



**Association of Accounting Technicians of Sri Lanka**

**Level III Examination - January 2023**

**Suggested Answers**

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

**Association of Accounting Technicians of Sri Lanka**  
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**Level III Examination - January 2023**

**(302) MANAGEMENT ACCOUNTING AND FINANCE**

**SUGGESTED ANSWERS**

Four (04) compulsory questions  
(20 Marks)

**SECTION - A**

*Suggested Answers to Question One:*

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

(a)

Selling Price	=	820
Variable Cost (240 + 60 + 120)	=	<u>(420)</u>
Contribution per unit	=	400
<b>Break Even Point (BEP)</b>	=	$\frac{\text{Fixed Cost}}{\text{Contribution per unit}}$
	=	$\frac{95,000 + (650,000 \times 10\%)}{400}$
	=	<u><b>400 Units</b></u>

(03 marks)

(b)

Sales (450 × 820/-)	=	369,000
Variable Cost (450 × 420/-)	=	<u>(189,000)</u>
Contribution		180,000
Fixed Cost (95,000 + 65,000)	=	<u>(160,000)</u>
<b>Profit</b>	=	<u><b>20,000</b></u>

(02 marks)  
(Total 05 marks)

*Suggested Answers to Question Two:*

*Chapter 07 - Working Capital Management*

	Workings	As at 31 <sup>st</sup> March 2023
Inventory residence period	1	87 days
Trade receivables residence period	2	<u>104 days</u>
		191 days
(-) Trade payables residence period	3	<u>(71 days)</u>
<b>Length of working capital cycle</b>		<u><b>120 days</b></u>

## Workings

### 1) Calculating Inventory Residence Period

$$\begin{aligned}\text{Inventory Resident Period} &= \frac{\text{Average Stock}}{\text{Cost of Sales}} \times 365 \text{ Days} \\ &= \frac{(4,532,930 + 3,752,000) / 2}{17,280,000} \times 365 \text{ Days} \\ &= \frac{4,142,465}{17,280,000} \times 365 \text{ Days} \\ &= \underline{\underline{87 \text{ Days}}}\end{aligned}$$

$$\text{Cost of Sales} = 24,000,000 \times 72\% = \underline{\underline{17,280,000}}$$

$$\begin{aligned}\text{Purchases} &= \text{Cost of sales} + \text{Closing inventory} - \text{Opening inventory} \\ &= 17,280,000 + 4,532,930 - 3,752,000 \\ &= \underline{\underline{18,060,930}}\end{aligned}$$

### 2) Calculating Trade receivables residence period/ Debtors collection period

$$\begin{aligned}\text{Trade Receivable Turnover Ratio} &= \frac{\text{Sales}}{\text{Average Debtors}} \\ 3.5 &= \frac{24,000,000}{\text{Average Debtors}}\end{aligned}$$

$$\text{Average Debtors} = \underline{\underline{6,857,143}}$$

$$\begin{aligned}\text{Trade receivables residence period/ Debtors collection period} &= \frac{6,857,143}{24,000,000} \times 365 \text{ Days} \\ &= \underline{\underline{104 \text{ Days}}}\end{aligned}$$

### 3) Calculating Trade Payables Settlement Period

$$\begin{aligned}\text{Trade Payable Settlement Period} &= \frac{\text{Average payables}}{\text{Purchases}} \times 365 \text{ Days} \\ &= \frac{(4,868,200 + 2,185,827) / 2}{18,060,930} \times 365 \text{ Days} \\ &= \frac{3,527,013.5}{18,060,930} \times 365 \text{ Days} \\ &= \underline{\underline{71 \text{ Days}}}\end{aligned}$$

(05 marks)

***Suggested Answers to Question Three:***

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

**(a)**

**Sales Budget**

Budgeted Units	$3,120,000 \times 60\%$	1,872,000
Budgeted Price	$500 \times 88\%$	440
<b>Budgeted sales Rs.</b>		<b>823,680,000</b>

**Workings**

Total Market in 2022 Units	$1,800,000/60 \times 100$	3,000,000
Total market in 2023 Units	$3,000,000 \times 1.04$	3,120,000
Budgeted Units	$3,120,000 \times 60\%$	1,872,000

**(03 marks)**

**(b)**

**Production Budget**

		<b><u>2023- Units</u></b>
Budgeted sales		1,872,000
(+) Closing stock	$1,872,000/12 \times 2$	312,000
(-) Opening stock		(150,000)
<b>Budgeted production</b>		<b><u>2,034,000</u></b>

**(02 marks)**

**(Total 05 marks)**

***Suggested Answers to Question Four:***

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

**Internal Manufacturing cost**

**Material cost**

New Material	420,000 - 130,000	290,000
Oppo. Cost of old material		45,000

**Labour cost**

Normal labour	80Hrs×Rs.300×1.5	36,000
Special labour		250,000

Variable overhead	80Hrs×Rs.110	8,800
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Internal Manufacturing cost		<u>629,800</u>
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**External purchase cost**

700,000

It is recommended to manufacture the moulds internally as internally manufacturing cost is lower than external purchase cost.



