



Association of Accounting Technicians of Sri Lanka

Level III Examination - July 2021

Suggested Answers

(302) MANAGEMENT ACCOUNTING AND FINANCE (MAF)

Association of Accounting Technicians of Sri Lanka
No.540, Ven. Muruththettuve Ananda Nahimi Mawatha,
Narahenpita, Colombo 05.
Tel : 011-2-559 669

A publication of the Education and Training Division

THE ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA
Level III Examination - July 2021
(302) MANAGEMENT ACCOUNTING AND FINANCE
SUGGESTED ANSWERS

Four (04) compulsory questions
 (Total 20 marks)

SECTION - A

Suggested Answers to Question One:

Chapter 07 - Working Capital Management

	Note	2020/21 (Days)
Inventory residence period	1	73
Trade receivables residence period	2	<u>91</u>
		164
(-) Trade payables residence period		(78)
Length of working capital cycle		86

Note 01 - Inventory Residence Period

$$\begin{aligned}
 \text{Inventory Residence Period} &= \frac{\text{Average Inventory}}{\text{Cost of sales}} \times 365 \text{ Days} \\
 &= \frac{(1,965 + 1,515)/2}{8,700} \times 365 \text{ Days} \\
 &= \frac{1,740}{8,700} \times 365 \text{ Days} \\
 &= \underline{\underline{73 \text{ Days}}}
 \end{aligned}$$

Cost of sales

$$\begin{aligned}
 \text{Profit} &= 11,600 \times 25\% &= 2,900 \\
 \text{Cost} &= 11,600 - 2,900 &= 8,700
 \end{aligned}$$

Note 02 - Trade Receivables Residence Period

$$\begin{aligned}
 \text{Trade Receivables Residence Period} &= \frac{\text{Average Trade Receivables}}{\text{Credit Sales}} \times 365 \text{ Days} \\
 &= \frac{(3,505 + 2,295)/2}{11,600} \times 365 \text{ Days} \\
 &= \frac{2,900}{11,600} \times 365 \text{ Days} \\
 &= \underline{\underline{91 \text{ Days}}}
 \end{aligned}$$

(05 marks)

Suggested Answers to Question Two:

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

(a)

Financial Perspectives

- 1 Gross profit ratio
- 2 Revenue for the year
- 3 % of new products sales from total sales
- 4 % of increase in revenue
- 5 Average unit selling price
- 6 Average gross profit per unit

Customer Perspective

- 1 Number of customers
- 2 Number of customer complaints
- 3 Number of new customers secured

(03 marks)

(b) Disadvantages of the Balanced Score Card

- 1 Performance measurement is subjective.
- 2 It must be tailored to the organization.
- 3 It needs buy in from leadership to be successful.
- 4 It can get complicated.
- 5 It requires a lot of data.
- 6 It doesn't include direct financial analysis of economic value of risk management.
- 7 When entity is failing to meet its balance score card goals, the goals may be re-interpreted to the current state of affairs to meet success or avoid failure.
- 8 Measures may give conflicting signals and confuse management.
- 9 The approach is not quick fixed. It takes considerable thought to develop an appropriate balance scorecard.
- 10 There is no financial analysis in economic value and risk management.
- 11 There may be contradictions between some divisional performance indicators.
- 12 This is a time consuming exercise.

(02 marks)

(Total 05 marks)

Suggested Answers to Question Three:

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

Income Statement under Marginal Costing			(Rs.'000)
Sales	16,800×Rs.800		13,440
(-) Cost of sales			
Opening stock	2,900×300	870	
Production variable cost (W 01)	15,500×300	<u>4,650</u>	
		5,520	
Closing stock (W02)	1,600×300	(480)	
Cost of sales			<u>(5,040)</u>
			8,400
Other variable cost			-
Contribution			8,400
Fixed Overheads			
Production overheads		2,240	
Administration & distribution overheads		<u>600</u>	<u>(2,840)</u>
Profit for the year			5,560

W 1 - Unit variable production cost

	Rs.
Direct Material	120
Direct Labour	150
Variable Overhead	<u>30</u>
	<u>300</u>

W 2 - Closing stock

	Rs.
Opening stock	2,900
Production	<u>15,500</u>
	18,400
(-) Sales	<u>(16,800)</u>
Closing stock	<u>1,600</u>

It is assumed that the variable cost of opening stock is equal to Rs.300/- per unit.

