

Pricing & Pareto Analysis

1. P.H Ltd, manufactures Product 'S' in departments A and B which also manufactures other products using the same machines. The particulars per unit of the Product 'S' are as under :

Direct Materials :	M 8 kg. at ` 3 per kg. used in Dept. A P 4 kg. at ` 5 kg. used in Dept. B	
Direct Labour:	2 hours at ` 2 per hours in Dept. A 3 hours at ` 10 per hour in Dept. B	
Overheads :	Dept A	Dept. B
Methods of Recovery	Direct Labour	Direct Labour
	Hours	Hours
Overheads Rates		
Fixed	` 6.00 per hour	` 3.00 per hour
Variable	` 5.00 per hour	` 2.00 per hour
Value of Plant & Machinery	` 16 lacs	` 8 lacs

Variable selling and distribution overheads relating to Product 'S' amount to ` 20,000 per month. The product requires a Working Capital of ` 3,00,000 at the target volume of 1,000 units per month occupying 25% of the practical capacity.

Required

- (a) Using the return on investment pricing formula, find the price of Product 'S' to yield a contribution to cover 24% rate of return on investment.
 - (b) If product 'S' is a well established product in the market, what should be the basis of fixation of Price. Set the minimum price of that basis.
 - (c) If product 'S' is a new product about to be launched in the market, what should be the basis of fixation of price. Set the minimum price on that basis.
2. An organisation manufactures a product, particulars of which are detailed below :

Annual production	20,000 units
Material cost	` 60,000
Other variable costs	1,20,000
Fixed cost	40,000
Total cost	2,20,000
Apportioned investment	` 2,00,000

Determine the unit selling price under each of the following strategies. Assume that the organization's tax rate is 25%.

- (i) 20% return on investment;
- (ii) 30% mark-up based on total cost;
- (iii) 20% profit on net sales price;
- (iv) 15% profit on list sales when trade discount is 35%;
- (v) 40% mark-up based on incremental cost;
- (vi) 50% mark-up based on value added by manufacturer.

3. A Company manufacturing agricultural Tractors has a capacity to produce 6,000 tractors annually. The capital employed in the project as on date is ` 20 crores. With increasing cost of production and reducing margins the company is fast narrowing its margin of safety. The return on capital employed fell from 10% in the previous year to 6% in the current year, i.e., the current year profit is ` 1.20 crores. The company wants to maintain the original cut off rate of 12% and various possibilities have been examined for this propose.

The company is at present manufacturing and marketing 6,000 tractors annually though there is imbalance in the plant. The company has the following major production departments with percentage capacity utilisation for the present production :

<u>Production Dept.</u>	<u>Capacity utilized</u>
Machine Shop	75%
Assembly Shop	100%
Heat treatment Shop	75%
Induction hardening	50%

The Company operates a single shift of 8 hours per day on an average for 300 days in a year. For technical reason the plant will have to operate on single shift basis only. The two alternatives which have emerged after a detailed study are :

- (a) To hire out the surplus capacity in the productions shops for which constant demand exists. The following income and expenditure projections are drawn out :

	<u>Hire charges per hour</u>	<u>Incremental cost per hour</u>
Machine Shop	10,000	2,000
Heat-treatment Shop	7,500	1,500
Induction-hardening	5,000	1,000

- (b) To increase the installed capacity to 8,000 tractors by spending ` 2 crores on additional machinery for the assembly for the assembly shop. The incremental revenue from the additional sale will be ` 5,000 per tractor. The cost of additional finance will be 12% being the cost of existing capital employed. In addition tax benefits on an average will work out to 1% of additional investment Decide.