



Association of Accounting Technicians of Sri Lanka

AA3 Examination - January 2018

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 2018
(AA32) Management Accounting and Finance

SUGGESTED ANSWERS

SECTION – A

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

Suggested Answers to Question One:

(a) Earned income is any income that is generated by working.

- Ex. Salary earned from the employment.
 Consulting fees
 Owning a small business
 Any other activity that pays based on time

(03 marks)

(b) **Advantages**

- It is not required to have startup capital to earn an income.
- It helps to build up a saving for an investment to make a portfolio or passive income.

Disadvantages

- Once you stop working, you stop making money.
- Without a skill, it is difficult to make earn income.
- Earned income is taxed at higher rate comparatively.

(02 marks)

(Total 05 marks)

Suggested Answers to Question Two:

Financial Perspective

- Gross Profit Ratio
- Net Profit Ratio
- Return on Capital Employed
- Gearing Ratio
- Asset Turnover Ratio
- Debtors
- Creditors
- Sales growth

Customer Perspective

- Number of customer complains
- Customer Attraction for the new products (sales ratio by products)
- Number of repeated customers
- Overall customer satisfaction
- New customers through recommendation from exist customers

(05 marks)

Suggested Answers to Question Three:

		2016/17	
Inventory residence period	365/5	73.00	Days
Trade receivables residence period	365/8	45.63	Days
		118.63	
(-) Trade payables residence period		(20.00)	
Length of Woking capital period		98.63	Days

98.6 Days

(05 marks)

Suggested Answers to Question Four:

(a)

Year	Profit	Depreciation	Cash Flows	C.C.F
0			(850.00)	(850.00)
1	90	150	240	(610.00)
2	180	150	330	(280.00)
3	170	150	320	40.00
4	20	150	420	
			(170 + 250)	

NB: The scrap value is considered as cash inflow in end of 04th year.

(b) **Payback Period**

$$\begin{aligned}(\text{PBP}) &= 2 \text{ Years} + 280/320 * 12 \text{ Months} \\ &= \underline{\underline{2 \text{ years and } 10.5 \text{ months}}}\end{aligned}$$

(Total 05 marks)

End of Section A

SECTION –B

Three (03) compulsory questions.

(Total 30 marks)

Suggested Answers to Question Five:

(Rs. '000)

Rs.000	Most Likely	Best Case Scenario	Worst case Scenario
Sales	67,320	71,760	62,856
Variable cost	(28,544) (233.20 x 122.40)	(28,829) (231 x 124.80)	(27,657) (237.60 x 116.40)
Contribution	38,776	42,931	35,199
Fixed cost	(15,900)	(15,750)	(16,200)
Profit	22,876	27,181	18,999

Working

	Most Likely		Best Case Scenario		Worst case Scenario	
Sales Qty.	120,000*1.02	122,400	120,000*1.04	124,800	120,000*0.97	116,400
Selling price	Rs500*1.1	550.00	Rs500*1.15	575.00	Rs500*1.08	540.00
Sales Value (Rs. '000)	67,320 (122,400*550)		71,760 (124,800*575)		62,856 (116,400*540)	
Variable cost	Rs220*1.06	233.20	Rs220*1.05	231.00	Rs220*1.08	237.60
Fixed cost (Rs. '000)	Rs15,000*1.06	15,900	Rs15,000*1.05	15,750	Rs15,000*1.08	16,200

(10 marks)

Suggested Answers to Question Six:

(a) Labour

Product	Demand	Labour requirement (Hrs)	Total Requirement Hrs
Juice A	4,000.00	1.00	4,000.00
Juice B	3,800.00	1.20	4,560.00
Juice C	4,500.00	0.80	3,600.00
			12,160.00
Labour Hours availability			(11,000.00)
Shortfall			1,160.00

Machine hours

Product	Demand	Machine requirement (Hrs)	Total Requirement Hrs
Juice A	4,000.00	0.40	1,600.00
Juice B	3,800.00	0.60	2,280.00
Juice C	4,500.00	0.30	1,350.00
			5,230.00
Machine Hours availability			(7,000.00)
Excess			1,770.00

Accordingly labour hours is the limiting factor.

(04 marks)

(b)

	Juice A	Juice B	Juice C
Selling price	8,500	12,500	6,300
Variable cost			
Material	3,800	6,900	3,200
Labour	400	480	320
Variable production OH	400	400	400
	(4,600)	(7,780)	(3,920)
Contribution per unit	3,900	4,720	2,380
Labour requirement per unit (Hrs)	1.00	1.20	0.80
Contribution per labour hour	3,900.00	3,933.33	2,975.00
Production Ranking	②	①	③

Product	Demand	Labour requirement (Hrs)	Total Requirement Hrs
Juice A	4,000.00	1.00	4,000.00
Juice B	3,800.00	1.20	4,560.00
Juice C	3,050.00	0.80	2,440.00
			11,000.00

Optimal Production Mix

A	=	4,000
B	=	3,800
C	=	3,050

(06 marks)

(Total 10 marks)

(Rs. '000)

Suggested Answers to Question Seven:

	Machine Cost	Operating profit	Tax Payments	Cash flows	COC @ 10%	Present Value
Y0	(9,000)			(9,000)	1.000	(9,000)
Y1	-	3,900	(462)	3,438	0.909	3,125
Y2	-	4,300	(574)	3,726	0.826	3,078
Y3	-	4,600	(658)	3,942	0.751	2,960
Y4	-	4,900	(742)	4,158	0.683	2,840
Y5	-	4,400	(1,232)	3,168	0.621	1,967
					NPV	4,970

As per the computation above it is recommended to invest in the machinery as it generates a positive NPV of Rs. 4,970/-.

