

COST AND MANAGEMENT ACCOUNTING- PERFORMANCE APPREASAL - STAGE-3

- Q.2 (i) ABC Systems are likely to yield the most benefits when indirect costs are a high percentage of total cost or when products and service make diverse demands or indirect resources. The main costs of ABC Systems are the complexity of the measurements necessary to implement and update the systems. Marks
2

- (ii) (i) Calculation of Cost Driver Rates:

- (a) Power = Rs. 200,000 / 50,000 kwh = Rs. 4 / kw 1
 Quality Inspections = Rs. 300,000 / 10,000 Inspections = Rs. 30 per inspection 1

- (ii) Calculation of Costs Allocated to Each Product from Each Activity :

Product	Amount in Rs.			
	A	B	C	Total
Power (10,000 x 4)	40,000	80,000	60,000	180,000
Quality Inspections (3,500 x 30)	105,000	75,000	90,000	270,000
Total	145,000	155,000	150,000	450,000

- (iii) Cost of Unused Capacity of Each Activity :

	Amount in Rs.
Power	(Rs. 200,000 - Rs, 180,000) 20,000
Quality Inspections	(Rs. 300,000 - Rs, 270,000) 30,000
Total cost of unused capacity	50,000

- (b) Factors to be considered in choosing the capacity level to compute budgeted fixed overhead cost :

- (i) Impact on ascertainment of costs of different products, divisions, centres etc.
- (ii) Impact on price fixation and tendering the quotations
- (iii) Impact on divisional, departmental, product-wise performance evolution
- (iv) Impact on likely changes in financial statements
- (v) Compliance of regulatory measures under relevant laws
- (vi) Impact on break-even and performance levels and targets
- (vii) Computation of idle capacity and capacity utilization
- (viii) Budgets and plans for future periods
- (ix) Capital investment decisions like BMR (Balancing, Modernization & Replacement) of assets etc.

(at least 6 factors @ ½ mark) 3

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Q. 3 (a)

Marks

(i) Apportionment of Joint Cost to A and B in proportion of Sales Value at Split-off Point

Sale Value of Product ASale Value of Product B

120,000 Kgs x Rs.8=Rs.960,000 60,000 Kgs x Rs.4=Rs.240,000

1+1

Therefore, the joint cost of Rs. 875,000 can be apportioned to products A and B in the ratio of 4:1

Product A Rs.875,000 x 4/5 = Rs. 700,000

1

Product B Rs.875,000 x 1/5 = Rs. 175,000

1

(ii) Statement Showing Cost per kg of each product indicating Joint Cost, Processing and Total Cost.

	Product A Total Rs.	100,000kgs Per Kg	Product B Total Rs.	120,000kgs Per Kg	
Share in Joint Cost	700,000	7.00	175,000	1.46	1
Further Processing Cost	180,000	1.80	150,000	1.25	1
Total Cost	880,000	8.80	325,000	2.71	1

(iii) Statement Showing Product wise Profit for the period.

	Amount in Rs.		
	Product A	Product B	
Sales (90,000 Kgs @10)	900,000		1
(115,000 Kgs @4)		460,000	1
Add: Closing Inventory at full cost as in above (ii)			
(10,000 Kgs @8.80)	88,000		
(5,000 Kgs @2.71)		13,542	
Value of Production	988,000	473,542	1
Less: Share of Joint Cost	700,000	175,000	1
Further Processing Cost	180,000	150,000	1
Profit	108,000	148,542	1

(b) Comments to increase profitability

It is suggested that Product A should be sold at split-off point and Product B should be further processed before sale to increase profitability from the following analysis of further processing:

2

Incremental Profit = Incremental sales - Incremental cost

Product A [(100,000 Kgs x Rs. 10) - (120,000 Kgs x Rs. 8)] - Rs.180,000 = Rs.140,000 Loss

1

Product B [(120,000 Kgs x Rs. 4) - (60,000 Kgs x Rs. 4)] - Rs.150,000 = Rs.90,000 Profit

1

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Q. 4 (a) Reporting of fixed overhead volume variance indicates that the company is using Absorption Costing system. Marks
2

(b) (i) Calculation of Actual Sales Volume:

