



Association of Accounting Technicians of Sri Lanka

July 2019 Examination - AA3 Level

**Suggested Answers
Subject No (AA32)**

**MANAGEMENT ACCOUNTING AND FINANCE
(MAF)**

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THE ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA

AA3 Examination-July 2019

(AA32) MANAGEMENT ACCOUNTING AND FINANCE

SUGGESTED ANSWERS

Four (04) compulsory questions
(Total 20 marks)

SECTION - A

Suggested Answers to Question 01:

Chapter 8-Managing Personal Finances

Saving

Saving is the process of putting aside some money for specific short term purpose. It is generally includes money used for emergencies and for liquidity, being able to pay bills and expenses. Savings will also secure the future when you can no longer earn regular income.

Investing

Investment is putting some money aside for long term return and increase in value to improve the living standard. The purpose of investment is achieving long term goal. Investing should start after an adequate saving is accumulated.

Saving

- (1) Saving money for a holiday
- (2) Saving for depositing for a house
- (3) Saving for emergencies
- (4) Saving to buy a new car within a year (short period)
- (5) Saving for your wedding within a short time

Investing

- (1) For your kids wedding in several days
- (2) For kids higher education expenses
- (3) For retirement
- (4) To start your own company in 10 years

(05 marks)

Suggested Answers to Question 02:

Chapter 01- Planning and Controlling Via Budgeting

(a)

Feedback control is a measurement of difference between the planned (expected output) and actual output is measured and modification of subsequent action and/or plans to achieve future required result. The intention is to learn for the future so that future deviation might be avoided. Feedback is a reactive process.

Feedforward control is forecasting the differences between the planned (expected output) and actual output and implementing the action before the event and prevent such differences in advance. The intention is avoid the difference before the event takes place. Feedforward control is proactive.

(03 marks)

(b)

- It ensures the desired performance by altering the inputs immediately once deviations are observed
- Unstable processes may be stabilized by analyzing the output of a system
- It does not require detailed knowledge of the system, in particular does not require mathematical model of the process
- It can be easily duplicated from one system to another
- Ability to track the process output

(02 marks)

(Total 05 marks)

Suggested Answers to Question 03:

Chapter 07-Working Capital Management

(a)	Rs.000	
	2017/18	2018/19
GP Ratio	10%	8%
Cost of sales	10,800.00	11,500.00
Sales	12,000.00	12,500.00
	$(10,800/90*100)$	$(11,500/92*100)$
Average trade receivables	1,678.25	2,175.55
	$(1,459 + 1,897.5)/2$	$(2,453.6 + 1,897.5)/2$
	$(1,678.25/12,000)*365$	$(2,175.55/12,500)*365$
Trade receivable residence period - Days	51 days	64 days

Or

Alternative Method

Sales = Cost of Sales / (1-GP Margin)

For 2017/18 = 10,800,000/0.90 = 12,000,000

For 2018/19 = 11,500,000/0.92 = 12,500,000

Receivable days = (Average Receivables/Sales)*365 Days

For 2017/18 = [(1,459,000+1,897,500)/2]/12,000,000*365

= **51 Days**

For 2018/19 = [(1,897,000+2,453,600)/2]/12,500,000*365 Days

= **64 Days**

(03 marks)

(b)

- Offering discounts for early settlements.
- Reassessing credit limits and credit periods.
- Factoring
- Invoice discounting
- Credit insurance

(02 marks)

(Total 05 marks)

Suggested Answers to Question 04:

Chapter 05-Investment Appraisal

Year	Cash Flows Rs.000	CCF Rs.000
0	(5,000)	(5,000)
1	464	(4,536)
2	581	(3,955)
3	620	(3,335)
4	1,680	(1,655)
5	2,465	-
6	2,640	

Payback period = 4 Years + 1,655 / 2,465 * 12

4 Years and 8 months

(05 marks)

End of Section A

Suggested Answers to Question 05:

Chapter 04-Decision under Risk and Uncertainty

(a)

	Probability	Expected Net Profit		
		Strategy 1	Strategy 2	Strategy 3
1.Low	0.25	3,450	2,275	1,950
2.Average	0.40	4,000	6,320	4,192
3.High	0.35	3,010	3,675	5,446

