

Joint Product & By Product

Questions

- Q.1** A company produce two joint products A and Q in 70:30 ratio from basic raw materials in department A. The input output ratio of department P is 100 : 85. Product P can be sold at the split of stage or can be processed further at department B and sold as product AR. The input output ratio is 100 : 90 of department B. The department B is created to process product A only and to make it product AR.

The selling price per kg. are as under:

Product P Rs. 85

Product Q Rs. 290

Product R Rs. 115

The production will be taken up in the next month.

Raw materials 8, 00,000 Kgs.

Purchases price Rs. 80 per kg.

| | Deptt. A Rs. Lacs | Deptt. B Rs. Lacs |
|--------------------|----------------------|----------------------|
| Direct materials | 35.00 | 5.00 |
| Direct labour | 30.00 | 9.00 |
| Variable overheads | 45.00 | 18.00 |
| Fixed overheads | 40.00 | 32.00 |
| Total | 150.00 | 64.00 |

Selling Expenses:

| | Rs. in Lacs |
|------------|-------------|
| Product P | 24.60 |
| Product Q | 21.60 |
| Product AR | 16.80 |

Required:

- i. Prepare a statement showing the apportionment of joint costs.
- ii. State whether it is advisable to produce product AR or not.

Answer:

Q.1 Ans:

Input in Department 'A' is 80,000 kgs, & Yield is 80%

∴ Output = 85% of 8, 00,000 = 6, 80,000 kgs.

Ratio of output for P and Q = 70:30.

Product of P = 70% of 6, 80,000 = 4, 76,000 kgs.

Product of Q = 30% of 6, 80,000 = 2, 04,000 kgs.

Statement showing apportionment of joint cost

| | P | Q | Total |
|------------------------|--------------|--------------|--------------|
| Product Kgs. | 4,76,000 | 2,04,000 | |
| Selling price per kg. | Rs. 85.00 | 290.00 | |
| | Rs. in lakhs | Rs. in lakhs | Rs. in lakhs |
| Sales | 404.60 | 591.60 | 996.20 |
| Less: Selling Expenses | 24.60 | 21.60 | 46.20 |
| Net sales | 380 | 570 | 950 |
| Ratio in % | 40% | 60% | 100% |

Rs. in lakhs

Raw materials (8, 00,000 kgs. × Rs. 80) 640

Process cost of department 'A' 150

790

Apportionment of Joint Cost (In the ratio of Net Sales i.e. P: Q., is 40%: 60%)

∴ Joint Cost of 'P' = Rs. 316 lakhs

∴ Joint Cost of 'Q' = Rs. 474 lakhs

Statement showing the profitability of further processing of product 'P' and converted into product 'AR'

| Product 'AR' | Rs. lakhs |
|---|-----------|
| Output 90% of 4, 76,000 kgs. = 4, 28,400 kgs. | |
| Joint costs | 316.00 |

| | |
|------------------------------------|--------------|
| Cost of Department B | 64.00 |
| Selling expenses | <u>16.80</u> |
| Total Cost (A) | 396.80 |
| Sales value (Rs. 115 × 4,28,400) | 492.66 |
| Profit (SV – TC) (492.66 -396.80) | 95.86 |

If 'P' is not processed, then profitability is as under.

| | |
|----------------------|----------|
| | Rs lakhs |
| Sales | 380.00 |
| Less: Joint expenses | 316.00 |
| Profit | 64.00 |

Advise: Further processing of product 'P' and converting into product 'AR' is beneficial to the company because the profit increases by Rs. 31.86 lakhs (i.e. 95.86 – 64.00)