



Association of Accounting Technicians of Sri Lanka

AA3 Examination - January 2019

Questions and Suggested Answers

Subject No : AA32

**MANAGEMENT ACCOUNTING AND FINANCE
(MAF)**

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THE ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA
EDUCATION AND TRAINING DIVISION

AA3 Examination - January 2019
(AA32) Management Accounting and Finance

SUGGESTED ANSWERS

SECTION – A

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

Suggested Answers to Question 01:

(Chapter 8 - Managing Personal Finances)

- a) **3 Factors affecting to the amount to be saved in a retirement plan**
- Life style of a person
 - Saving rate
 - How many work years remaining
 - Commitment to the dependents
 - The rate of return
 - Affordability to monthly/annual premiums
 - Life expectation
- b) **Benefit of retirement plan**
- Easy adjustment to expenses and financial needs post retirement.
 - Avoiding any dramatic change in your lifestyle post retirement from the job.
 - Providing financial protection to dependents.
 - Significant tax benefits on retirement pension plan account.

(Total 05 marks)

Suggested Answers to Question 02:

(Chapter 7 - Working Capital Management)

Rs. Million		31/03/2018	
Inventory residence period	$365\text{Days} / 5$	73.00	
Trade receivable residence period	$((50+60)/2)/220*365$	91.25	
		<hr/>	
		164.25	
Trade payable residence period	$365\text{Days} / 8$	(45.63)	
		<hr/>	
		118.63	<i>(05 marks)</i>
		<hr/>	

Suggested Answers to Question 03:

(Chapter 1 - Planning and Controlling Via Budgeting)

- a) **Advantages of benchmarking**
- It provides a basis of establish standard performance
 - It sets targets that are achievable
 - It helps for innovation
- b) **Limitations of benchmarking**
- It implies only one best way of doing things.
 - It gives past solutions for future problems
 - It is a catching up exercise
 - It depends on the accuracy of information of comparator entity
 - The benchmark might not be appropriate

(Total 05 marks)

Suggested Answers to Question 04:

(Chapter 3 - Relevant Costing – Decision Making)

a)

Selling Price		600	
(-) Variable cost			
Direct material	335		
Direct Labour	140		
Variable OH	65	(540)	
Contribution		60	

$$\begin{aligned} \text{PV Ratio} &= \frac{\text{Contribution}}{\text{Selling Price}} \quad \times \quad 100 \\ &= \frac{60}{600} \quad \times \quad 100 \\ &= \quad \underline{\underline{10\%}} \end{aligned}$$

b)

$$\begin{aligned} \text{BEP} &= \frac{\text{Fixed Cost}}{\text{Contribution}} \\ &= \frac{55 \times 1,020,000}{60} \\ &= \frac{56,100,000}{60} \\ &= \underline{\underline{935,000 \text{ Units}}} \end{aligned}$$

c)

$$\begin{aligned} \text{MOS} &= \text{Budgeted Sales} - \text{BEP Sales} \\ &= 1,020,000 - 935,000 \\ &= \underline{\underline{85,000 \text{ Units}}} \end{aligned}$$

(Total 05 marks)

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End of Section A

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

Suggested Answers to Question 05:

(Chapter 4 - Decision under Risk and Uncertainty)

a)

Demand Level	Low	Average	High	Expected Value
Probability	0.2	0.65	0.15	
Sell the product through agent	1,000,000	3,737,500	1,200,000	5,937,500
Operate directly owned restaurants	620,000	4,875,000	1,842,000	7,337,000
Operate directly owned sales outlets	1,079,000	4,793,750	1,428,900	7,301,650

	Expected Value	Probability of R&D being successful	Expected value
Sell the product through agent	5,937,500	0.25	1,484,375
Operate directly owned restaurants	7,337,000	0.25	1,834,250
Operate directly owned sales outlets	7,301,650	0.25	1,825,413

b)

Operating directly owned restaurant	1,834,250	
(-) Cost of developing the market	(1,050,000)	
Expected net financial impact	784,250	} Select the highest
Disposal value of preliminary research	400,000	

Note: It is assumed that above figures are forecasted profits.

As per the calculation above it is recommended to operate directly owned restaurant as it makes best financial impact.

