THE INSTITUTE OF CHARTERED ACCOUNTANTS OF SRI LANKA

SUGGESTED SOLUTIONS

KE2 – Management Accounting Information

March 2016

SECTION 01

Answer 01

1.1

Learning Outcome/s: 1.2.1
Source documents are internal documents. **Correct Answer C**

1.2

Learning Outcome/s: 1.2.2
Cost of sales under FIFO is not reflected at recent prices. **Correct Answer B**

1.3

Learning Outcome/s: 1.3.1	
Product X = 4*3hours =	12.00
Product Y = 4*7hours =	28.00
Total hours	40.00
Per hour rate	250.00
Pay for the week	10,000.00
Correct Answer B	

1.4

Learning Outcome/s: 1.4.1		
Total fixed overheads	=	136,000
Labour utilised (25,000+9,000)	=	34,000
Fixed overheads for the Job1	=	100,000
Value of WIP of Job1 = 20,000+34,300+25,000+100,000 =		179,300
Correct Answer B		

1.5

Learning Outcome/s: 2.5.1
The representative sample is given by "C". **Correct Answer C**

1.6

Learning Outcome/s: 3.1.1
Statement (i) is true since fixed cost is absorbed to products in absorption costing. Statement (ii) is false since marginal costing makes fictitious losses when there are no sales. Statement (iii) is also false since fixed costs are charged in full as a period cost when calculating operating profit based on marginal costing. **Correct Answer A**

1.7

Learning Outcome/s: 3.1.3
The increased profit in absorption system = 850,000-550,000 = 300,000 This difference is due to the overhead absorbed in stock movement. The stock movement = 15,000-12,000 = 3,000 Overhead absorption rate per unit (Rs.) = 300,000/3,000 = 100 **Correct Answer C**

1.8

Learning Outcome/s: 4.2.3
Correct Answer B

1.9

Learning Outcome/s: 5.2.2		
Actual profit (Rs.)	2.50	million
Less: favourable variances		
Selling price	(0.18)	
Total material cost	(0.35)	
Fixed overhead expenditure	(0.04)	
Add: adverse variances		
Sales volume contribution	0.06	
Total labour cost	0.31	
Total variable overhead cost	0.05	
Budgeted profit (Rs.)	2.35	million
Correct Answer B		

1.10

Learning Outcome/s: 7.2.2
n = 5 b = $\frac{n\sum XY - \sum X\sum Y}{n\sum X^2 - (\sum X)^2} = \frac{(5*8{,}104) - (100*400)}{(5*2{,}040) - 100^2} = 520/200 = 2.6$ a = $(\sum Y)/n - b\,(\sum X)/n = 400/5 - (2.6*100/5) = 28$ Y = 28 + 2.6X **Correct Answer A**

(Total: 20 marks)

Answer 02

2.1

Learning Outcome/s: 1.2.1/1.2.2			
(a)	TRUE	(d)	TRUE
(b)	TRUE	(e)	FALSE
(c)	FALSE	(f)	TRUE

2.2

Learning Outcome/s: 1.4.1
■ The undertaking, which adopts service costing, does not produce any tangible goods. E.g., Transport service. **(Intangibility)**
■ The use of material is very low in "service" costing and a majority contains cost for services.
■ The cost per unit can be simple (electricity) or composite (cost per patient in a hospital).
■ Cost are usually computed period-wise.
■ Service costing can be used for services rendered internally (example - hospital) or externally (transport service).
■ **Simultaneity** - Several customers can be served at the same time. Ex. electricity, training class.
■ **Heterogeneity** - the service is diverse and not comparable in kind. Transport service, hospital service
■ **Perishability** - cannot save for the future.

2.3

Learning Outcome/s: 1.4.2	
	Rs.
Direct materials (3*500)	1,500
Direct labour (250*4)	1,000
Production overheads (4,000,000/20,000*4)	800
Production cost	3,300
Selling and distribution overheads (3mn/6mn*3300)	1,650
Total cost of the job	4,950
Markup (20%)	990
Price to be charged	5,940

2.4

Learning Outcome/s: 3.1.2/3.1.1	
Cost of the machine per hour = (500,000 - 50,000)/10,000 =	45.00
Repair and maintenance = 80,000/10,000 =	8.00
Power 2.50 *10	25.00
Rate per hour (Rs.)	78.00
For selecting the 10,000 hours correctly	

2.5

Learning Outcome/s: 3.2.1
■ Fixed production overheads are considered fixed in the short-run. However, **it has some components, which will vary based on different cost drivers other than output.** ■ The ABC system attempts to identify such activities and assigns fixed production overheads to each product based on utilisation of activity drivers by each product. ■ Therefore, the ABC system assigns production overheads to products in a more realistic way, which will result in accurate product pricing.

