PROCESS COSTING   **By CA.GAUTAM SETHI**

Q.1   A product passes through three processes – A, B, and C. The details of expenses incurred on the three processes during the year 1992 were as under:

Process	A	B	C
Units issued/introduced	10,000		
Cost per unit	Rs.100		
Sundry materials	Rs.28,000	Rs.15,000	Rs.8,000
Labour	3,00,000	48,500	65,000
Direct expenses	41,000	53,570	27,360

Office & administration expenses during the year were Rs.80,000 and selling expenses were Rs.50,000.

Actual output of the three processes was: A – 9,200 units, B – 4,200 units and C – 2,100 units. One-half of the output of Process A, two – thirds of the output of Process B was passed on to the next process and the balance was sold. The entire output of Process C was sold. The Selling price is fixed to provide a profit of 20% on cost in process A, 25% on cost in process B & 50% of selling price in process C. The normal loss of the three processes, calculated on the input of every process was: Process A – 6%, B – 10% and C – 20%. The loss of Process A was sold at Rs.10 per unit, that of B at Rs.20 per unit and of Process C at Rs.30 per unit. **_Prepare_** the three Process Accounts, Normal loss and abnormal gain/loss accounts & the Profit and Loss Account.   {15}

Q.2   The following details are given in respect of manufacturing unit for the month of April, 1995:

(i) Opening work-in-progress 5000 units	
(a) Materials	Rs. 18,750
(b) Labour	7,500
(c) Overheads	3,750
(ii) Units introduced into the process 17,500 units	
(iii) 18,500 units are transferred to the next process.	
(iv) Process costs for the period are:	
Material	Rs. 2,50,000
Labour	1,95,000
Overheads	97,500

(v) Normal loss @ 4% realizable @ Rs.5 per unit whereas actual scrap is 1500 units.
(vi)The stage of completion of units in closing WIP is estimated to be: Material 100%, Labour 60% and Overheads 50%.
You are required to prepare Process A/c showing
Statement of equivalent units of production, Statement of cost, Statement of value   {12}

Q.3   R.P. Ltd furnished you the following information relating to process B for the month of October   2004:

(i) Opening work-in-progress 5000 units of the value of Rs.11,500
(a) Materials (80% complete)
(b) Labour & Overheads (60% complete)

(ii) Units received   – 20,000 units @ Rs.3/- per unit.
(iii) Expenses debited to the process:
      Direct materials   – Rs. 14,650;
      Labour   – Rs. 21,148;
      Overheads   – Rs. 42,000.
(iv) Normal loss in process – One per cent of input.
(v) Closing Work-in- Progress – 3500 units; Degree of completion:
      Material – 100%
      Labour and Overheads – 50%
(vi) Finished Output – 19,500 units
(vii) Degree of completion of abnormal loss:
      Material – 100%
      Labour and Overheads – 80%
(viii) Units scrapped as normal loss were sold at Re. 2 per unit.
(ix) All the units of abnormal loss were sold at Rs.2.50 per unit.

Prepare

(1)   Statement of Equivalent production;

(2)   Statement of Cost of Finished goods, Abnormal Loss and Closing Work-in-progress.

{15}

Q.4   In a manufacturing process, in the course of manufacture of the product X, the by – products P and Q also emerge. The preparation expenses amount to Rs.1,31,505. All the three products are processed further and sold in the market (details given below).

	Main Product	By – Products	
	X	P	Q
Sales value (Rs.)	90,000	60,000	40,000
Post – separation costs (Rs.)	6,000	5,000	4,000
Profit as a percentage of sales	25	20	15

Total fixed selling and distribution expenses are 10% of the total cost of sales and are apportioned to the three products in the ratio of 20 : 40 : 40.

(i) Prepare a statement showing the apportionment of pre – separation costs to the main product and the two by – products.

(ii) If the by – product P is not processed further and can be sold just after separation at Rs.58,500 without incurring any selling & distribution expenses, would you advise its disposal at that stage?   {10}

Q.5   ABC Ltd operates a simple chemical process to convert a single material into three separate items, referred to here as X, Y, and Z.   All three end products are separated simultaneously at a single split-off point.

Product X and Y are ready for sale immediately upon split-off without further processing or any other additional costs. Product Z, however, is processed further before being sold. There is no available market price for Z at the split-off point.

The selling prices quoted here are expected to remain the same in the coming year. During 2002-03, the selling prices of the items and the total amounts sold were:

X – 186 tons sold for Rs.1,500 per ton.

Y – 527 tons sold for Rs.1,200 per ton.

Z – 736 tons sold for Rs.950 per ton.

The total joint manufacturing costs for the year were Rs. 6,25,000. An additional Rs.3,10,000 was spent to finish product Y & Rs.1,80,000 for Z. Closing quantity were:

X – 180 tons

Y – 83 tons

Z – 64 tons

There was no opening or closing work-in-progress.

Required:

(i) Compute the cost of inventories of X, Y and Z for Balance Sheet purposes and cost of goods sold for income statement purpose as of March 31,2003, using:

(a) Net realizable value (NRV) method of joint cost allocation.

(b) Constant gross-margin percentage NRV method of joint-cost allocation.

(ii) Compare the gross-margin percentages for X, Y and Z using two methods given in requirements (i).

{12}

Q.6   Following costs were incurred in producing 800 M.T. of M. S. Rods:

Materials	Rs.3,80,000
Labour	Rs.1,60,000
Processing Charges	Rs.89,560

Total Cost	Rs. 6,29,560

Of the total output 15% was defective and had to be sold after a discount of 20% off the normal price. The scrap arising out of the production is to be disposed at a cost of Rs.8,760. The sale price is calculated to yield 15% profit on sales you are required to find out the normal price as well as the discounted price per M.T. of M. S. Rods.   {6}