SRI LANKA

Association of Accounting Technicians of Sri Lanka

Level III Examination - January 2022

Suggested Answers

(302) MANAGEMENT ACCOUNTING AND FINANCE (MAF)

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THE ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA

Level III Examination - January 2022

(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)

1. Support to maintain a good relationship between financial activities and other activities in an organization.
2. Provide suggestions on the future activities from the evaluations of current status by means of relevant costing analysis.
3. Provide required information to all the levels of management to make decisions.
4. Provide required information and reports for planning and organizing.
5. Provide recommendation for the control of methods of business operations.
6. Summarize financial data and information which are necessary to make decisions on the future activities.
7. Support to identify the divisions/ activities with issues and facilitate strategic decision making.

(02 marks)

(b)

(i)

$$\textbf{Break Even Point (BEP)} = \frac{\textbf{Budgeted Fixed Cost}}{\textbf{Contribution Per Unit}}$$

$$\text{BEP} = \frac{1,440,000}{15}$$

$$\text{BEP} = \underline{\underline{\textbf{96,000 Units}}}$$

Workings: **Calculating contribution per unit**

Contribution per unit	**=**	**Sales price per unit – Variable cost per unit**
	=	85 – (40+18+12)
	=	85 -70
	=	**15**

(02 marks)

(ii)

Margin of Safety (MOS)	**=**	**Budgeted Sales in units – Break Even Sales in units**
MOS	=	100,000 - 96,000
MOS	=	**4,000 Units**

(01 mark)

(Total 05 marks)

Suggested Answers to Question Two:

Chapter 7 - Working Capital Management

	Note	2021
Inventory residence period	01	29
+ Debtors collection period	02	146
		175
(-) Creditors settlement period	03	(130)
Length of Working Capital Cycle		**45 Days**

Note 01 - Inventory Residence Period

$$\textbf{Inventory Residence Period} = \frac{\textbf{Average Inventory}}{\textbf{Cost of Sales}} \times \textbf{365 Days}$$

$$= \frac{(1{,}768{,}000+2{,}174{,}400)/2}{24{,}640{,}000} \times 365 \text{ Days}$$

$$= \frac{1{,}971{,}200}{24{,}640{,}000} \times 365 \text{ Days}$$

$$= \textbf{29 Days}$$

Note 2 – Debtors Collection Period

$$\textbf{Debtors Collection Period} = \frac{\textbf{365}}{\textbf{Debtors Turnover Ratio}}$$

$$= \frac{365}{2.5}$$

$$= \underline{\underline{\textbf{146 Days}}}$$

Note 03 – Creditors Settlement Period

$$\textbf{Creditors Settlement Period} = \frac{\textbf{Average Trade Payables / Average Creditors}}{\textbf{Purchases}} \textbf{ x 365 Days}$$

$$= \frac{(9,898,000+7,350,000)/2}{24,233,600} \text{ x 365 Days}$$

$$= \frac{8,624,000}{24,233,600} \text{ x 365 Days}$$

$$= \underline{\underline{\textbf{130 Days}}}$$

Working **- Purchases**

Cost of sales	24,640,000
+ Closing Inventory	1,768,000
(-) Opening Inventory	(2,174,400)
Purchases	**24,233,600**

(05 marks)

Suggested Answers to Question Three:

Chapter 3 – Different Types of Budgets and Planning & Controlling Vs Budgeting

(a) Sales Budget
For the year ended 2022

	Quantity	Per Unit (Rs.)	Values (Rs.)
Sales	202,500	1,330	269,325,000

Workings:

Sales units (Budgeted)

Sales 2021 = 180,000 units

Budgeted sales for 2022 = 180,000/16 × 18 = <u>202,500 units</u>

Selling price per units (Budgeted)

Unit price 2021 = Rs. 1,400

Unit price for 2022 after expected 5% decrease = Rs.1,400 × 95% = 1,330

(03 marks)

(b) Production Budget
For the year ended 2022

	Units
Sales Requirement	202,500
+ Closing inventory	20,250
	222,750
(-) Opening inventory	(11,000)
Budgeted Production	**211, 750**

Working:

Closing inventory = 202,500 × 10% = 20,250 units

(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

			Rs.
Sales	Rs.600 × 10,000		6,000,000
(-) Relevant cost			
Material X			
Required material	10,000 × 2Kg = 20,000 kg		
Available stock	(5,000) kg		
Purchasing cost	15,000Kg ×Rs.160	2,400,000	
Material Y			
Purchasing cost	10,000Kg × Rs.150	1,500,000	
Labour Cost			
Required labour hours	10,000 × 2hrs = 20,000		
Additional labour incentive	20,000 × Rs.400 × 20%	1,600,000	
Variable Overhead	Rs.20 × 10,000	200,000	**(5,700,000)**
Profit			**300,000**

The company should accept the order since it generates an additional profit of Rs.300,000/-.

(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)

Skilled Labour

Product	Demand / Budgeted Sales (units)	Skilled Labour Requirement (Hrs)	Total Requirement (Hrs)
Mini	1,000	0.8	800
		(800/1,000)	
Deluxe	600	1.1	660
		(1,100/1,000)	
Supreme	200	1.5	300
		(1,500/1,000)	
Total Required (Hours)			**1,760**
Skilled Labour Availability (Hours)			1,900
Excess			**140**

Packing Material

Product	Demand / Budgeted Sales (units)	Packing material (Sqm)	Total Requirement (Sqm)
Mini	1,000	0.4	400
		(160/400)	
Deluxe	600	0.6	360
		(240/400)	
Supreme	200	0.9	180
		(360/400)	
Total required Square Meters			**940**
Packing Material Availability (Square Meters)			1,000
Excess			**60**

Delivery Weight

Product	Demand/ Budgeted Sales (units)	Delivery weight (kgs)	Total Requirement (kgs)
Mini	1,000	1	1,000
		(200/200)	
Deluxe	600	1.5	900
		(300/200)	
Supreme	200	2.5	500
		(500/200)	
Total required weight			**2,400**
Delivery Weight Availability			2,200
Shortage			**200**

Limiting factor is Delivery Weight

(04 marks)

(b)

		Mini		Deluxe		Supreme
Selling Price		2,600		4,400		6,500
(-) Variable cost						
Material	800		1,900		2,800	
Skilled labour	800		1,100		1,500	
Packing material	160		240		360	
Delivery cost	200		300		500	
Variable OH	150		200		250	
Total variable cost		**(2,110)**		**(3,740)**		**(5,410)**
Contribution		**490**		**660**		**1,090**
Delivery weight per unit (kg)		1		1.5		2.5
Contribution per delivery (kg)		490		440		436
Rank		***1***		***2***		***3***

Optimal Product Mix

Product	**Production plan**	**Delivery weight Kgs**	**Total Requirement Kgs**
Mini	1,000	1	1,000
Deluxe	600	1.5	900
Supreme	120	2.5	300
			2,200

(06 marks)
(Total 10 marks)

Suggested Answers to Question Six:

Chapter 3 – Different Types of Budgets and Planning & Controlling Vs. Budgeting

	Apr-22	May-22	Jun-22
Receipts			
Cash sales -W1	1,200,000	640,000	1,120,000
Total receipt	**1,200,000**	**640,000**	**1,120,000**
Payments			
Supplier payment to fabric - W2	450,000	396,000	126,000
Supplier payment to accessories - W2	264,000	84,000	192,000
Labour cost - Stitching - W3	140,000	320,000	360,000
Labour cost - painting	160,000	160,000	160,000
Overhead cost	45,000	45,000	45,000
Purchase of computer	-	230,000	-
Total payments	**1,059,000**	**1,235,000**	**883,000**
Net cash flows	**141,000**	**(595,000)**	**237,000**
B/B/F	500,000	641,000	46,000
B/C/D	**641,000**	**46,000**	**283,000**

Workings:

W1 - Cash sales ***(Rs.)***

	Apr-22	May-22	Jun-22
Sales quantity	1,500	800	1,400
Selling price	800	800	800
Cash sales	1,200,000	640,000	1,120,000