2.6

Learning Outcome/s: 3.2.2	
Machinery maintenance cost (3mn/30,000)*0.5 =	50.00
Material ordering cost (1.5mn/1500)*0.002 =	2.00
Standard fixed cost per unit of product P	52.00

2.7

Learning Outcome/s: 7.1.2
(a) Rent expenditure for the next year is not a discretionary item and basically depends on what we paid for this year. In other words, the next year's rent will be this year's rent with an increment. Therefore, incremental budgeting is preferable in this case. (b) Training and development expenditure is more discretionary in nature. The number of training programmes for the following year will not be based on the number of programmes held this year. It will rather be based on the requirements of the following year. Therefore, zero based budgeting is more suitable for making budgets for such expense categories.

2.8

Learning Outcome/s: 7.2.1			
y = 26,000 + 3,100x			
Quarter ending March 2016 = 9th time period			
Quarter ending June 2016 = 10th time period			
Therefore, sales for these two quarters are;			
		Seasonality	Sales (units)
March 2016	53,900	70%	37,730
June 2016	57,000	120%	68,400

2.9

Learning Outcome/s: 7.3.1		
	May-16	**Jun-16**
Cash sales (30%*570,000)	171,000	186,000
Debtors - March (500,000*70%*80%)	280,000	336,000
Debtors - April (600,000*70%*20%)	84,000	79,800
Total receipts	**535,000**	**601,800**

2.10

Learning Outcome/s: 7.4.1				
	Flexed budget	**Actual cost**	**Variance (Rs.)**	
DM	840,000	936,000	96,000	Adverse
DL	648,000	732,000	84,000	Adverse
VOH	144,000	132,000	12,000	Favourable

(Total: 30 marks)

SECTION 2

Answer 03

Relevant Learning Outcome/s: 1.1.1/1.1.2/1.1.3

(a)

- In the short-run, the fixed production overheads are fixed and do not change with the level of production.
- Profit per unit includes a part of such fixed production overheads, which does not change based on decisions taken by the management.
- The contribution per unit includes only variables, which vary according to the level of production. Therefore, these variables vary in the short-run.
- Accordingly, the management should concentrate only on variable income and costs rather than fixed income/costs in the short -run in order to see whether the decision taken increases the contribution in the short-run.

(b)

	Rs. '000	Rs.
Highest at 85,000 units	57,500	
Step up cost	(5,000)	
Without step-up cost	52,500	
Lowest at 55,000units	37,500	
Total variable		
(85,000 - 55,000) = 30,000 units	15,000	
Variable cost per unit (15mn/30,000)		500

	At 75,000	At 90,000
Variable cost at Rs. 500 per unit	37,500	45,000
Fixed cost	10,000	10,000
Step up fixed cost	-	5,000
Total cost	47,500	60,000

(Total 10 marks)

Answer 04

Relevant Learning Outcome/s: 2.4.1/2.4.2

(a)

Selling price Rs.	Variable cost Rs.	Contribution per unit Rs.	Sales quantity	Total contribution (Rs.000)	Fixed cost (Rs. 000)	Profit (Rs.000)	Joint probability	**Expected profit (Rs. 000)**
1000 (0.6)	900	100	100,000 (0.6)	10,000	(12,000)	(2,000)	0.36	(720.00)
1000(0.6)	900	100	120,000 (0.4)	12,000	(12,000)	-	0.24	-
1200(0.4)	900	300	100,000 (0.8)	30,000	(12,000)	18,000	0.32	5,760.00
1200(0.4)	900	300	120,000 (0.2)	36,000	(12,000)	24,000	0.08	1,920.00
							1.00	**6,960.00**

Alternate 01

	P=1000 (0.6)		**P=1200 (0.4)**		**Expected profit**
	120,000 (0.4)	**100,000(0.6)**	**120,000(0.2)**	**100,000(0.8)**	
VC=900	-	(2,000,000)	24,000,000	18,000,000	**6,960,000**
	(0.6*0.4)=0.24	(0.6*0.6)=0.36	(0.4*0.2)=0.08	(0.4*0.8)=0.32	

Alternate 02

				VC (Rs.)	Contribution per unit	Total contribution (Rs.000)	Fixed cost (Rs. 000)	Profit (Rs.000)	Joint probability	**Expected profit (Rs.000)**
SG-01			120,000(0.4)	900	100	12,000	12,000	-	0.24	-
	Rs. 1,000(0.6)		100,000(0.6)	900	100	10,000	12,000	(2,000)	0.36	(720)
										-
			120,000(0.2)	900	300	36,000	12,000	24,000	0.08	1,920
	Rs.1,200(0.4)		100,000(0.8)	900	300	30,000	12,000	18,000	0.32	5,760
										6,960

(b) Expected profit =Rs.6,960,000

(c) Probability of achieving profit above 2million is 0.32 (32%)

The probability is less than 60%. Therefore the product should not be introduced to the market.

