Association of Accounting Technicians of Sri Lanka

July 2017 Examination - AA3 Level

Questions and Suggested Answers
(AA 32)

MANAGEMENT ACCOUNTING AND FINANCE (MAF)

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THE ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA

EDUCATION AND TRAINING DIVISION

AA3 Examination - July 2017
(AA 32) Management Accounting and Finance

SUGGESTED ANSWERS

SECTION – A

Four (04) compulsory questions.
(Total 20 marks)

Suggested Answers to Question One:

a) i) Assist in preparation of **personal** financial statements quickly and accurately.
ii) Provide information as to control the cash.
iii) Save lot of time and effort.
iv) Contributes promptly to assess Financial Situation at any time.
v) Provide information to make decisions.
vi) Measure the performance against the initial financial plan.
vii) Assists in providing information required by banks.
viii) Fulfills obligations as to income tax and Law.
ix) Highlights quickly areas where problems could arise.
x) Assists in calculating income tax liability.

b) i) Practicing discipline in all money matters will make you avoid unnecessary spending and borrowing. It will always keep you align with your financial plan.
ii) Sound money - management decisions.
iii) Pay down the debt will lead to financial independent cutting down the high-interest rate debt like credit cards.
iv) Consider non-traditional income opportunities will enhance your earnings and will lead to financial independence within a shorter period.
v) Take an active role in investment activities.
vi) Reject failures.
vii) Build success.
viii) Embrace careful measures.

(Total 05 marks)

Suggested Answers to Question Two:

$$\text{Direct Material Mix Variance} = \text{Standard Price} \left[\left(\text{Total actual material usage} \times \text{Standard mix} \right) - \left(\text{Total actual material usage} \times \text{actual mix} \right) \right]$$

A = 400 [(50,000 x 2/5) - (50,000 x 22,000 / 50,000)]
= 400 (20,000 - 22,000)
= **800,000 Adverse**

B = 150 [(50,000 x 3/5) - (50,000 x 28,000 / 50,000)]
= 150 (30,000 - 28,000)
= **300,000 Favourable**

Direct Material Mix Variance = A + B
= 800,000 Adverse + 300,000 Favourable
= **500,000 Adverse**

(Total 05 marks)

Suggested Answers to Question Three:

(Rs. '000)

	Most Likely		**Best Case Scenario**		**Worst Case Scenario**	
Sales	20*150	3,000	20*150%*150	4,500	20*75%*150	2,250
Variable cost	20*80	(1,600)	20*150%*70	(2,100)	20*75%*100	(1,500)
Contribution		1,400		2,400		750
Fixed cost		(240)		(240)		(240)
Profit		1,160		2,160		510

(05 marks)

Suggested Answers to Question Four:

Working Capital Cycle = 40 + 53 - 67

= **26 days**

Workings:

Trade Receivable Collection Period = $\frac{\text{Average Trade Receivables}}{\text{Sales}}$ x 365

= (3,961.50 / 35,850) x 365

= **40 days**

Trade Payable Settlement Period = $\frac{\text{Average Trade Payables}}{\text{Purchases}}$ x 365

= (3,970 / 21,711) x 365

= **67 days**

(Total 05 marks)

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End of Section A

SECTION –B

Three (03) compulsory questions.
(Total 30 marks)

Suggested Answers to Question Five:

(a)

	Package A	Package B	Package C
Low	350,000 (3,500,000 x 0.1)	400,000 (4,000,000 x 0.1)	320,000 (3,200,000 x 0.1)
Average	2,500,000 (5,000,000 x 0.5)	3,250,000 (6,500,000 x 0.5)	2,000,000 (4,000,000 x 0.5)
High	4,000,000 (10,000,000 x 0.4)	3,000,000 (7,500,000 x 0.4)	4,400,000 (11,500,000 x 0.4)
Expected Value	**6,850,000**	**6,650,000**	**6,720,000**

Without perfect information;

Package A is the best package

(07 marks)

b) Expected profit on perfect information = (400 + 3,250 + 4,400)

= **8,050,000**

Maximum amount that should be paid for research company = Rs. 8,050,000 - 6,850,000

= **Rs. 1,200,000**

(03 marks)

(Total 10 marks)

Suggested Answers to Question Six:

(a) i) Sales Price Variance = Actual Quantity (Standard Price - Actual Price)

= 80,070 (810 - 806)

= **320,280 Adverse**

ii) Variable OH Expenditure = Actual Hours (Standard Rate - Actual Rate)

