Association of Accounting Technicians of Sri Lanka

July 2016 Examination - AA3 Level

Questions and Suggested Answers
Subject No : 32

MANAGEMENT ACCOUNTING AND FINANCE (MAF)

A publication of the Education and Training Division

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

AA3 Examination - July 2016
(32) Management Accounting and Finance

SUGGESTED ANSWERS

<div align="right">

SECTION – A

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

Suggested Answers to Question One:

a) A personal budget is a financial plan that allocates future personal income towards expenses, savings and debt repayment. Past spending and personal debt are considered when creating a personal budget. There are several methods and tools available for creating, using and adjusting a personal budget. For example, jobs are an income source, while bills and rent payments are expenses.

b) i)   It increases effectiveness in obtaining, using and protecting your financial resources throughout your life.

    ii) It increases the control of your financial affairs by avoiding excessive debt, bankruptcy.

    iii) It improves the personal relationship resulting from well-planned and effectively communicated financial decisions.

    iv) It helps for a sense of freedom from financial worries by looking to the future, anticipating expenses and achieving your personal economic goal.

(Total 05 marks)

Suggested Answers to Question Two:

a) i)   Poor collection from the customers.

    ii) Reduction of cash sales.

    iii) Settlement of creditors in order to get a settlement discount.

    iv) Purchase of assets on cash.

b) i)   Strengthening the collection from the debtors.

    ii) Delay the payments to creditors.

    iii) Obtain a short term bank facility.

    iv) Refinancing the assets purchased.

    v)   Delay further investments or purchase of assets on cash. *(Total 05 marks)*

Suggested Answers to Question Three:

PD Limited
Optimum Production Mix August 2016

Production plan	No. of hours per unit	Demand	Labour hours
D	1	120,000.00	120,000.00
P	1.5	140,000.00	210,000.00
			330,000.00
Aggregate contribution			

Product Mix
D   -   120,000 units
P   -   140,000 units

Workings

W1- Calculation of shortage	P	D	Total
Maximum demand	150,000	120,000	270,000
Labour hours per unit	1.5	1	
	Rs300/200	Rs200/200	
Total labour hours required	225,000	120,000	345,000
Available labour hours			330,000
Shortage of labour hours			(15,000)

W2-Computation of contribution to limiting factor	P	D
Selling price	920.00	725.00
Less : Variable cost		
Material	80.00	120.00
Labour - Skilled	300.00	200.00
Labour - Unskilled	255.00	170.00
Variable production OH	90.00	70.00
	(725.00)	(560.00)
Contribution per unit	**195.00**	**165.00**
No. of S. labour hours per unit	1.50	1.00
Contribution per S. labour hour	130.00	165.00
Rank	**2**	**1**

(Total 05 marks)

Suggested Answers to Question Four:

a)   **Computation of ROCE**

$$\text{ROCE} = \frac{\text{PBIT}}{\text{Equity} + \text{Non-current Liabilities}}$$

		2016	2015
Profit Before Interest and Tax	A	1,468,500	1,240,200
Equity + Non-current Liabilities	B	17,800,000	15,600,000
ROCE	**A/BX100**	**8.25%**	**7.95%**

b)   **Advantages of ROCE**
   • It measures how well the business has utilized its funds invested in.
   • It is easy to calculate and the information are readily available on the financial statements.
   • It measures the overall performance of business.
   • It is enable to make comparison between different sizes of businesses.

(Total 05 marks)

End of Section A

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

Suggested Answers to Question Five:

(a)   If price is Rs. 380/-

Expected demand	=	(70,000 x 70%) + (90,000 x 30%)
	=	49,000 + 27,000
	=	**76,000 units**

If price is Rs. 360/-

Expected demand	=	(70,000 x 60%) + (90,000 x 40%)
	=	42,000 + 36,000
	=	**78,000 units**

Price	400	380	360
Demand in units	50,000	76,000	78,000
Sales	20,000,000	28,800,000	28,080,000
Variable cost	(50 x 250)	(250 x 76)	(78 x 250)
	(12,500,000)	(19,000,000)	(19,500,000)
Contribution	7,500,000	9,880,000	8,580,000
Fixed cost	(4,000,000)	(4,000,000)	(6,000,000)
Profit	**3,500,000**	**5,880,000**	**2,580,000**

(b)   It is recommended to make the selling price Rs. 380/- as it gives the highest expected profit.