10,460

12,270

11,588

Expected Values

Strategy 1

$$3,450 + 4,000 + 3,010 = 10,460,000$$

$$[(0.25 \times 13,800) + (0.4 \times 10,000) + (0.35 \times 8,600)]$$

Rs.10,460,000

Strategy 2

$$2,275,000 + 6,320 + 3,675$$

$$[(0.25 \times 9,100) + (0.4 \times 15,800) + (0.35 \times 10,500)]$$

Rs.12,270,000

Strategy 3

$$1,950 + 4,192 + 5,446$$

$$[(0.25 \times 7,800) + (0.4 \times 10,480) + (0.35 \times 15,560)]$$

Rs.11,588,000

The highest expected value is given by strategy 2. Therefore, strategy 2 should be used for re-pricing.

(06 marks)

(b)

Based on the economic research, if inflation is;		Expected Value
Low –Strategy 1 will be selected	$(13,800 \times 0.25)$	= 3,450,000
Average-Strategy 2 will be selected	$(15,800 \times 0.4)$	= 6,320,000
High-Strategy 3 will be selected	$(15,560 \times 0.35)$	= <u>5,446,000</u>
Expected value using Perfect Information		= 15,216,000
Expected value without information		= <u>(12,270,000)</u>
		<u><u>2,946,000</u></u>

Having perfect information will provide the company with an increase in profit of Rs.2,946 Million. Therefore, the company should obtain the services of the economic research company since the fee quoted by them (Rs.2 Mn) is lower than the benefit.

(04 marks)
(Total 10 marks)

Suggested Answers to Question 06:

Chapter 01-Planning and Controlling via budgeting

Budget for Financial Year 2019/20

Rs,000

	Most Likely Scenario		Best Case Scenario		Worst case Scenario	
Sales income	1300Km* 1.05* Rs.40	54,600.00	1300Km* 1.07* Rs.40	55,640.00	1300Km* 1.02* Rs.40	53,040.00
Variable cost						
Fuel Cost	1365Km* 1.15* Rs.14	(21,976.50)	1391Km* 1.09* Rs.14	(21,226.66)	1326Km* 1.18* Rs.14	(21,905.52)
Drivers commission @ 3%		(1,638.00)		(1,669.20)		(1,591.20)
Contribution		30,985.50		32,744.14		29,543.28
Other Fixed Cost	Rs8,500 * 1.08	(9,180.00)	Rs8,500 * 1.05	(8,925.00)	Rs8,500 * 1.12	(9,520.00)
Drivers Salary	Rs15,000*1.1	(16,500.00)	Rs15,000*1.1	(16,500.00)	Rs15,000*1.1	(16,500.00)
Profit		5,305.50		7,319.14		3,523.28

(10 marks)

Suggested Answers to Question 07:

Chapter 06-Sources of Capital and Cost of Capital

(a) i) Cost of Ordinary Shares

$$\begin{aligned} r_e &= \frac{D_0 (1+g)}{P_0} + g \\ &= \frac{3 (1+0.04)}{25} + 0.04 \\ &= \underline{\underline{16.48\%}} \end{aligned}$$

(02 marks)

ii) Cost of Irredeemable Debentures

$$\begin{aligned} r_d &= \frac{K (1-t)}{P_0} \\ &= \frac{12 (1-0.28)}{100} \\ &= \frac{8.64}{100} \times 100 \\ &= \underline{\underline{8.64\%}} \end{aligned}$$

(02 marks)

iii) Cost of Irredeemable Preference Shares

$$\begin{aligned} r_p &= \frac{D_0}{P_0} \\ &= \frac{1.2}{20} \times 100 \\ &= \underline{\underline{6\%}} \end{aligned}$$

(02 marks)

iv) Weighted average cost of capital using the market values

Source	Market Value (Rs.)	Weight	COC %	WACC
Ordinary shares	500,000	33%	16.48%	5.44
Debentures	800,000	53%	8.64%	4.58
Preference shares	200,000	14%	6.00%	0.84
	1,500,000			10.9

$$\text{WACC} = \underline{\underline{=10.90\%}}$$

(02 marks)

(b) Any two of the following,

(1) No Dilution in Control

Unlike ordinary shares debentures carry no voting rights and therefore there is no dilution in control to the shareholders.

(2) Interest expense is deductible for tax

The interest that is paid on debt capital is deductible for the calculation of taxes therefore the cost of debt is cheaper than equity.