Budgeted profit margin = Budgeted Profit / Budgeted Volume

= Rs.34,000/ 1,500 units = Rs.22.66667 1

Unfavourable Sales Volume Variance in units = Rs 6,800/ 22.6667 = 300 Units 1

Therefore, Actual Sales Volume was 300 units less than budgeted sales volume. 1

Actual Sales Volume = 1,500 units - 300 Units = 1,200 units

(ii) Calculation of Actual Quantity of Material Consumed:

Standard quantity of material used per unit of output:

= Budgeted Material Consumed/ Budgeted Production

= 750 Kgs/ 1,500 units = 0.5 Kg. 1

Standard Price = Budgeted Material Cost/ Budgeted Consumption

= Rs. 36,000/ 750 Kgs = Rs. 48 per Kg. 1

Material Usage Variance = (Std Quantity - Actual Quantity) x Standard Price

Rs -1200 = (1550 x 0.5kg - Actual Quantity) x 48

Rs -1200 = (775 kgs - Actual Quantity) x 48

Rs -1200 = 37,200 - 48 AQ

48 AQ = 38,400

Actual Quantity = 800 kgs 1

(iii) Calculation of Actual Material Cost:

Material Price Variance = (Standard Price - Actual Price) x Actual Purchase Quantity

Rs.8,000 = (Rs.48 per kg - Actual Price) x 1,000 kg

Rs.8,000 = 48,000 - 1,000 AP

1,000 AP = 40,000

Actual Price = Rs. 40 per Kg

Actual Material Cost = 1,000 Kg x Rs.40 per Kg 1

= Rs.40,000 1

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- Marks**
- (iv) Calculation of Actual Labour Hours:
- Standard hours per unit of output:
 = Budgeted Hours/ Budgeted Output
 = 1,125 hours/ 1,500 units = 0.75 hour 1
- Standard Labour Rate = Budgeted Labour Cost/ Budgeted Hours
 = Rs.36,000/ 1,125 hours = Rs. 32 per hour 1
- Labour Effcy Variance = (Standard Hours – Actual Hours) x Standard Rate
- Rs.–1,200 = (1550 x 0.75 – Actual Hours) x Rs.32
- Rs.–1,200 = (1,162.50 – Actual Hours) x Rs.32
- Rs.–1,200 = (37,200 – 32 Actual Hours)
- 32 AH = 38,400
- Actual Hours = 1,200 Hrs 2
- (v) Calculation of Actual Labour Cost:
- Total Labour Variance = Standard cost – Actual cost
 (Rs.1600UF + Rs.1200UF) = (1550 x 0.75 Hrs x Rs.32) - Actual Cost
- Rs.2,800 UF = 37,200 – Actual cost
- Actual cost = Rs.40,000 2
- (vi) Calculation of actual variable overhead cost:
- Variable OH variance = Standard cost – Actual cost
 (~~Rs.4800UF~~+Rs600UF) = 1,550 x (18,000/1,500) – Actual cost 1
- Rs 5,400 UF = 1,550 x 12 – Actual cost
- Rs 5,400 UF = 18,600 – Actual cost
- Actual variable OH cost = 24,000 2
- (vii) Calculation of actual fixed overhead cost:
- Fixed OH Efficiency variance = Budgeted Cost – Actual Cost
- Rs 20,000 F = Rs 36,000 – Actual Cost
- Actual fixed OH cost = Rs 36,000 – Rs 20,000 = Rs.16,000 2

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Q. 5 (a) (i)

Flexible Budgeted Income Statement

Marks

For the quarter ended March 31, 2010.

Rs. in million

	Product A	Product B	Total
Sales Units (Nos)	37,500	58,000	95,500
Sales	28.125	29.000	57.125
<u>Variable Costs</u>			
Factory Overhead	11.250	11.600	22.850
Administrative OH	3.750	3.480	7.230
Total Variable Costs	15.000	15.080	30.080
Contribution Margin	13.125	13.920	27.045
<u>Fixed Costs</u>			
Factory Overhead			7.000
Administrative OH			4.000
Total Fixed Costs			11.000
Operating Income			16.045

1

2

1

1

1

(ii) Income Statement under Marginal Costing showing Variances

For the quarter ended March 31, 2010.