Workings

(Rs. '000)

	Y1	Y2	Y3	Y4	Y5
PBT	2,100	2,500	2,800	3,100	2,600
Depreciation	1,800	1,800	1,800	1,800	1,800
Cash Flows	3,900	4,300	4,600	4,900	4,400
Capital Allowance	(2,250)	(2,250)	(2,250)	(2,250)	-
Taxable Profit	1,650	2,050	2,350	2,650	4,400
Tax Payment at 28%	462	574	658	742	1,232

End of Section B

Two (02) compulsory questions.

(Total 50 marks)

Suggested Answers to Question Eight:

(A)

	Rs.
Sales (9,000 x 200)	1,800,000
Materials - Scrap value (1,400m x 45)	(63,000)
Material to be purchased [(9,000 x 0.4 - 1,400) x 250]	(550,000)
Labour :	
Wages - not a relevant cost	-
Overtime (500 x 160 x 1.5)	(120,000)
OT for regular order (300 x 160 x 1.5)	(72,000)
Supervisor - Fixed salary (not relevant)	-
Variable overheads (2,250 x 80) (W-01)	(180,000)
Machine hours (8,500 x 6)	(51,000)
Design Cost - (sunk cost)	-
Profit	764,000

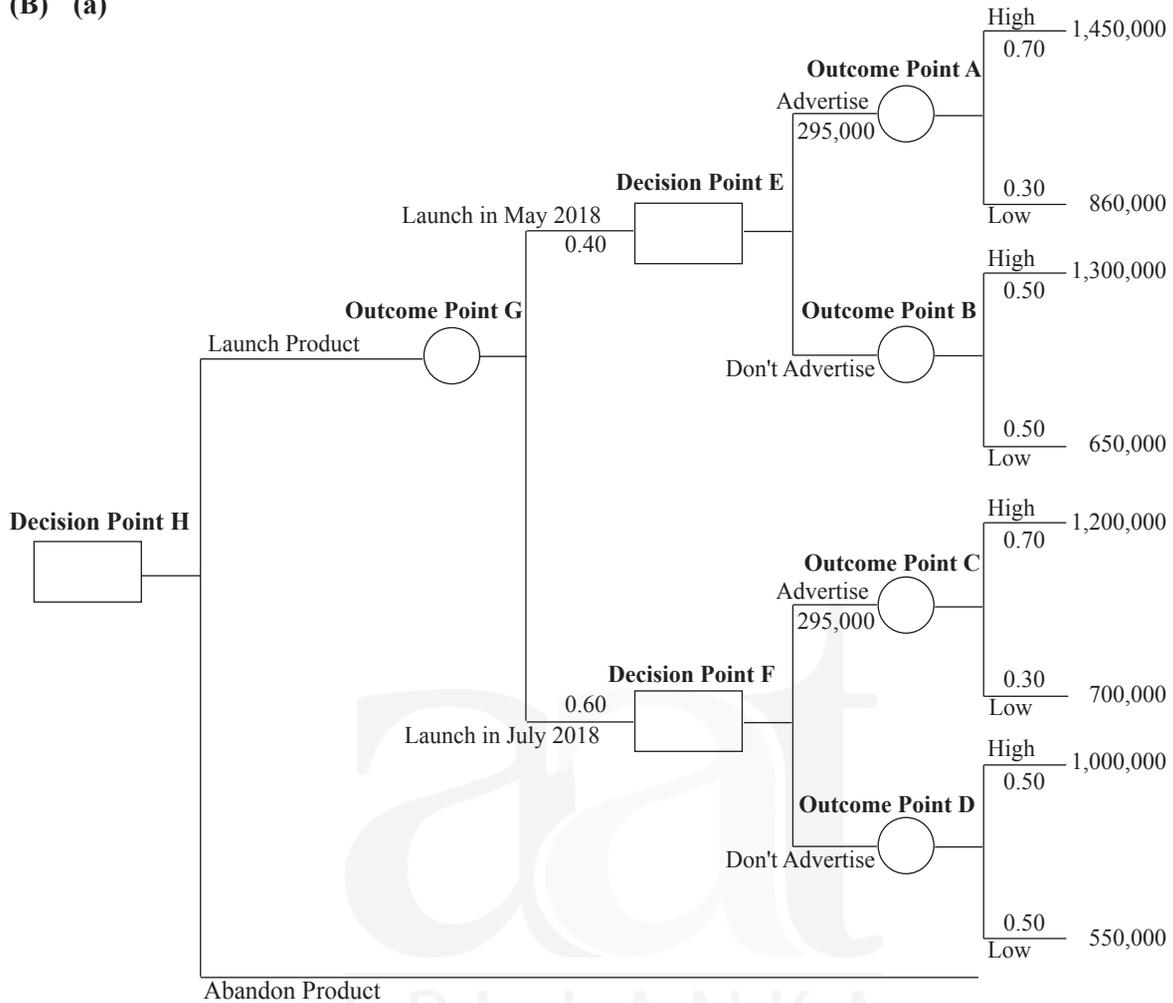
Order should be accepted.