= 48,900 (140 - 148)

= **391,200 Adverse**

iii) Variable OH Efficiency = Standard Rate (Standard Hours - Actual Hours)

= 140 (48,042 - 48,900)

= **120,120 Adverse**

(06 marks)

(b) **Operating Statement**

	Rs.	Rs.
Budget contribution (176 x 80,000)		14,080,000
Sales Margin Value Variance		12,320
		14,092,320
Variance		
Add:		
DM Usage Variance	148,000	
DL Rate Variance	1,467,000	1,615,000
		15,707,320
Less:		
Sales Price Variance	320,280	
DM Price Variance	797,000	
Direct Labour Efficiency Variance	214,500	
VOH Expenditure Variance	391,200	
VOH Efficiency Variance	120,120	(1,843,100)
Actual Contribution		**13,864,220**

(04 marks)

(Total 10 marks)

Suggested Answers to Question Seven:

		Division A	Division B	Overall
ROCE	=	$\frac{\text{PBIT}}{\text{Total Capital}} \times 100$	$\frac{\text{PBIT}}{\text{Total Capital}} \times 100$	$\frac{\text{PBIT}}{\text{Total Capital}} \times 100$
	=	$\frac{2,558,400}{31,200,000} \times 100$	$\frac{6,497,000}{44,500,000} \times 100$	$\frac{9,055,400}{75,700,000} \times 100$
	=	**8.2%**	**14.6%**	**11.96%**
Asset turnover	=	$\frac{\text{Sales}}{\text{Capital employed}}$	$\frac{\text{Sales}}{\text{Capital employed}}$	$\frac{\text{Sales}}{\text{Capital employed}}$
	=	$\frac{78,000,000}{31,200,000}$	$\frac{144,625,000}{44,500,000}$	$\frac{222,625,000}{75,700,000}$
	=	**2.50 Times**	**3.25 Times**	**2.94 Times**

	Division A's Manager	Division B's Manager	CEO	BenchMark
ROCE	8.2%	14.6%	11.96%	11.5%
Assets Turnover	2.5 Times	3.25 Times	2.94 Times	2.8 Times

As per the calculations above Division A manager will not be rewarded since the division has not achieved the target ROCE and asset turnover of 11.5% and 2.8 respectively.

However Division B manager will be rewarded since the target ROCE and asset turnover both are achieved.

Overall Teazzy Limited has achieved the target ROCE and asset turnover therefore CEO will be rewarded.

(10 marks)

End of Section B

SECTION –C

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

Suggested Answers to Question Eight:

A)

a) Sales = (125,000 x 800) + (350,000 x 250)
= 100,000,000 + 87,500,000
= **187,500,000**

V/C = (102,500 x 800) + (266,600 x 250)
= 82,000,000 + 66,500,000
= **148,500,000**

Contribution = 187,500,000 - 148,500,000
= **39,000,000**

Combined Profit Volume Ratio = $\frac{\text{Combined Contribution}}{\text{Combined Sales}}$ x 100
= (39,000 / 187,500) x 100
= **20.8%**

(05 marks)

OR

$$\text{Combined Profit Volume Ratio} = \frac{\text{Combined Contribution}}{\text{Combined Sales}} \times 100.00$$

$$= \frac{(22{,}500*3.2) + (84{,}000*1)}{(125{,}000*3.2) + (350{,}000*1)} \times 100.00$$

= **20.80%**

Workings

W1	Sales Ratio	800	:	250
		3.20	:	1

W2	**Contribution**		
	Selling Price	125,000	350,000
	(-) Variable cost		
	Accommodation	(62,500)	(195,000)
	Food and beverage	(28,000)	(46,500)
	Entrance ticket	(10,000)	(18,000)
	Other variables	(2,000)	(6,500)
	Contribution	**22,500**	**84,000**

(b) Combined Break Even Level = $\frac{\text{Total Fixed Cost}}{\text{Profit Volume Ratio}}$

= $\frac{32,510,400}{0.208}$

= **Rs. 156,300,000**

	BEP (Rs.)	**BEP (Units)**
Standards	83,360,000	667 units
	156,300 x (100,000 / 187,500)	(83,360 / 125)
Delux	72,940,000	208 units
	156,300 x (87,500 / 187,500)	(72,940 / 350)

B)

a) Direct material 2,500Kg is short for the estimated production.