(05 marks)

Suggested Answers to Question Four:

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

			(Rs.'000)
If produce in house	$2,790 \times 100$	=	279,000
<u>If outsourced</u>			
Cost of outsourcing	$2,500 \times 100$	=	250,000
Fixed production overhead	$430 \times 100 \times 35\%$	=	15,050
Compensation on labour		=	36,000
Saving on variable cost	$(1,430 + 610 + 320) 100$	=	<u>(236,000)</u>
			<u>65,050</u>

The cost of outsourcing is low when compared with the production cost. It is viable to outsource.

(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)

Raw Material AB

Product	Demand	Material per unit Kgs	Total Requirement Kgs
Small size	1,500	(225/150) 1.50	2,250
Large size	600	(450/150) 3	<u>1,800</u>
Total requirement of material AB			4,050
Availability of material AB			<u>4,200</u>
Excess Resource			<u>150</u>

Raw Material CD

Product	Demand	Material per unit Kgs	Total Requirement Kgs
Small size	1,500	(400/800) 0.50	750
Large size	600	(800/800) 1	<u>600</u>
Total requirement of material CD			1,350
Availability of material CD			<u>(1,100)</u>
Shortage of Resource			<u>(250)</u>

Skilled labour

Product	Demand	Skilled labour hours per unit	Total Requirement Hrs
Small size	1,500	(600/400) 1.50	2,250
Large size	600	(1,000/400) 2.50	<u>1,500</u>
Total requirement of skilled labour			3,750
Availability of skilled labour			<u>4,400</u>
Excess Resource			<u>650</u>

Limiting factor is Material CD

(04 marks)

(b)

	Small size		Large size	
Selling Price		2,800		4,500
(-) Variable cost				
Material AB	225		450	
Material CD	400		800	
Skilled Labour A	600		1,000	
Variable OH	<u>300</u>		<u>400</u>	
Total variable cost		(1,525)		(2,650)
Contribution		1,275		1,850
CD Material per unit		0.5kg		1kg
Contribution- Material CD per Kg		2,550		1,850
Rank		1		2

Optimal Product Mix

Product	Production plan	Material CD per unit Kgs	Total Requirement Kgs
Small size	1,500	0.50	750
Large size	350	1	350
			1,100

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(06 marks)

(Total 10 marks)

Suggested Answers to Question Six:

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

	(Rs.'000)		
	Jan-22	Feb-22	Mar-22
Receipts			
Cash sales (W1)	450	396	378
Received from debtors (W1)	2,560	2,000	1,760
Short term loan	-	600	728
Total Receipts	3,010	2,996	2,866
Payments			
Suppliers for materials (W2)	900	960	750
Suppliers for overheads (W2)	250	220	210
Staff salaries and incentives	1,500	1,500	1,500
Administration expenses	400	400	400
Interest on short term loan @ 1% (12%/12)	-	-	6
Total payments	3,050	3,080	2,866
B/B/F	1,124	1,084	1,000
B/C/F	1,084	1,000	1,000

W1 - Cash sales and collection from debtors

	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22
Sales	3,000	3,200	2,500	2,200	2,100
Cash sales @ 20%	600	640	500	440	420
Cash received on cash sales @ 90%	540	576	450	396	378
Credit sales	2,400	2,560	2,000	1,760	1,680
Cash receipt from debtors		2,400	2,560	2,000	1,760

W2 - Payments to raw material

	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22
Sales	3,000	3,200	2,500	2,200	2,100
Cost of sales 40% (100%-60%)	1,200	1,280	1,000	880	840
Material cost @75%	900	960	750	660	630
Supplier payment for material			900	960	750
Other overhead payment @25%	300	320	250	220	210

(10 marks)

Suggested Answers to Question Seven:

Chapter 05 – Sources of Capital and Cost of Capital

(a) Cost of Ordinary Shares

$$K_e = \frac{d_0}{P_0} \times 100$$

$$K_e = \frac{2.70}{18} \times 100$$

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

(02 marks)