(3) Lower Cost

The issue costs as well as the cost of capital is lower in debt than in equity since debt carries less risk for investors since they will be settled before shareholders in the event of liquidation.

(4) Interest is not dependent upon performance

When the company performance improves it doesn't mean a higher interest has to be paid unlike the expectations for a higher dividend by shareholders.

(02 marks)
(Total 10 marks)

End of Section B

Two (02) compulsory questions.
(Total 50 marks)

SECTION - C

Suggested Answers to Question 08:

Chapter 03- Relevant Costing-Decision Making

(A)(a)

If bought;	Component		
	A	B	C
Subcontractor's price per unit	2,380	4,300	5,600
Direct Cost Saving per unit	(2,350)	(4,160)	(5,450)
Additional Direct Cost per unit	30	140	150
Production quantity (units)	36,000	20,000	22,000
Total Additional Cost of Subcontract per annum	1,080,000	2,800,000	3,300,000
Production overhead saving from buying	1,800,000	1,500,000	2,090,000
Net Saving of Buying	720,000	(1,300,000)	(1,210,000)

(06 marks)

(b)

- Company should buy only component A, since buying component A will bring in a cost saving of Rs.720,000/-per annum.
- If component B&C are bought these will result in additional costs of Rs. 1.3Mn and Rs.1.21 million per annum for the company, since the direct fixed overheads that can be saved by buying is not adequate to cover the extra cost of buying.

(02 marks)

(B)

- (a) Contribution per product A = Sale Price-Variable Cost
= 1,200-1,095 = **105/-**
- Contribution per product B = 900-810 = **90/-**

	A	B
Selling Price	1,200	900
Direct Material X1	(360)	(240)
Direct Material X2	(240)	(240)
Direct labour	(375)	(250)
Variable Overhead	(120)	(80)
Contribution per unit	105	90

(03 marks)

(b)

Identification of variables
X is the number of units to be produced from A
Y is the number of units to be produced from B
Objective function
$Z = 105X + 90Y$
Constrains
Material - X2
$4X + 4Y \leq 220,000$ -Equation No 01
Labour Hours
$1.5X + 1Y \leq 60,000$ - Equation No 02
Market demand
$X \leq 25,000$ - Equation No 03
$Y \leq 32,000$ - Equation No 04

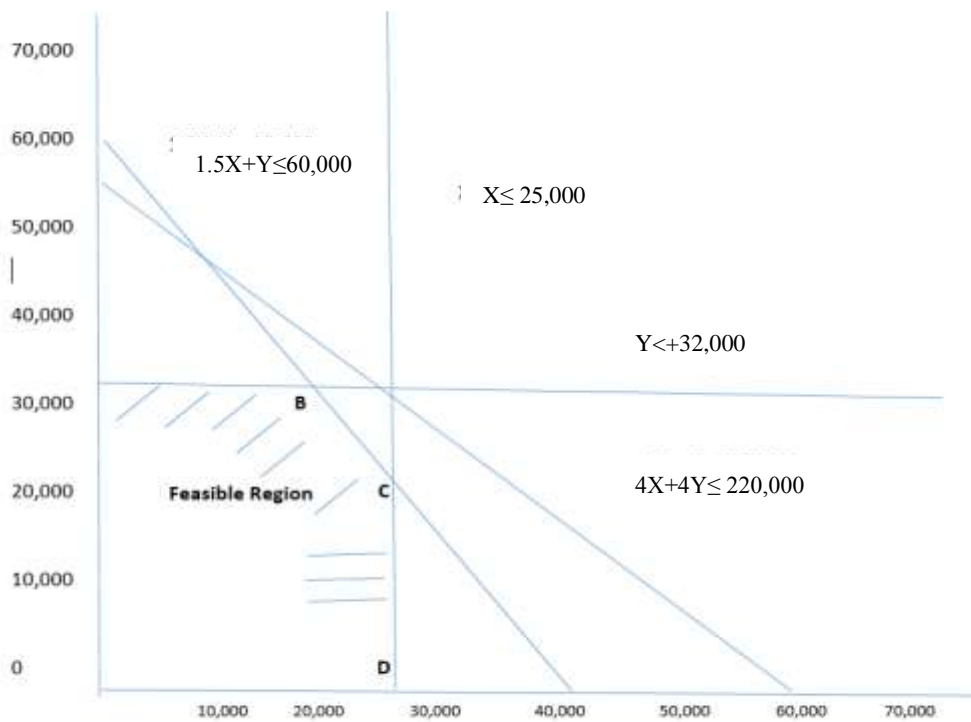
Equation 1	$4X + 4Y \leq 220,000$
Equation 2	$1.5X + 1Y \leq 60,000$
Equation 3	$X \leq 25,000$
Equation 4	$Y \leq 32,000$
Equation 5	$X, Y \geq 0$