***(05 marks)***

***End of Section A***

*Suggested Answers to Question Five:*

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

(a)

**Direct material**

Product	Demand	D. Material (M)	Total Requirement Material
6-Seater	30	2.50 (1,125/450)	75
8-Seater	15	4.00 (1,800/450)	60
12-Seater	8	6.00 (2,700/450)	48
<b>Total required meters</b>			183
Direct material Availability M			190
<b>Excess</b>			<u><u>(7)</u></u>

**Stitching labour**

Product	Demand	Stitching labour (Hrs)	Total Requirement Hrs
6-Seater	30	1 (300/300)	30
8-Seater	15	1.25 (375/300)	18.75
12-Seater	8	1.5 (450/300)	12
<b>Total required Hrs</b>			60.75
Stitching labour availability in Hrs			100
<b>Excess</b>			<u><u>(39.25)</u></u>

**Embroidering Labour**

Product	Demand	Embroidering Labour Hrs	Total Requirement Hrs
6-Seater	30	5 (2,500/500)	150
8-Seater	15	8 (4,000/500)	120

<b>12-Seater</b>	8	12	96
		(6,000/500)	
<b>Total required Hrs</b>			366
Embroidering labour availability			
Hrs			302
<b>Shortage</b>			64

*It is identified that embroidering labour is the limiting factor.*

*(04 marks)*

**(b)**

	<u>6-Seater</u>	<u>8-Seater</u>	<u>12-Seater</u>
Selling Price	5,000	7,500	12,000
<b>(-) Variable cost</b>			
Material AB	1,125	1,800	2,700
Stitching labour	300	375	450
Embroidering labour	2,500	4,000	6,000
Variable OH	500	600	800
Total variable cost	(4,425)	(6,775)	(9,950)
Contribution	575	725	2,050
Embroidering labour Hrs	5	8	12
Contribution- Embroidering labour			
Hrs	115.00	90.63	170.83
Ranking	2	3	1

<b>Product</b>	<b>Production Plan</b>	<b>Embroidering Labour Hrs</b>	<b>Total Requirement Hrs</b>
12-Seater	8	12	96
6-Seater	30	5	150
8-Seater	7	8	56
			302

*(06 marks)*  
*(Total 10 marks)*

***Suggested Answers to Question Six:***

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

<b>Cash Budget</b>	<b>Feb-23</b>	<b>Mar-23</b>	<b>Apr-23</b>
<b>Receipts</b>			
Cash sales -W1	10,000,000	17,600,000	22,000,000
Collection from debtors - W1	165,600,000	90,000,000	110,520,000
Interest income @ 8%	8,000	85,387	-
<b>Total receipt</b>	<b>175,608,000</b>	<b>107,685,387</b>	<b>132,520,000</b>

**Payments**

Payment to material X - W2	154,000,000	132,000,000	44,000,000
Payment to packing material W2 **	8,500,000	13,600,000	17,000,000
Packing Labour cost - W3 **	1,500,000	2,400,000	3,000,000
Administration expenses - W4	800,000	800,000	800,000
<b>Total payments</b>	<b>164,800,000</b>	<b>148,800,000</b>	<b>64,800,000</b>
Net cash flows	10,808,000	(41,114,613)	67,720,000
Balance at beginning of the month	1,200,000	12,008,000	(29,106,613)
Balance at end of the month	12,008,000	(29,106,613)	38,613,387