Product	Demand	Material requirement (Kg)	Total Requirement (Kg)
G1	10000	2	20,000
G2	9000	2	22,500
G3	6000	5	30,000
			72,500
Material availability			70,000
Shortage of material			2,500

Product	Demand	D. Labour (Hrs)	Total Requirement (Hrs)
G1	10,000.00	1.00	10,000.00
G2	9,000.00	1.50	13,500.00
G3	6,000.00	2.50	15,000.00
			38,500.00
D. Labour Hours availability			39,000.00

Therefore, Limiting factor is Direct Material. Because the maximum availability for the next month is only 70,000kg where it requires 72,500kg of Direct Material.

(04 marks)

b)

	G1	G2	G3
Selling price	580	850	1,500
Variable cost			
Material	120	150	300
Labour	250	375	625
Variable production OH	120	180	300
	490	705	1,225
Contribution per unit	**90**	**145**	**275**
Material requirement per unit	2	2.5	5
Contribution per material	45	58	55
Production ranking	**3**	**1**	**2**

Accordingly the production plan would be as follows;

Product	Production	Material requirement per unit (kg)	Total requirement (kg)
G2	9,000	2.5	22,500
G3	6,000	5	30,000
G1	8,750	2	17,500
Optimal Production Mix			**70,000**

(06 marks)

c)

Product	Sales	Contribution per unit	Total
G2	9,000.00	145.00	1,305,000.00
G3	6,000.00	275.00	1,650,000.00
G1	8,750.00	90.00	787,500.00
Total contribution			**3,742,500.00**
(-) Fixed cost			(1,425,000.00)
Profit			**2,317,500.00**

(03 marks)

(Total 25 marks)

Suggested Answers to Question Nine:

A) a)

Product - RX 1					
RS. 000	**Market promotion**	**Sales**	**Variable cost**	**Fixed cost**	**Cash flows**
Y0	(12,000)				**(12,000)**
Y1	--	8,000	(3,800)	(4,450)	**(250)**
Y2	--	17,000	(8,882.50)	(5,340)	**2,777.50**
Y3	--	36,000	(17,250)	(5,874)	**12,876**
Y4	--	60,000	(31,625)	(6,461.40)	**21,913.60**
Y5	--	72,000	(34,800)	(7,107.54)	**30,092.46**

Product - RX 2					
RS. 000	**Market promotion**	**Sales**	**Variable cost**	**Fixed cost**	**Cash flows**
Y0	(9,500)				(9,500)
Y1	--	8,000	(3,600)	(3,250)	1,150
Y2	--	22,400	(9,900)	(3,575)	8,925
Y3	--	27,610	(11,990)	(3,932.50)	11,687.50
Y4	--	33,780	(14,400)	(4,325.75)	15,054.25
Y5	--	37,860	(15,840)	(4,758.325)	17,261.625

(07 marks)

b) i) **Product RX1**

Rs. '000	**RX 1**	**DF**	
Y0	(12,000)	1	(12,000)
Y1	(250)	0.869	(217.25)
Y2	2,777.50	0.756	2,099.79
Y3	12,876	0.658	8,472.41
Y4	21,913.60	0.572	12,534.58
Y5	30,092.46	0.497	14,955.95

NPV = **25,845.48**

Product RX2

Rs. '000	**RX 2**	**DF**	
Y0	(9,500)	1	(9,500)
Y1	1,150	0.869	999.35
Y2	8925	0.756	6747.30
Y3	11,687.50	0.658	7690.37
Y4	15,054.25	0.572	8610.03
Y5	17,261.675	0.497	8579.05

NPV = **23,126.00**

(ii) RX1 will give a higher NPV. Therefore RX1 is recommended.

(01 mark)

B) a)

K_e = D_0 / P_0

K_e = (5.76 / 45) x 100

K_e = 12.80%

(02 marks)

b)

K_p = D_0 / P_0

K_p = (1 / 12.5) x 100

K_p = 8.00%

(02 marks)

c)

Kd = k (1 - t) / P0

Kd = [12.5 (1 - .28)] / 125 x 100

Kd = 7.20%

(02 marks)

d)

Rs. Mn.			
Source	**Market Value Rs.**	**COC %**	**COC Rs.**
Ordinary shares	9,000	12.8%	1,152
Preference shares	1,000	8%	80
Debentures	2,500	7.2%	180
	12,500		**1,412**

WACC = (1,412 / 12,500) x 100

= **11.30%**

(04 marks)

(Total 25 marks)

End of Section C

Notice :

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