(W-01)

$$\begin{aligned} \text{Labour hours} &= \frac{15 \times 9,000}{60} \\ &= \underline{\underline{2,250 \text{ hours}}} \end{aligned}$$

(12 marks)

(B) (a)



(09 marks)

(b)

Outcome point A = Expected total contribution
 (with advertising) = $[(1,450,000 \times 0.7) + (860,000 \times 0.3)]$
 = 1,273,000

Advertising Cost = 295,000
 Net Contribution = 978,000

Outcome point B = Expected total contribution
 (without advertising) = $(1,300,000 \times 0.5) + (650,000 \times 0.5)$
 = 975,000

(04 marks)
 (Total 25 marks)

Suggested Answers to Question Nine:

(A) (a)

i) Sales Price Variance = Actual Qty. x (Actual Price - Standard Price)
= 10,850 x (9,135,700/10,850 - 800)
= 10,850 (842-800)
= **455,700 Favourable**

ii) Sales Volume Margin Variance = Budgeted Margin x (Actual Qty. - Budgeted Qty.)
= 130 x (10,850 - 11,000)
= **19,500 Adverse**

iii) Direct Material Price Variance = Actual Usage x (Standard Price - Actual Price)
= 41,360 x (75 - (3,308,800/41,360))
= 41,360 (75 - 80)
= **206,800 Adverse**

iv) Direct Material Usage Variance = Standard Price x (Standard Use - Actual Use)
= 75 x (10,850*4Kg - 41,360)
= 75(43,400-41,360)
= **153,000 Favourable**

v) Direct Labour Rate Variance = Actual Hours Paid x (Standard Rate - Actual Rate)
= (Rs.2,681,800/220) x (250 - 220)
= 12,190 x 30
= **365,700 Favourable**

vi) Direct Labour Efficiency Variance = Standard Rate x (Standard Hrs - Actual Hrs)
= 250 x (10,850 - 12,190)
= **335,000 Adverse**

(12 marks)

(b)

Operating statement			Rs.
Budgeted contribution	11,000*130/-		1,430,000
Sales Margin Volume Variance			(19,500)
Budgeted contribution of actual sales			1,410,500
Variable cost	A	F	
Sales price variance		455,700	
D. Material Price Variance	206,800		
D. Material Usage Variance		153,000	
D. Labour Rate Variance		365,700	
D. Labour Efficiency Variance	335,000		
VOH Expenditure variance	75,950		
VOH Efficiency variance	-	99,050	
Total variable cost	617,750	1,073,450	455,700
Actual Contribution			1,866,200

(05 marks)

(B)

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

$$K_e = \frac{2.8 (1+.05)}{21} + .05 \times 100$$

$$K_e = \underline{19\%}$$

(03 marks)

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

$$K_p = \frac{1.2}{12} \times 100$$

$$K_p = \underline{10\%}$$

(02 marks)

(c) Cost of Listed Debentures:

Year		Cash Flow	Discounting Factor @ 10%	DCF	Discounting Factor @ 15%	DCI
0	Issuing Debentures	98	1	98	1	98
1-2	Payment of Interest	(12)	1.735	(20.82)	1.625	(19.5)
2	Redemption	(100)	0.826	(82.6)	0.756	(75.6)
				(5.42)		2.9

$$\text{IRR} = 15\% - \frac{5\%}{8.32} \times 2.9$$

$$= \underline{\underline{13.2\%}}$$

OR

$$\text{IRR} = 10\% + [(5\% / 8.32) \times 5.42]$$

$$= \underline{\underline{13.2\%}}$$

(03 marks)
(Total 25 marks)

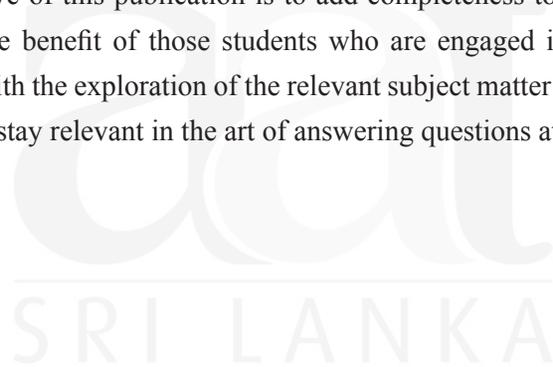
End of Section C

Notice :

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