(Total 10 marks)

Suggested Answers to Question Six:

a) Operating Statement for the year 2016

Rs.000	Budget			Flex Budget	Actual	Variance
Volume	**20,000**			**18,000**	**18,000**	-
Sales	425,000	425,000/20,000*18,000		382,500	416,000	33,500 F
Variable cost						
Material cost	150,000	150,000/20,000*18,000		135,000	160,000	25,000 A
Labour cost	75,000	75/20,000*18,000		67,500	80,000	12,500 A
Variable overhead	25,000	25/20,000*18,000		22,500	18,000	4,500 F
Total variable cost	**250,000**			**225,000**	**258,000**	**33,000 A**
Contribution	**175,000**			**157,500**	**158,000**	**5000 F**
Fixed Production	30,000			30,000	25,000	5000 F
Fixed Admin cost	50,000			50,000	55,000	5000 A
Fixed Distribution	45,000			45,000	60,000	15,000 A
Total fixed cost	**125,000**			**125,000**	**140,000**	**15,000 A**
Profit	**50,000**			**32,500**	**18,000**	**14,500 F**

b) **Limitation of budgetary control**

•   The budget plan is based on estimates and forecasting which cannot be considered to be an exact science. Therefore the budget progamme may not be accurate and ineffective.

•   Future uncertainty and changes which was identified later on will be incorporated in the budget later on therefore there will be significant variance with budgeted figures and actuals.

•   This is cumbersome and time consuming process.

•   The management commitment is important for a successful budgetary control system.

(Total 10 marks)

Suggested Answers to Question Seven:

a)

Rs.000				
Source	**Market Value Rs.**	**COC %**	**Weightings**	**WACC**
Ordinary shares	900,000.00	18.19%	82%	14.88
Retained Earnings	-	-	-	
Debt	200,000.00	15.00%	18%	2.73
	1,100,000.00		**100%**	**17.61**

WACC = 17.61%

Working

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

$$K_e = \frac{25\,(1.15)}{900} + 15\%$$

$$K_e = 18.19\%$$

b) i)   It minimizes the weight and average cost of capital of the business.

ii) There is no dilution of existing control of the business. (No loss of control).

iii) There is no additional influence on the company culture and operation by the equity holders.

iv) The interest is tax deductible.

v)   It does not need to pay more interest when the company earns more profit.

vi) Repayment of debt is profitable in inflationary situation.

c) 1)   Cost of the source of funds

2)   Profitability (ROCE and ROE)

3)   Financial risk

4)   Deviation of Ownership

5)   Asset base

6)   Duration

7)   Gearing

8)   Legal restrictions

(Total 10 marks)

End of Section B

Two (02) compulsory questions.

(Total 50 marks)

Suggested Answers to Question Eight:

A)

a)   The relevant cash flows of the new for the 5 years are as follows;

Rs.000						
Year	**Y0**	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**
Purchase of New machine	(100,000)					
Scrap value of new machine						14,000
Sale proceed of old machine	6,000					
Increase in sales		90,000	60,000	75,000	105,000	120,000
Increase in variable cost		(45,000)	(30,000)	(37,500)	(52,500)	(60,000)
Increase in fixed cost		(22,800)	(22,800)	(22,800)	(22,800)	(22,800)
Net Cash Flows	(94,000)	22,200	7,200	14,700	29,700	51,200

Note –   It is assumed that the fixed cost excluding the depreciation of new machine is an incremental cost.

b)

i)   Computation of NPV of new machine

Rs.000	**Cash flows**	**COC @ 20%**	**Present Value**
Y0	(94,000)	1.000	(94,000)
Y1	22,200	0.833	18,492.60
Y2	7,200	0.694	4,996.80
Y3	14,700	0.579	8,511.30
Y4	29,700	0.482	14,315.40
Y5	51,200	0.402	20,582.40
		NPV	(27,101.5)

ii)

$$\text{IRR} = \text{A} + \frac{\text{NPVa}}{\text{NPVa} - \text{NPVb}} \times \text{B-A}$$

$$= 10\% + \frac{(4{,}747.00)}{(4{,}747) - (27{,}102)} \times 20\%{-}10\%$$

$$= 10\% + (0.2124) \times 0.1$$

$$= \underline{7.88\%}$$

Working

Rs.000	Cash flows	COC @ 20%	Present Value	COC @ 10%	Present Value
Y0	(94,000)	1.000	(94,000)	1.000	(94,000)
Y1	22,200	0.833	18,492.60	0.909	20,182
Y2	7,200	0.694	4,996.80	0.826	5,950
Y3	14,700	0.579	8,511.30	0.751	11,044
Y4	29,700	0.482	14,315.40	0.683	20,285
Y5	51,200	0.402	20,582.40	0.621	31,791
		NPV	(27,102)		(4,747)

c)   It is recommended not to invest in the new machine as it generates negative net present value of Rs27.12Mn at the discount rate of 20%.