Rs. in million

	Master Budget	Flexible Budget	Actual	Volume and Mix Variances	Price and OH Exp Variances
Sales Units (Nos)	90,000	95,500	95,500	5,500 (F)	
Sales	55.000	57.125	52.350	2.125 (F)	4.775 (U)
<u>Variable Costs</u>					
Factory Overhead	22.000	22.850	21.825	0.850 (U)	1.025 (F)
Administrative OH	7.000	7.230	8.100	0.230 (U)	0.870 (U)
Total Variable Costs	29.000	30.080	29.925	1.080 (U)	0.155 (F)
Contribution Margin	26.000	27.045	22.425	1.045 (F)	4.620 (U)
<u>Fixed Costs</u>					
Factory Overhead	7.000	7.000	7.000	0.000	0.000
Administrative OH	4.000	4.000	4.000	0.000	0.000
Total Fixed Costs	11.000	11.000	11.000	0.000	0.000
Operating Income	15.000	16.045	11.425	1.045 (F)	4.620 (U)
	2	+ 2	+ 2	+ 2	+ 2 =

10

(b) (i) Sales Price Variance = (Actual Sales Price - Master Budget Sales Price) x Actual Sales Units.

$$\text{Product A} = \frac{26,250}{37.5} - \frac{30,000}{40} \times 37,500 \text{ units}$$

$$= (\text{Rs. } 700 - \text{Rs. } 750) \times 37,500 \text{ units} = \text{Rs. } 1,875,000 \text{ Unfavourable}$$

2

$$\text{Product B} = \frac{26,100}{58} - \frac{25,000}{50} \times 58,000 \text{ units}$$

$$= (\text{Rs. } 450 - \text{Rs. } 500) \times 58,000 \text{ units} = \text{Rs. } 2,900,000 \text{ Unfavourable}$$

2

(ii) Sales Volume Variance = (Actual Sales Units - Master Budget Sales Units) x Master Budget

Average Contribution Margin per unit

$$= (95,500 \text{ units} - 90,000 \text{ units}) \times \text{Rs. } 26,000,000 / 90,000$$

$$= 5,500 \text{ Units} \times \text{Rs. } 288.889$$

$$= \text{Rs. } 1,588,889 \text{ Favourable}$$

2

Sales Mix Variance = (Flexible Budget Avg Contribution Margin per unit – Master Budget

Average Contribution Margin per unit) x Actual unit sales

$$= \text{Rs. } \frac{27,045,000}{95,500} - \text{Rs. } \frac{26,000,000}{90,000} \times 95,500$$

$$= \text{Rs. } 283.1937 - \text{Rs. } 288.8889 \times 95,500$$

$$= \text{Rs. } 5.6952 \times 95,500$$

$$= \text{Rs. } 543,889 \text{ Unfavourable}$$

2

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Q. 6 (a)

Marks

A Firm
Income Statement

	Rs in'000'			
	Consultancy	Corporate & Taxation	Total	
Revenue from Clients	12,000	18,000	30,000	
Less: Variable Cost	3,000	3,600	6,600	1
Contribution Margin	9,000	14,400	23,400	1
Less: Traceable Fixed Cost	8,400	11,700	20,100	
Divisional Margin	600	2,700	3,300	1
Common Fixed Cost			1,800	
Operating Income			1,500	1

- (b) No, the firm would not be financially better off if the consultancy was dropped as the division is covering all of its own costs and is contributing Rs.600,000 per month to cover common fixed cost of the firm. Though the margin of Consultancy Division is much lower than Corporate & Taxation Division but it is still profitable 3

- (c) Impact of Campaign on Profitability

	Rs.in'000'	
Increased revenues from clients	3,000	
Contribution Margin % of Consultancy(9,000/ 12,000)	75%	1
Incremental Contribution Margin	2,250	1
Less: Cost of Campaign	600	1
Increase in Overall Operating Income	1,650	1

- (d) Calculation of Residual Income

	Rs.in'000'		
	Before Campaign	After Campaign	
Average Operating Assets	9,000	9,000	
Operating Income	1,500	3,150 (1500+1650)	
Less: Min. Req. Return (15% of Rs.9 million)	1,350	1,350	
Residual Income	150	1,800	
	2	+	2
		=	4

THE END

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