(b) Cost of Irredeemable Preference Shares

$$K_p = \frac{D_0}{P_0} \times 100$$

$$K_p = \frac{1}{12.5} \times 100$$

$$K_p = \underline{8\%}$$

(02 marks)

(c) Cost of Redeemable Debentures

Year	Description	Cash Flows	DF @ 10%	PV	DF @ 15%	PV
0	Issue	95	1.000	95	1	95
1-5	Interest	(11)	3.791	(41.70)	3.352	(36.87)
5	Redemption	(100)	0.621	(62.09)	0.497	(49.72)
			NPV	(8.79)		8.41

$$IRR = A + \frac{NPV_a}{NPV_a - NPV_b} \times (B-A)$$

$$= 10\% + \frac{8.79}{8.79 - (8.41)} \times (15\% - 10\%)$$

$$= 0.10 + \frac{8.79}{17.2} \times 5\%$$

$$= 0.10 + 0.026$$

$$= \underline{12.56\%}$$

(03 marks)

(d) Weighted Average Cost of Capital using market values

Source	Market Value Rs. Mn	COC %	COC Rs.
Ordinary shares	2,700	15.00%	405
Preference shares	437.5	8.00%	35
Debentures	475	12.56%	59.64
	3,612.5		499.64

$$\text{WACC} = \frac{499.64}{3,612.50} \times 100 = \underline{13.83\%}$$

(03 marks)

(Total 10 marks)



End of Section B

Suggested Answers to Question Eight:

Chapter 4 – Standard Costing and Variance Analysis

(a)

(i)

DM Price

Variance	=	(Standard Price	- Actual Price)	×	Actual Quantity	=	
X	=	(600	- 658)	×	4,250	=	246,500 A
Y	=	(240	- 218)	×	17,985	=	395,670 F
						=	<u>149,170 F</u>

(02 marks)

(ii)

Direct Material Mix Variance =	Standard price of DM* [(total actual material usage* standard mix) – (total actual material usage*actual mix)]		
Material X	600× [(22,235 × 0.5/2.5)- (22,235 × 4,250/22,235)] 600×(4,447-4,250)	118,200	Favourable
Material Y	240× [(22,235 × 2/2.5)- (22,235 × 17,985/22,235)] 600×(17,788-17,985)	47,280	Adverse
Total		70,920	Favourable

(04 marks)

(iii)

Direct Material Yield Variance =	Standard price* [(total standard usage* standard mix) – (total actual usage*standard mix)]		
Material X	600× [((0.5+2))kg × 8,175 units× 0.5/2.5)- ((4,250+17,985)× 0.5/2.5)] 600× [(2,043.75×0.5/2.5)] 600×(408.75-4,447)	215,700	Adverse
Material Y	240× [((0.5+2)kg × 8,175 units× 2/2.5)- ((4,250+17,985) kg × 2/2.5)] 240× [(20,437.50 × 0.5/2.5)] - [(22,235 × 2/2.5)] 240×(16,350 -17,788)	345,120	Adverse
Total		560,820	Adverse

(04 marks)

(b) Operating Statement - Marginal Costing

Budgeted Contribution	8,250*295			2,433,750
Sales margin volume variance				(22,125)
Budgeted contribution of actual sales	8,175*295			2,411,625
Adjusting variances		A	F	
Direct material price variance		-	149,170	
Direct material mix variance		-	70,920	
Direct material yield variance		560,820	-	
Direct labour rate variance		-	121,000	
Direct labour efficiency variance		135,000	-	
Variable OH expenditure variance		9,075	-	
Variable OH efficiency variance		22,500	-	
Sales contribution price variance		163,500	-	
		890,895	341,090	(549,805)
Actual Contribution				1,861,820

(05 marks)

(Total 15 marks)

Suggested Answers to Question Nine:**Chapter 06 – Capital Investments Appraisal**

(a)