W2 - Payments to raw material ***(Rs.)***

	Apr-22	May-22	Jun-22
Production quantity (units)	700	1,600	1,800
Raw material cost @ Rs.300 per unit	210,000	480,000	540,000
Fabric cost @ 60%	126,000	288,000	324,000
Accessories cost @ 40%	84,000	192,000	216,000
Payment to fabric suppliers	**450,000**	**396,000**	**126,000**
Payment to accessories suppliers	**264,000**	**84,000**	**192,000**

W3 - Labour cost – Stitching ***(Rs.)***

	Apr-22	May-22	Jun-22
Production quantity (units)	700	1,600	1,800
Stitching cost (Rs.200 per unit)	140,000	320,000	360,000

(10 marks)

Suggested Answers to Question Seven:

Chapter 5 – Sources of Capital and Cost of Capital

(a) Cost of ordinary voting shares

$$\mathbf{K_{e}\ /\ r_{e} = \frac{D_0}{P_0} \times 100}$$

$$= \frac{2.4}{16} \times 100$$

$$= \underline{\underline{\mathbf{15\%}}}$$

(02 marks)

(b) Cost of Irredeemable Preference Shares

$$\mathbf{Kp\ /\ r_{p} = \frac{D_0}{P_0} \times 100}$$

$$= \frac{1.5}{12} \times 100$$

$$= \underline{\underline{\mathbf{12.5\%}}}$$

(02 marks)

(c) Cost of Redeemable Debentures - IRR Calculation

$$\mathbf{IRR = a + (b - a) \times \frac{NPV_a}{NPV_a - NPV_b}}$$

$$= 10\% + (12\% - 10\%) \times \frac{15.34}{(15.34 - 22.43)}$$

$$= 10\% + 2\% \times \frac{15.34}{-7.09}$$

$$= \underline{\underline{\mathbf{5.67\%}}}$$

Working:

Year	Description	Cash Flows	DF @ 12%	PV	DF @ 10%	PV
0	Issue	112	1	112	1	112
1-5	*Interest	(9.12)	3.604	(32.87)	3.791	(34.56)
5	**Redemption	(100)	0.567	(56.7)	0.621	(62.1)
	NPV			**22.43**		**15.34**

***Interest (post-tax) = Pre-tax interest × (1-t)**

Interest (post-tax)	**=**	**Pre-tax interest × (1-t)**
	=	(100 × 12%) × (1-0.24)
	=	12 × 0.76
	=	**9.12**

****Redemption cash flows**

Redemption cash flows = 100 × 12% × 76% = 100

(03 marks)

(d) Weighted Average Cost of Capital using the market values

Source	Market Value (Rs.'000)	Weightage	COC %	WACC
Ordinary shares	960,000	0.59	15%	8.85
Preference shares	120,000	0.07	12.5%	0.875
Debentures	560,000	0.34	5.67%	1.928
	1,640,000			**11.653**

Alternative Answer

Cost of Redeemable Debentures - IRR Calculation

$$\text{IRR} = a + (b - a) \times \frac{NPVa}{NPV_a - NPV_b}$$

$$= 5\% + (10\% - 5\%) \times \frac{-5.88}{(-5.88 - 15.34)}$$

$$= 5\% + 5\% \times \frac{-5.88}{-21.22}$$

$$= \underline{\underline{6.39\%}}$$

Workings:

Year	Description	Cash Flows	DF @ 5%	PV	DF @ 10%	PV
0	Issue	112	1	112	1	112
1-5	Interest	(9.12)	4.329	(39.48)	3.791	(34.56)
5	Redemption	(100)	0.784	(78.4)	0.621	(62.1)
	NPV			**(5.88)**		**15.34**

Weighted Average Cost of Capital using the market values

Source	Market Value (Rs.'000)	Weightage	COC %	WACC
Ordinary shares	960,000	0.59	15%	8.85
Preference shares	120,000	0.07	12.5%	0.875
Debentures	560,000	0.34	6.39%	2.173
	1,640,000			**11.898**

(03 marks)
(Total 10 marks)

End of Section B

Suggested Answers to Question Eight:

Chapter 4 – Standard Costing and Variance Analysis

(a)

(i) Sales Price Variance

Sales Price Variance	=	**Actual Sales Quantity**	×	**(Actual Price**	**-**	**Standard Price)**
	=	7,560	×	(1,700	-	1680)
	=	**151,200 Adverse**				