**\*\* Payment on packing material and packing labour are made based on number of packets sold.**

**W1 - Cash sales and collection****from customers**

	<b>Dec-22</b>	<b>Jan-23</b>	<b>Feb-23</b>	<b>Mar-23</b>	<b>Apr-23</b>
Sales Qty	110,000	50,000	50,000	80,000	100,000
Selling price Rs.	2,000	2,000	2,000	2,200	2,200
Total sales	220,000,000	100,000,000	100,000,000	176,000,000	220,000,000
<b>Cash sales - @ 10%</b>	<b>22,000,000</b>	<b>10,000,000</b>	<b>10,000,000</b>	<b>17,600,000</b>	<b>22,000,000</b>
Credit sale @ 90%	198,000,000	90,000,000	90,000,000	158,400,000	198,000,000
<b>Credit sale collection 30 days @ 30%</b>		59,400,000	27,000,000	27,000,000	47,520,000
<b>Credit sale collection 60 days @ 70%</b>			138,600,000	63,000,000	63,000,000
<b>Total collection</b>		<b>59,400,000</b>	<b>165,600,000</b>	<b>90,000,000</b>	<b>110,520,000</b>

**W2 - Payments to raw****material**

	<b>Nov-22</b>	<b>Dec-22</b>	<b>Jan-23</b>	<b>Feb-23</b>	<b>Mar-23</b>	<b>Apr-23</b>
Purchase Qty	140,000	120,000	40,000	75,000	70,000	50,000
Purchase price Rs.	1,100	1,100	1,100	1,100	1,188	1,283
Raw material X	154,000,000	132,000,000	44,000,000	82,500,000	83,160,000	64,152,000
Raw material X payment				154,000,000	132,000,000	44,000,000

**Payments for packing material**

\*Packing material @

Rs.170				8,500,000	13,600,000	17,000,000
				(170x50,000)	(170x80,000)	(170x100)

**\* Payment on packing material are based on number of packets sold**



<b>W3 – Packing Labour cost</b>	<b>Feb-23</b>	<b>Mar-23</b>	<b>Apr-23</b>
*Labour cost @ Rs.30 per Kg	1,500,000	2,400,000	3,000,000
	(30x50,000)	(30x80,000)	(30x100,000)

*\* Payment on packing labour are based on number of packets sold*

<b>W4 - Administration expenses</b>	<b>Jan-23</b>	<b>Feb-23</b>	<b>Mar-23</b>	<b>Apr-23</b>
Admin cost	800,000	800,000	800,000	800,000
Cash payment @ 40%	320,000	320,000	320,000	320,000
Credit payment @ 60% in 30days		480,000	480,000	480,000
<b>Total payment</b>	<b>320,000</b>	<b>800,000</b>	<b>800,000</b>	<b>800,000</b>

*(10 marks)*

### *Suggested Answers to Question Seven:*

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

$$(a) K_e = \frac{D_0}{P_0} \times 100$$

$$K_e = \frac{0.8}{3.2} \times 100$$

$$K_e = \underline{\underline{25\%}}$$

*(02 marks)*

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

$$K_p = \frac{1.8}{8} \times 100$$

$$K_p = \underline{\underline{22.50\%}}$$

*(02 marks)*

#### **(c) Investors point of view**

<b>Year</b>	<b>Cash Flows</b>	<b>DF @ 10%</b>	<b>PV</b>	<b>DF @ 15%</b>	<b>PV</b>
0	(85.00)	1.000	(85.00)	1.000	(85.00)
1-5	9.12	3.791	34.57	3.352	30.57
	100*12%*76%				
5	<u>100.00</u>	<u>0.621</u>	<u>62.09</u>	<u>0.497</u>	<u>49.72</u>
		<b>NPV</b>	<b>11.66</b>		<b>(4.71)</b>

$$\begin{aligned}
 \text{IRR} &= A + \frac{\text{NPVa}}{\text{NPVa} - \text{NPVb}} \\
 &= 10\% + \frac{11.66}{11.66 - (4.71)} \\
 &= 0.10 + 0.7123 \times 0.05 \\
 &= \underline{13.56\%}
 \end{aligned}$$

(03 marks)

(d)

Source	Market Value Rs. Mn	Weightage	COC %	WACC
Ordinary shares	320.00	49%	25 %	12.25%
Preference shares	200.00	31%	22.5%	6.975%
Debentures	127.50	20%	13.56%	2.712%
	647.50			21.937%

(03 marks)  
(Total 10 marks)

**daa**  
SRI LANKA

**End of Section B**

*Suggested Answers to Question Eight:*

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

(a)

(i)

<b>DLRV</b>	=	<b>Std. Rate</b>	-	<b>Act. Rate</b>	×	<b>Act. Hrs Paid</b>			
Skilled	=	300	-	320	×	624,000	=	12,480,000	<b>A</b>
				(199,680/624)					
Unskilled	=	180	-	165	×	168,000	=	2,520,000	<b>F</b>
				(27,720/168)					
								<u>9,960,000</u>	<b>A</b>
									<i>(02 marks)</i>