(10 marks)

Suggested Answers to Question 06:

(Chapter 1 - Planning and Controlling Via Budgeting)

Rs.000	Budget		Flex Budget	Actual	Variance
Sales Qty	35,000		36,400	36,400	-
Sales Rs.	45,500	$45,500/35,000*36,400$	47,320	46,410	910A
Variable Cost					
D. Material	5,250	$5,250/35,000*36,400$	5,460	5,293	167F
Skilled Labour	3,500	$3,500/35,000*36,400$	3,640	3,665	25A
Unskilled Labour	16,800	$16,800/35,000*36,400$	17,472	16,758	714F
Variable OH	12,250	$12,250/35,000*36,400$	12,740	12,393	347F
	(37,800)		(39,312)	(38,108)	1203F
Contribution	7,700		8,008	8,302	294F
Fixed production OH	(5,750)		(5,750)	(5,767)	17A
Profit	1,950		2,258	2,535	277F

(10 marks)

Suggested Answers to Question 07:

(Chapter 3 - Relevant Costing – Decision Making)

a)

Product	SP end of FP	SP end of CP	Additional Income	Additional Variable cost	Additional Contribution	No. of Units	Total Incremental contribute	Incremental Fixed cost of further processing	Net profit of further processing
K1	218	175	43	42	1	240,000	240,000	(245,700)	(5,700)
K2	225	210	15	25	-10	126,000	(1,260,000)	(625,000)	(1,885,000)
K3	86	68	18	12	6	400,000	2,400,000	(830,500)	(1,569,500)

It is recommended to further process only the product K3.

b)

Product	Selling Price	Common VC	Additional Variable cost	Contribution	Qty	Total
K1	175	(140)	-	35	240,000	8,400,000
K2	210	(165)	-	45	126,000	5,670,000
K3	86	(60)	(12)	14	400,000	5,600,000
Estimated total contribution						19,670,000
(-) Common fixed cost						(12,680,000)
(-) Further processing fixed cost						(830,500)
Estimated profit						6,159,500

(10 marks)

End of Section B

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

Suggested Answers to Question 08:

(Chapter 6 - Sources of Capital and Cost of Capital)

A)

$$a) K_e = \frac{D_0 (1+g)}{P_0} + g$$

$$K_e = \frac{5 (1+0.1)}{55} + 0.1 \quad \times 100$$

$$K_e = \underline{\underline{20\%}}$$

(02 marks)

$$b) K_p = \frac{D_0}{P_0}$$

$$K_p = \frac{3.2}{30} \times 100$$

$$K_p = \underline{\underline{10.67\%}}$$

(02 marks)

$$c) K_d = \frac{K (1-T)}{P_0}$$

$$K_d = \frac{14 (1-0.3)}{78}$$

$$K_d = \frac{9.8}{78} \times 100$$

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

(02 marks)

d)

Source	Market Value (Rs.)	COC %	Rs. (Mn)
			COC Rs.
Ordinary shares	1,320	20%	264
Preference shares	225	10.67%	24
Debentures	780	12.56%	98
	2,325		386

$$\text{WACC} = \frac{386}{2,325} \times 100 = \underline{\underline{16.60\%}}$$

(03 marks)

B)

a)

(Chapter 5 - Investment Appraisal)

Machine P1

Year	Machine	Operating CF	Income Tax	Net Cash flows	COC @ 15%	Present Value
0	(12,500)			(12,500)	1.000	(12,500)
1	-	7,985	(1,458)	6,527	0.870	5,675.65
2	-	8,375	(1,575)	6,800	0.756	5,141.78
3	-	8,955	(1,749)	7,206	0.658	4,738.06
4	-	9,875	(2,025)	7,850	0.572	4,488.26
					NPV	7,544

W1 - Income tax payment

Year	Accounting Profit	Depreciation	Operating Cash flows	Capital Allowance	Taxable Profit	Income Tax @ 30%
1	4,860	3,125	7,985	(3,125)	4,860	1,458
2	5,250	3,125	8,375	(3,125)	5,250	1,575
3	5,830	3,125	8,955	(3,125)	5,830	1,749
4	6,750	3,125	9,875	(3,125)	6,750	2,025

Machine P2

Year	Machine	Operating CF	Income Tax	Net Cash flows	COC @ 15%	Present Value
0	(12,500)			(12,500)	1.000	(12,500)
1	-	6,475	(1,005)	5,470	0.870	4,756.52
2	-	6,886	(1,128)	5,758	0.756	4,353.65
3	-	7,300	(1,253)	6,048	0.658	3,976.33
4	-	7,850	(1,418)	6,433	0.572	3,677.80
5	-	8,280	(2,484)	5,796	0.497	2,881.64
					NPV	7,146

W2 - Income tax payment						
Year	Accounting Profit	Depreciation	Operating Cash flows	Capital Allowance	Taxable Profit	Income Tax @ 30%
1	3,975	2,500	6,475	(3,125)	3,350	1,005
2	4,386	2,500	6,886	(3,125)	3,761	1,128
3	4,800	2,500	7,300	(3,125)	4,175	1,253
4	5,350	2,500	7,850	(3,125)	4,725	1,418
5	5,780	2,500	8,280	-	8,280	2,484

(12 marks)

b)

	Machine P1	Machine P2
Life time	4 Years	5 Years
NPV	7,544	7,146
Annuity Factor @ 15%	2.855	3.352
AEV	<u>2,642.32</u>	<u>2,131.74</u>

(03 marks)

c) As per the computation above it is recommended to choose Machine P1 since it generates highest AEV in comparison to machine P2.