Working:

Standard Price = 12,700,800/ 7,560 = 1,680

(02 marks)

(ii) Direct Labour Rate Variance

DLRV	**=**	**Actual Direct Labour Hours**	**x**	**(Standard Rate**	**-**	**Actual Rate)**			
G1	=	7,540	x	(170	-	176)	=	45,240	Adverse
G2	=	15,800	x	(75	-	72)	=	47,400	Favorable
								2,160	**Favorable**

Workings:

G1 Actual Rate = 1,327,040/7,540 = 176
G2 Actual Rate = 1,137,600/15,800 = 72

(02 marks)

(iii) Direct labour mix variance

Direct labour mix variance = **Standard rate [(Actual hours × Standard mix) - (Actual Hours × Actual mix)]**

$$Grade\ 1 = 170\left[\left(23{,}340\ \times\frac{1}{3}\right)-\left(23{,}340\ \times\frac{7{,}540}{23{,}340}\right)\right]$$

= 170 (7,780 – 7,540)

= **40,800 Favorable**

$$Grade\ 2 = 75\left[\left(23{,}340\ \times\frac{2}{3}\right)-\left(23{,}340\ \times\frac{15{,}800}{23{,}340}\right)\right]$$

= 75 (15,560 – 15,800)

= **18,000 Adverse**

Total = 40,800 F – 18,000 F

= **22,800 Favorable**

(iv) Direct Labour Yield (Productivity) Variance

Direct labour yield productivity variance = **Standard rate [(Actual Hours × Standard mix) - (Actual Hours × Actual mix)]**

$$Grade\ 1 = 170\left[\left(22{,}680\ \times\frac{1}{3}\right)-\left(23{,}340\ \times\frac{1}{3}\right)\right]$$

= 170 (7,560 – 7,780)

= **<u>37,400 Adverse</u>**

$$Grade\ 2 = 75\left[\left(22{,}680\ \times\frac{2}{3}\right)-\left(23{,}340\ \times\frac{2}{3}\right)\right]$$

= 75 (15,120 – 15,560)

= **<u>33,000 Adverse</u>**

Total = 37,400 A – 33,000 A

= **<u>70,400 Adverse</u>**

(03 marks)

(b) Operating Statement

Budgeted Contribution	8,000 × 300	2,400,000
Sales margin volume variance		(132,000)
Budgeted contribution of actual sales		2,268,000
<u>+Favorable variances</u>		
Direct material price variance	89,368	
Direct material usage variance	120,800	
Direct labour rate variance	2,160	
Direct labour mix variance	22,800	235,128
<u>- Adverse Variances</u>		
Direct labour yield variance	70,400	
Variable OH expenditure variance	70,020	
Variable OH efficiency variance	26,400	
Sales price variance	151,200	(318,020)
Actual contribution		**2,185,108**

(05 marks)
(Total 15 marks)

Suggested Answers to Question Nine:

Chapter 6 – Capital Investments Appraisal

(a)

(Rs.'000)

	Y0	Y1	Y2	Y3	Y4	Y5
Investment	(125,000)					
Working Capital	(3,000)					
Sales (W2)		82,500	115,500	171,000	180,000	127,500
Variable production cost		(30,000)	(44,000)	(72,000)	(80,000)	(60,000)
Advertising Cost		(8,000)	(23,000)	(15,000)	(15,000)	(4,000)
Fixed Overhead Cost (W1)		(12,000)	(12,000)	(12,000)	(12,000)	(12,000)
Income tax (W2)		(300)	(1,260)	(9,780)	(10,020)	(12,360)
	(128,000)	**32,200**	**35,240**	**62,220**	**62,980**	**42,140**
DCF @10%	1	0.909	0.826	0.751	0.683	0.621
Net Present Value	**(128,000)**	**29,270**	**29,108**	**46,727**	**43,015**	**26,169**

NPV = 46,290

Workings:

W1 - Relevant fixed cost

Fixed overhead	=	37,000
Depreciation (125,000/5)	=	(25,000)
Fixed Overhead Cost		**12,000**

