

16. ACTIVITY BASED COSTING

PROBLEM NO 1:

1. Customer Profitability Analysis, Customer Cost Hierarchy

(amounts in Rs.)

	Wholesale Customers		Retail Customers	
	W	H	R	T
Revenues:				
Total Number of Suits ordered	44 x 400 = 17,600	62 x 200 = 12,400	212 x 30 = 6,360	250 x 25 = 6,250
Revenue at List Price	17,600 x 1,000 = 1,76,00,000	12,400 x 1,000 = 1,24,00,000	6,360 x 1,000 = 63,60,000	6,250 x 1,000 = 62,50,000
Less: Discount	17,600 x (1,000 - 700) = 52,80,000	12,400 x (1,000 - 800) = 24,80,000	6,360 x (1,000 - 850) = 9,54,000	6,250 x (1,000 - 900) = 6,25,000
Revenue at Actual Price	1,23,20,000	99,20,000	54,06,000	56,25,000
Less: Cost of Goods Sold	17,600 x 550 = 96,80,000	12,400 x 550 = 68,20,000	6,360 x 550 = 34,98,000	6,250 x 550 = 34,37,500
A. Gross Margin	26,40,000	31,00,000	19,08,000	21,87,500
Less: Customer—Level Costs				
Order Processing	44 x 1,225 = 53,900	62 x 1,225 = 75,950	212 x 1,225 = 2,59,700	250 x 1,225 = 3,06,250
Sales Visits	8 x 7,150 = 57,200	22 x 7,150 = 85,800	22 x 7,150 = 1,57,300	20 x 7,150 = 1,43,000
Delivery—Regular	41 x 1,500 = 61,500	48 x 1,500 = 72,000	166 x 1,500 = 2,49,000	190 x 1,500 = 2,85,000
Delivery—Rushed	3 x 4,250 = 12,750	14 x 4,250 = 59,500	46 x 4,250 = 1,95,000	60 x 4,250 = 2,55,000
B. Customer level Costs	1,85,350	2,93,250	8,61,500	9,89,250
C. Customer Level Operating Income (A - B)	24,54,650	28,06,750	10,46,500	11,98,250
Customer level operating income as a % on Revenues at Actual prices	19.92%	28.29%	19.35%	21.30%

2. Measures to increase Profits:

- a) ABC System highlights that Customer Level Costs of R & T are high due to — (a) high number of orders, (b) high number of customer visits, and (c) high number of rushed deliveries. The CEO should consider whether this high level of activity can be reduced without reducing customer revenues.
- b) The CEO should also consider reduction in the level of price discounting for the customers, especially.

3. Income statement of MNP suits

(in Rs.)

Particulars	Wholesale customers	Retail customers	Total
Customer level operating income	52,61,400	22,44,750	75,06,150
Less: Distribution channel cost	17,50,000	10,50,000	28,00,000
Distribution channel level operating income	35,11,400	11,94,750	47,06,150
Less: Corporate sustaining costs			12,50,000
Operating Income			34,56,150

PROBLEM NO 2:

- i) Traditional Method of absorption of overhead i.e. on the basis of Direct Labour hours

$$\text{Total over heads} = \frac{36,96,000}{\text{Hours } (60,000 \times 2.5) + (4,00,000 \times 4) + (1,60,000 \times 3)}$$

$$= \frac{36,96,000}{3,42,000} = \text{Rs. } 10.81 \text{ per labour hour}$$

	P	Q	R
Raw Material	Rs.	Rs.	Rs.
Direct Labour	50=000	40=00	22=00
Over heads(2.5x10.81)	16=00	24=00	12=00
Factory cost	27=025	43=24	21=62
Raw Material	93=000	107=24	55=62

Calculation of factory cost of the products

- ii) Under Activity Based Costing System

Computation of Cost Drivers Rates

- 1) Set up cost: Cost driver → No. of Production run 6, 00,000/60 = Rs. 1000/ per run
- 2) Machines: Cost driver → Machine hour rate
15, 20,000/2, 94,000= Rs. 5.17 per Machine hour rate
- 3) Receiving cost: Cost driver → No. of Receipts
8,70,000 / 1080= Rs. 805.56
- 4) Packing: Cost driver → No. of deliveries
5,00,000/64= Rs. 7812.5 per delivery
- 5) Engineering: Cost driver → No. of Production order
7,46,000/100 = Rs. 7,460 per order

Calculation of factory Cost per unit of Production

	P		Q		R	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Materials		50.00		40.00		22.00
Direct Labour		16.00		24.00		12.00
Overheads						
Setup cost	0.10		0.35		2.50	
Machines	12.93		10.34		20.68	
Receiving cost	0.81		2.52		44.31	
Packing	2.34		1.17		19.53	
Engineering	3.73	19.91	3.73	18.41	23.31	110.33
Factory Cost		85.91		82.41		144.33

THE END