(ii)

**Direct Labour mix variance**

Labour	Actual Hours*Actual Mix	Actual Hours*Standard Mix	Variance Hrs.	Std. Rate	Mix variance	
Skilled	624,000	633,600 (792,000/2.5×2)	9,600F	300	<b>2,880,000</b>	<b>F</b>
Unskilled	168,000	158,400 (792,000/2.5×0.5)	9,600A	180	<b>1,728,000</b>	<b>A</b>
	<u>792,000</u>	<u>792,000</u>	=		<u><b>1,152,000</b></u>	<b>F</b>
						<i>(03 marks)</i>

(iii)

**Direct Labour yield variance**

Labour	Standard Hours* Standard Mix	Actual Hours* Actual Mix	Variance Hrs.	Std. Rate	Yield variance	
Skilled	640,000 320,000×2	633,600	6,400F	300	<b>1,920,000</b>	<b>F</b>
Unskilled	160,000 320,000×0.5	158,400	1,600F	180	<b>288,000</b>	<b>F</b>
	<u>800,000</u>	<u>792,000</u>	<u>8,000F</u>		<u><b>2,208,000</b></u>	<b>F</b>
						<i>(03 marks)</i>

(iv)

**Sales Price Variance = Actual Sales (Actual Price - Standard Price)**

$$\begin{aligned}
 &= 320,000 \left( \frac{480,000}{320} - 1,550 \right) \\
 &= 320,000 (1,500 - 1,550) \\
 &= \underline{\underline{16,000A}}
 \end{aligned}$$

*(02 marks)*

(b)

**Operating Statement - Marginal Costing**

Budgeted Contribution	300,000×235	70,500,000
Sales contribution volume variance		4,700,000
Budgeted contribution of actual sales	320,000×235	75,200,000

**Adjusting variances**

	<u>A</u>	<u>F</u>
Direct material price variance	2,304,000	-
Direct material usage variance	5,760,000	-
Direct Labour rate variance	9,960,000	-
Direct Labour mix variance		1,152,000
Direct Labour yield variance	-	2,208,000
Variable OH expenditure variance	3,564,000	-
Variable OH efficiency variance	-	560,000
Sales Price variance	16,000,000	-
	<u>37,588,000</u>	<u>3,920,000</u>
		<u>(33,668,000)</u>

**Actual contribution**

**41,532,000**

(05 marks)  
(Total 15 marks)

**Suggested Answers to Question Nine:**

**Chapter 06 - Capital Investments Appraisal**

(a)

	Investment	Working capital	Gross profit	Rental	Sales commission 4%	Fixed cost	Income tax	Cash flows	Rs' Million	Present Value
Y0	(83.00)	(20.00)		-		-	-	(103.00)	1.000	(103.00)
Y1	-		37.50	(9.00)		(5.00)	(1.14)	22.36	0.820	18.33
Y2	-		44.80	(12.96)		(5.5)	(1.82)	24.52	0.672	16.48
Y3	-		70.40	(13.997)	(14.08)	(6.05)	(4.21)	32.06	0.551	17.67
Y4	-		97.50	(15.12)	(15.60)	(6.665)	(9.93)	50.19	0.451	22.64
Y5	10.00	20.00	123.2	(16.33)	(17.60)	(7.320)	(22.07)	89.88	0.369	33.17
									<b>NPV</b>	<b>5.29</b>

## Workings

### W1 - Gross profit / Contribution

	<u>Y1</u>	<u>Y2</u>	<u>Y3</u>	<u>Y4</u>	<u>Y5</u>
Sales	250.00	280.00	352.00	390.00	440.00
GP Margin	15%	16%	20%	25%	28%
Gross profit	37.50	44.80	70.40	97.50	123.20

### W2 - Rental

	<u>Y1</u>	<u>Y2</u>	<u>Y3</u>	<u>Y4</u>	<u>Y5</u>
Annual rental	12	12.96	13.997	15.12	16.33
Discount @25%	(3.00)				
	9.00	12.96	13.997	15.12	16.33

### W3 - Fixed cost

	<u>Y1</u>	<u>Y2</u>	<u>Y3</u>	<u>Y4</u>	<u>Y5</u>
Annual rental	30.00				
(-) Depreciation - (75-10)/5	(13.00)				
Rental	(12.00)				
Fixed cost excl. DepN and Rental	5.00	5.00	5.00	5.00	5.00
Inflation @ 10%	5.00	5.5	6.05	6.655	7.320

### W4 - Income tax

	<u>Y1</u>	<u>Y2</u>	<u>Y3</u>	<u>Y4</u>	<u>Y5</u>
Profit before dep.	23.500	26.340	36.273	60.128	81.954
Capital Allowance	(18.750)	(18.750)	(18.750)	(18.750)	-
Sales Proceed (W2)	-	-	-	-	1.000
	4.750	7.590	17.523	41.378	91.954
Tax @24%	1.14	1.82	4.21	9.93	22.07

(13 marks)

(b)

It is recommended to accept the project since it generated positive NPV of Rs.5.29Mn.