(X=0 , Y=55,000) , (Y=0 , X=55,000)

(X=0 , Y=60,000) , (Y=0 , X=40,000)

(05 marks)

(c)



(06 marks)

(b)

A (0,32,000)	= 2,880,000
B (18,000,32,000)	= 4,770,000
C (25,000,22,500)	= 4,650,000
D (25,000,0)	= 2,625,000

Optimum Product Mix

- Product **A**=18,000
- Product **B**=32,000

(03 marks)
(Total 25 marks)

Suggested Answers to Question 09:

Chapter 05 - Investment Appraisal

(A)

Year	0	1	2	3	4	5
Investment	(50,000)					
Income	-	40,000	48,000	49,000	51,000	52,000
VC	-	(20,600)	(28,800)	(29,400)	30,345	30,940
FC	-	(5,000)	(5,000)	(5,000)	(5,000)	(5,000)
Tax paid(W-01)	-	(532)	(476)	(588)	(883.40)	(4,496.80)
	(50,000)	13,868	13,724	14,012	14,771.60	11,563.20
DCF	1	0.892	0.797	0.712	0.635	0.5674
	(50,000)	12,382	10,940	9,973	9,387	6,591
NPV	= (727)					

W1 - Income tax payment

	Profit	Fixed Cost	Capital Allowance	Income Tax @ 28%	Tax Paid
Y1	19,400	5,000	(12,500)	1,900	532
Y2	19,200	5,000	(12,500)	1,700	476
Y3	19,600	5,000	(12,500)	2,100	588
Y4	20,655	5,000	(12,500)	3,155	883
Y5	21,060	5,000	-	16,060	4,497

As per the calculation above it is not recommended to accept the project since it generates negative NPV of Rs.727.

(10 marks)

(B) (a) (i)

Chapter 02-Planning and Controlling Via Advance Variances

Direct Labour Rate Variance	=	Actual hours used*(Standard Rate-Actual Rate)		
Skilled Labour	=	6,150 hrs*(400-425)	153,750	Adverse
Unskilled labour	=	27,400hrs*(180-170)	<u>274,000</u>	Favourable
Total			120,250	Favourable

(02 marks)

(ii)

Direct Labour Mix Variance	=	Standard Rate*(Total actual usage-Standard mix)- (Total actual usage*actual mix)		
Skilled Labour	=	400*(33,550*1.5/7.5-33,550hrs*6,150/33,550)	224,000	Favourable
Unskilled Labour	=	180*(33,550*6/7.5-33,550hrs*27,400/33,550)	<u>100,800</u>	Adverse
Total			123,200	Favourable

(04 marks)

(iii)

Direct Labour Yield Variance	=	Standard Rate*[(Total actual usage-Standard mix)- (Total actual usage*Standard mix)]		
Skilled Labour	=	400*(32,850*1.5/7.5-33,550hrs*1.5/7.5)	56,000	Adverse
Unskilled Labour	=	180*(32,850*6/7.5-33,550hrs*6/7.5)	<u>100,800</u>	Adverse
Total			156,800	Adverse

(04 marks)

(b)

Chapter 02-Planning and Controlling Via Advance Variances				
Operating statement				
Budgeted contribution	4,300*895/-			3,848,500
Sales Margin Volume Variance				71,600
Budgeted contribution of actual sales				3,920,100
Variable cost		Adverse	Favourable	
Sales Price Variance		219,000		
Direct Material Price Variance			356,000	
Direct Material Usage Variance		182,000		
Direct Labour Rate Variance			120,250	
Direct Labour Mix Variance			123,200	
Direct Labour Yield Variance		156,800		
Variable Overhead Expenditure variance		70,500		
Variable Overhead Efficiency variance		77,000		
Total variable cost		<u>705,300</u>	<u>599,450</u>	(105,850)
Actual Contribution				3,814,250

(05 marks)
(Total 25 marks)

End of Section C

Notice:

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