(01 marks)

(Total 25 marks)

Suggested Answers to Question 09:

(Chapter 2 - Planning and Controlling Via Advance Variances)

A) a)

(i)	Sales Price Variance	= Actual Quantity (Actual Price - Standard Price)	
	S	= 23,630 (3,300 - 3,420)	= 2,833,600 F
	Q	= 14,780 (5,500 - 5,380)	= 1,773,600 A
			= <u>1,062,000 F</u>

(02 marks)

(ii)	Sales Mix Variance	= Standard Price (Actual Qty. x Standard Mix - Actual x Actual Mix)
	S	= 3,300 [38,410 x (25,000/40,000) - 38,410 x (23,630/38,410)]
		= 3,300 (26,006.25 - 23,630)
		= <u>1,241,625 A</u>
	Q	= 5,500 [38,410 x (15,000/40,000) - 38,410 x (14,780/38,410)]
		= 5,500 (14,403.75 - 14,780)
		= <u>2,069,375 F</u>

Sales Mix Variance = 2,069,375 - 1,241,625

= 827,750 F

(04 marks)

- (iii) Sales Quantity Variance = Standard Price (Total Standard Sales Qty. x Standard Mix - Total Actual Sales Qty. x Standard Mix)
- S = 3,300 [40,000 x (25,000/40,000) - 38,410 (25,000/40,000)]
- = 3,300 (25,000 - 24,006.25)
- = **3,279,375 A**
- Q = 5,500 [40,000 x (15,000/40,000) - 38,410 x (15,000/40,000)]
- = 5,500 (15,000 - 14,003.75)
- = **3,130,875 A**
- Quantity Variance = 3,130,875 A + 3,279,978 A
- = **6,410,250 A** (04 marks)
- (iv) Sales Value Variance = 1,062,000 (F) + 827,750 (F) - 6,410,250 (A)
- = **4,520,500 A** (02 marks)

b)

(Chapter 2 - Planning and Controlling Via Advance Variances)

- Use of high quality material for the production / Minimum production stoppages
 - Purchase of high quality material / General Price increase in the market
 - Use of unskilled labour / Production stoppages
- (03 marks)

B) a)

(Chapter 3 - Relevant Costing – Decision Making)

Product	Demand	Skilled Labour (Hrs)	Total
T1	14,500	0.80	11,600
T2	26,000	0.60	15,600
T3	42,000	0.30	12,600
Total skilled labour hours required			39,800
Total skilled labour hours available			40,000
Excess			200

(04 marks)

Product	Demand	Unskilled Labour (Hrs)	Total
T1	14,500	1.50	21,750
T2	26,000	0.80	20,800
T3	42,000	0.70	29,400
Total unskilled labour hours required			71,950
Total unskilled labour hours available			65,000
Shortage			6,950

b)

	T1	T2	T3
Selling Price	7,400	4,500	3,100
(-) Variable Cost			
Direct material	3,470	2,160	1,185
Skilled Labour @300/-	240	180	90
Unskilled labour @240/-	360	192	168
Variable overhead	345	210	150
	4,415	2,742	1,593
Contribution	2,985	1,758	1,507
	1.50	0.80	0.70
Contribution per unskilled labour hour	1,990.00	2,197.50	2,152.86
Ranking	3	1	2

Product	Production Plan	Unskilled Labour (Hrs)	Total
T1	9,866.67	1.50	14,800
T2	26,000	0.80	20,800
T3	42,000	0.70	29,400
Total skilled labour hours required			65,000
Total skilled labour hours available			65,000

(06 marks)

(Total 25 marks)

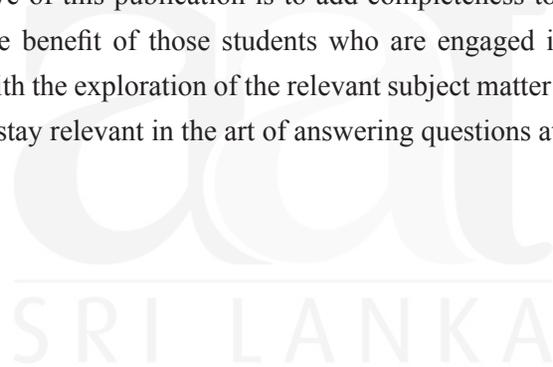
End of Section C

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