(d) 1-0.36= 0.64 (64%)

Answer 05

Relevant Learning Outcome/s: 5.1.5/5.1.2

(a)
- It estimates the cost per unit, which provide a useful input to management decisions such as pricing, inventory valuation.
- It provides challenging targets for the management and motivates them.
- It assists in setting budgets and forecasts.
- It assists in evaluating performance of the management.
- It acts as a control device by highlighting the deviations from the expected levels.

(b) Ideal Standards

These are based on perfect working conditions with no wastages, idle time, and breakdowns etc. Ideal variances may de-motivate staff since they always result in adverse variances with the actual results.

Attainable Standards

These standards are set based on that the standard amount of work is carried out efficiently, machines properly operated and materials are properly used, after making some allowances for wastage and inefficiencies.

(c)
- As stated, the standard costing method is more suitable for operations of repetitive nature and when the input for a unit of output can be specified.
- However, in the some service organisations it is difficult to establish a measurable cost unit.
- In some service organisations, the "cost unit" is different from one another.
- In service organisations a majority is human cost/involvement therefore the output will not be always in the same standard of quality and will be difficult to predict.
- Due to the above practical difficulties, the application of the standard costing method in service organisations is less.

(Total 10 marks)

Answer 06

Relevant Learning Outcome/s: 4.1.1/4.2.1

(a)

	Rs.	
Principal amount of the loan	500,000	
Interest for 5 years at 12% per annum (X)	300,000	X
Principal plus Interest (Y)	800,000	Y
Instalment Value (Z = Y/20)	40,000	Z

(b) Quarterly cum discounting factor = 500,000/40,000 = 12.5000

Corresponding rate of interest for 20 periods (from tables) = 5%

			Interest	Principal
(c)	Amount of loan	500,000		
	Interest Q1 (500,000 x 5%)	25,000		
	Repayment (Instalment 1)	(40,000)	25,000	15,000
		485,000		
	Interest Q2 (485,000 x 5%)	24,250		
	Repayment (Instalment 2)	(40,000)	24,250	15,750
		469,250		
	Interest Q3 (469,250 x 5%)	23,463		
	Repayment (Instalment 3)	(40,000)	23,463	16,538
		452,713		

(d)	Interest applicable for quarters (12% / 4)	3%
	Quarterly cum discounting factor = 500,000/40,000	12.5000
	Number of periods / instalments (from tables)	16
(e)	Total repayment (40,000 x 16)	640,000
	Interest for 4 years (640,000 - 500,000)	140,000
	Simple interest rate (140,000/4/500,000)	7.00%

(Total 10 marks)

Answer 07

Relevant Learning Outcome/s: **2.1.1/2.2.1/6.1.1/6.2.1**

(a)

(i) Assume the mark up to be M

	Purchase Cost	Revenue
Stock losses	5	0
Discount sales	20	20x0.75x(1+M) = 15(1+M)
Normal sales	75	75(1+M)
Total stock	100	90(1+M)

Since Gross margin is 40%

$$\frac{90(1+M) - 100}{90(1+M)} = 0.4$$

M = 0.85 = 85%

(ii) If total purchases are Rs. 100,000

	Cost (Rs '000)		Revenue (Rs '000)
Losses	5		0
Discount sales	20	15 x 1.85	27.75
Normal sales	75	75 x 1.85	138.75
	100		166.5

Gross Margin = 66.5 / 166.5 = 40%

(b)

	Quantity	Price	Cost
Normal Fuel	100	100	10,000
Super Fuel	80	125	10,000

There is no difference in cost.
Therefore, any type of fuel may be used.

(c)

(i) $R = 120 + 14X - X^2$

Revenue is maximized when $\frac{dR}{dX} = 0$

$dR/dX = 14 - 2X$

$X = 7$

Floor area to maximize when revenue is 7,000 square feet

(ii) When X = 7

Revenue = 120 + 14x7 - 7x7 =	169	i.e. Rs. 169,000
Cost = 30 + 7 =	37	i.e. Rs. 37,000
Net revenue = 169 - 37 =	132	i.e. Rs. 132,000

(iii) $MR = dR/dX = 14 - 2X$

$MC = dC/dX = 1$

Net Revenue = $120 + 14X - X^2 - (30 + X) = 90 + 13X - X^2$

(iv) Optimum floor area is when net revenue is maximum

$d(NR)/dX = 13 - 2X = 0$

$X = 6.5$ i.e. 6,500 sf

(Total 20 marks)

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