800 / 9,550
W2	171,500,000 * 3,750 / 9,550
	<u>171,500,000</u>

Working

	W1	W2	
Selling Price	2,900.00	3,750.00	
Material	(900.00)	(1,336.00)	
Labour	(500.00)	(600.00)	
VOH	(315.00)	(364.00)	
	1,185.00	1,450.00	
Sales ratio	2.00	1.00	
Com. Sales	5,800.00	3,750.00	9,550.00
Com. Contribution	2,370.00	1,450.00	3,820.00

(06 Marks)  
(Total 20 Marks)

**End of Section C**

**Notice:**

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