	(Rs.'000)					
	0	1	2	3	4	5
Investment	(55,000)					
Gross Profit		22,000	22,400	21,120	19,250	12,960
Maintenance Cost	(3,300)					
Fixed Cost (W1)		(3,940)	(3,940)	(3,940)	(3,940)	(3,940)
Tax (W2)		(876)	(972)	(665)	(216)	(2,006)
Net Cash Flow	(58,300)	17,184	17,488	16,515	15,094	7,014
DF @ 14%	1	0.877	0.769	0.675	0.592	0.519
NPV	(58,300)	15,070	13,448	11,148	8,936	3,640
NPV	(6,058)					

Working :

Gross Profit	22,000	22,400	21,120	19,250	12,960
FC	(15,600)	(15,600)	(15,600)	(15,600)	(15,600)
Profit	6,400	6,800	5,520	3,650	(2,640)
Depreciation	11,000	11,000	11,000	11,000	11,000
Capital Allowances	(13,750)	(13,750)	(13,750)	(13,750)	-
	3,650	4,050	2,770	900	8,360
Tax @ 24%	(876)	(972)	(665)	(216)	(2,006)

(13 marks)

(b) It is not recommended to invest in the machine since it generated negative NPV of Rs. 6,058 Mn.

(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 - P1	6,500	2,271,100	Transferred to finished goods	5,440	3,220,480
Direct Labour	-	944,840	Normal loss (W4)	325	35,750
Overhead	-	416,520			
Abnormal gain	45	26,640	WIP B/F	780	402,870
	6,545	3,659,100		6,545	3,659,100
WIP C/F	780	402,870			

W1- Statement of Equivalent Units

	Total Qty Kgs	Material X		Direct Labour		Variable OH	
		Degree of Completion	Equivalent Units	Degree of Completion	Equivalent Units	Degree of Completion	Equivalent Units
Opening stock	-						
Output	5,440	100%	5,440	100%	5,440	100%	5,440
Normal loss 5% of input	325	-	-		-		
Abnormal gain	(45)	100%	(45)	100%	(45)	100%	(45)
Closing WIP	780	100%	780	75%	585	50%	390
Total input	6,500		6,175		5,980		5,785

W2- Computation of unit cost

	D. Material	D. Labour	Overhead	Total
Cost of Input	2,271,100	944,840	416,520	3,632,460
Sale of NL as scrap units @110/-	(35,750)	-	-	(35,750)
Net cost of input	2,235,350	944,840	416,520	3,596,710
Expected Equivalent Units	6,175	5,980	5,785	
Cost of units produced	362	158	72	592

W3 - Statement of evaluation

	D. Material			D. Labour			Overhead			Grand Total
	Equivalent Units	Unit Cost	Total	Equivalent Units	Unit Cost	Total	Equivalent Units	Unit Cost	Total	
Output	5,440	362	1,969,280	5,440	158	859,520	5,440	72	391,680	3,220,480
Abnormal gain	45	362	16,290	45	158	7,110	45	72	3,240	26,640
Closing WIP	780	362	282,360	585	158	92,430	390	72	28,080	402,870
			2,267,930			959,060			423,000	3,649,990

W4 - Normal Loss

$6,500 \times 5\% = 325$ units

Value = $325 \times 110 = \underline{\underline{35,750}}$

(13 marks)

(B)

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

	A 300	B 150	Total
No. of units			
Selling Price	200	300	500
Less: Variable Cost			
Direct Material	(70)	(60)	(130)
Direct Layout	(30)	(65)	(95)
Variable Production Overhead	(20)	(55)	(75)
Contribution per unit	80	120	200
Total Contribution (Rs.'000)	24,000	18,000	42,000
Total Sales (Rs.'000)	60,000	45,000	105,000
Combined PV Ratio	=	$\frac{42,000}{105,000}$	x 100
	=	<u>40%</u>	

$$\begin{aligned}
 \text{B/E Sales} &= \frac{\text{Fixed Cost}}{\text{Combined PV ratio}} \\
 &= \frac{10,175}{40\%} \\
 &= 25,437.50 \\
 &= \underline{\underline{25,437,500 \text{ units}}}
 \end{aligned}$$

Fixed Cost

	A	B	Total
No. of units	300	150	
Fixed Production Overhead	20	25	
Total Contribution	6,000	3,750	9,750
Non-Production Overhead			425
Total Fixed Cost			10,175



(07 marks)
(Total 20 marks)

End of Section C

Notice:

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