B)

Description	Note	Rs.	Rs.
Incremental income	125Units @ Rs900/-		112,500.00 *(Relevant income, market selling price)*
(-) Incremental cost			
Material	1kg x 125 Units @ Rs660/-		82,500.00 *(Market price of direct material is relevant)*
Direct labour	0.5 hours * 125 Units	62.50	
	(-) Existing Idle hours	(40.00)	
	Labour shortfall @ Rs500/-*1.5	22.50	16,875.00 *(Idle hours not relevant, because wages have been guaranteed for it only the overtime hours is relevant)*
Variable OH	62.5Hours @ Rs60/-		3,750.00 *(Relevant, because it is the normal rate)*
Fixed OH	Not an incremental cost		- *(Not relevant for decision making)*
Total variable cost			(103,125.00)
Incremental profit			**9,375.00**

Switch Limited should accept the special order as it generates additional profit of Rs 9,375/- on this order

(Total 25 marks)

A

a)

Computation of Actual Profit	Note	Rs.000
Production and sales	1,800 Units @ Rs13,000/-	23,400
Direct Material - A	17,800Kg @ Rs500/-	(8,900)
Direct Labour	7,100Hours @ Rs200/-	(1,420)
Prime Cost		**(10,320)**
Variable OH		(960)
Fixed OH		(1,600)
Total cost		**(12,880)**
Actual profit		**10,520**

Note – It is assumed that fixed cost absorbed is equal to actual fixed cost incurred.

b) **The variance calculated below in Rs.000**

i	Sales Price Variance	=	(Act Price - Std. Price) x Act. Sales	
		=	(13,000 - 12,000) x 1,800 units	
		=	1,800.00 F	

ii	Sales Volume Variance	=	Std price (Std. Qty. - Actual Qty.)	
		=	12,000 (2,000 - 1,800)	
		=	2,400.00 A	

iii	Direct Material Price Variance	=	(Std Price - Act. Price) x Act. Usage	
		=	(400 - 500) x 17,800Kg	
		=	1,780.00 A	

iv	Direct Material Usage Variance	=	(Std Usage - Act. Usage) x Std. Price	
		=	(1,800x10Kg - 17,800Kg) x 400	
		=	80,000 F	

v	Direct Labour Rate Variance	=	(Std Rate - Act. Rate) x Act. Hours	
		=	(150 - 200) x 7,100 Hours	
		=	355,000 A	

vi	Direct Labour Efficiency Variance	=	(Std Hours - Act. Hours) x Std. Rate	
		=	(7,200 Hrs - 7,100 Hrs) x 150	
		=	15,000 F	

vii	VOH Expenditure Variance	=	(Act. Hours sat Std. Rate - Act. Hours at Act. Rate)	
		=	7,100 (100) - 960,000	
		=	250,000 A	

viii	VOH Efficiency Variance	=	(Std Hours - Act. Hours) x Std. Rate	
		=	(7,200 Hrs - 7,100 Hrs) x 100	
		=	10,000 F	

(B) **Option I**
    Discontinue Product C and get the saving of Rs. 6 million.

	A	B	C	Total
Sales	25	30	-	55
VC	(10)	(15)	-	(25)
Contribution	15	15	-	30
H/O Exp.	(7.5)	(9)	-	(16.5)
Saving on discontinued	-	-	6	6
	7.5	**6**	**6**	**19.5**

Assumption : It is assumed that when the product C is discontinued head office expenses of product C will not be borne by other 2 products.

    Option II
    Discontinue Product C and transfer those resources to product B

	A	B	C (Product B)	Total
Sales	25	30	18.9	73.9
VC	(10)	(15)	(10.5)	(35.5)
Contribution	15	15	8.4	38.4
H/O Exp.	(7.5)	(9)	(5.67)	(22.17)
	7.5	**9**	**2.73**	**16.23**

Assumption : New product B will require to incease 30% of its sales as H/O Expenses, if they are to produce new product B with the resources of product C

Conclusion : DPL should discontinue product C and get the saving of Rs. 6 million without producing new product B.

Workings

W1 Selling price of new product B   = 150 x 90%   = 135
W2 Total variable cost of new product B = (15,000,000 / 200,000) x 140,000 = 10.5 million
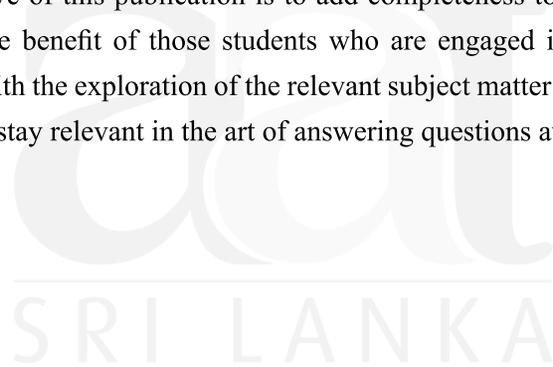W3 H/O expenses of new product B   = 18.9 x 30%   = 5.67

End of Section C

Notice :

These answers complied and issued by the Education and Training Division of AAT Sri Lanka constitute part and parcel of study material for AAT students.

These should be understood as Suggested Answers to question set at AAT Examinations and should not be construed as the "Only" answers, or, for that matter even as "Model Answers".

The fundamental objective of this publication is to add completeness to its series of study texts, designs especially for the benefit of those students who are engaged in self-studies. These are intended to assist them with the exploration of the relevant subject matter and further enhance their understanding as well as stay relevant in the art of answering questions at examination level.