W2 – Income Tax

	Y1	Y2	Y3	Y4	Y5
Sales unit	7,500	11,000	18,000	20,000	15,000
Selling Price	11,000	10,500	9,500	9,000	8,500
Sales	**82,500**	**115,500**	**171,000**	**180,000**	**127,500**
Variable Overhead (Rs.4,000 per unit × Number of units)	(30,000)	(44,000)	(72,000)	(80,000)	(60,000)
Advertising	(8,000)	(23,000)	(15,000)	(15,000)	(4,000)
Depreciation (125,000/5)	(25,000)	(25,000)	(25,000)	(25,000)	(25,000)
Fixed Overhead	(12,000)	(12,000)	(12,000)	(12,000)	(12,000)
Profit	**7,500**	**11,500**	**47,000**	**48,000**	**26,500**
Depreciation	25,000	25,000	25,000	25,000	25,000
Capital Allowance (125,000 × 25%)	(31,250)	(31,250)	(31,250)	(31,250)	-
Taxable profit	**1,250**	**5,250**	**40,750**	**41,750**	**51,500**
Tax @ 24%	**300**	**1,260**	**9,780**	**10,020**	**12,360**

(13 marks)

(b)

It is recommended to accept the project as it generates positive NPV of 46,290,000. The project is viable.

(02 marks)
(Total 15 marks)

Suggested Answers to Question Ten:

(A)

Chapter 2 – Process Costing and Digital Costing

Process II Account

Description	Units	Value	Description	Units	Value
Direct Material - P I	8,000	1,520,640	Output to FG	6,230	2,787,925
Direct Labour	-	1,320,760	Normal loss	320	19,200
Overhead	-	534,650	Abnormal loss	800	358,000
			WIP	650	210,925
	8,000	3,376,050		8,000	3,376,050

W1- Statement of Equivalent Units

	Total Qty Kgs	Material		Direct labour		Overhead	
		Degree of Completion	Equivalent Units	Degree of Completion	Equivalent Units	Degree of Completion	Equivalent Units
Opening stock	-						
Output	6,230	100%	6,230	100%	6,230	100%	6,230
Normal loss 5% of input	320	-	-		-		
Abnormal loss	800	100%	800	100%	800	100%	800
Closing WIP	650	100%	650	60%	390	30%	195
Total input	8,000		7,680		7,420		7,225

W2- Computation of unit cost

	D. Material	D. Labour	Overhead	Total
Cost of Input	1,520,640	1,320,760	534,650	3,376,050
Sale of NL as scrap units @60/-	(19,200)	-	-	(19,200)
Net cost of input	1,501,440	1,320,760	534,650	3,356,850
Expected Equivalent Units	7,680	7,420	7,225	
Cost of unit produced	195.5	178	74	447.5

W3 - Statement of evaluation

	D. Material			D. Labour			Overhead			
	Equivalent Units	Unit Cost	Total	Equivalent Units	Unit Cost	Total	Equivalent Units	Unit Cost	Total	Grand total
Output	6,230	195.5	1,217,965	6,230	178	1,108,940	6,230	74	461,020	2,787,925
Abnormal loss	800	195.5	156,400	800	178	142,400	800	74	59,200	358,000
Closing WIP	650	195.5	127,075	390	178	69,420	195	74	14,430	210,925
			1,501,440			1,320,760			534,650	

(14 marks)

(B)

Chapter 1 – Introduction to the Management Accounting, Relevant Cost and Decision Making under risk and uncertainty

		Internal sales team		External sales team
Sales Quantity	500,000 × 0.2	100,000	500,000 × 0.3	150,000
	380,000 × 0. 5	190,000	380,000 × 0.55	209,000
	290,000 × 0.3	87,000	290,000 × 0.15	43,500
Expected sales quantity		**377,000**		**402,500**
Annual sales @ Rs.150		56,550,000		60,375,000
Variable cost @ Rs.45		(16,965,000)		(18,112,500)
Sales commission		(1,696,500)		(3,018,750)
Contribution		**37,888,500**		**39,243,750**

It is assumed that sales unit are given per annum.

It is recommended to hire external sales team to sell new product.

(06 Marks)

(Total 20 Marks)

End of Section C

Notice:

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