(02 marks)

(Total 15 marks)

## Suggested Answers to Question Ten:

(A)

### Chapter 02 - Process Costing and Digital Costing

#### Statement of Equivalent Units

	Total Qty. M	Direct Material		Direct Labour		Overhead	
		Deg. of Comp.	Equivalent Units	Deg. of Comp.	Equivalent Units	Deg. of Comp.	Equivalent Units
Opening stock -							
Output	25,000	100%	25,000	100%	25,000	100%	25,000
Fresh - Output	263,000	100%	263,000	100%	263,000	100%	263,000
Normal loss 5% of input	15,000	-	-	-	-	-	-
Abnormal loss	(10,000)	100%	(10,000)	100%	(10,000)	100%	(10,000)
Closing WIP	32,000	100%	32,000	50%	16,000	45%	14,400
<b>Equivalence Units</b>	<b>325,000</b>		<b>310,000</b>		<b>294,000</b>		<b>292,400</b>

Computation of unit cost	D. Material	D. Labour	Overhead	Total
Opening stock	3,750,000	534,000	199,000	4,483,000
Cost of Input	42,575,000	27,690,000	16,614,000	86,879,000
Sale of scrap units @40/-	(600,000)	-	-	(600,000)
Net cost of input	45,725,000	28,224,000	16,813,000	90,762,000
Expected Equivalent Units	310,000	294,000	292,400	
<b>Cost of unit produced</b>	<b>147.50</b>	<b>96.00</b>	<b>57.50</b>	<b>301.00</b>

#### Process1 Account

Description	Units	Value	Description	Units	Value
Opening WIP	25,000	4,483,000	Transferred to Process II	288,000	86,688,000
Direct Material - P I	300,000	42,575,000	Normal loss	15,000	600,000
Direct Labour	-	27,690,000			
Variable Production Overhead	-	16,614,000	WIP B/F	32,000	7,084,000
Abnormal gain	10,000	3,010,000			
	<b>335,000</b>	<b>94,372,000</b>		<b>335,000</b>	<b>94,372,000</b>
WIP C/F	32,000	7,084,000			

### Workings

Statement of evaluation	Direct Material			Direct Labour			Overhead			Total
	Eus	Cost	Total	Eus	Cost	Total	Eus	Cost	Total	
Output	288,000	147.50	42,480,000	288,000	96	27,648,000	288,000	58	16,560,000	86,688,000
Abnormal loss	(10,000)	147.50	(1,475,000)	(10,000)	96	(960,000)	(10,000)	58	(575,000)	(3,010,000)
Closing WIP	32,000	147.50	4,720,000	16,000	96	1,536,000	14,400	58	828,000	7,084,000

(14 marks)

(B)

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

(a)

	Selling Price	Variable Cost	Contribution per Unit	Sales Qty.	Total Contribution
High	300	(210)	90	100,000	9,000,000
Low	300	(230)	70	60,000	4,200,000

			Operating Income	Probability	Expected Value Operating Income
<b>Option 1</b>	High Sales	9,000,000 - 600,000	8,400,000	0.55	6,240,000
	Low Sales	4,200,000 - 600,000	3,600,000	0.45	
<b>Option 2</b>	High Sales	9,000,000 - 280,000 - (300×100,000×1.2%)	8,360,000	0.55	6,264,800
	Low Sales	4,200,000 - 280,000 - (300×60,000×1.2%)	3,704,000	0.45	
<b>Option 3</b>	High Sales	9,000,000 - (300×100,000×2.3%)	8,310,000	0.55	6,274,200
	Low Sales	4,200,000 - (300×60,000×2.3%)	3,786,000	0.45	

(05 Marks)

(b)

It is recommended to choose option 3 as it generates highest expected contribution.

(01 Mark)

(Total 20 Marks)

**End of Section C**

***Notice:***

These answers compiled and issued by the Education and Training Division of AAT Sri Lanka constitute part and parcel of study material for AAT students.

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