

Process Costing

Time Allowed : 45 Minutes
TEST – 11 (Solution)
Total: 25 Marks
Answer to Question no.1:

Input – Normal Loss – Abnormal Loss = Actual output

χ Units – 10% of χ units – 50 units = 850 units

Solving, we get χ 1,000 units.

Hence, quantity of input introduced in Process A = 1,000 units.

Process A Account

Particulars	Units	₹	Particulars	Units	₹
To Units Issued (@ ₹ 4)	1,000	4,000	By Normal Loss (10%) (@ ₹ 2)	100	200
To Wages		500	By Abnormal Loss (@ ₹ 5.50)	50	275
To Power		200	By Bank A/C	340	2,244
To General Expenses		450	(40% of 850 units)	@ 6.60	
To Costing P & L A/C		375	By Process B A/C	510	2,805
Profit of Quantity Sold			(60% of 850 units) (@ ₹ 5.50)		
	1,000	5,524		1,000	5,524

Cost per unit of normal output = $\frac{4,000 + 500 + 200 + 450 - 200}{1,000 \text{ units} - 100 \text{ units}} = ₹ 5.50 \text{ p.u.}$

We are given that 40% of total output is sold at the rate which includes profit of $16\frac{2}{3}\%$ of Selling

Price. In other words profit is $\frac{1}{6}$ of Selling Price which is equal to $\frac{1}{5}$ of cost. Hence, Profit p.u. = $\frac{1}{5} \times$

5.50 = ₹ 1.10

Selling Price p.u. = 5.50 + 1.10 = ₹ 6.60

Normal Loss Account

	Units	₹		Units	₹
To Process A A/C (@ ₹ 2 p.u.)	100	200	By Bank A/C	100	200

Abnormal Loss Account

	Units	₹		Units	₹
To Process A A/C (@ ₹ 5.50 p.u.)	50	275	By Bank A/C (@ ₹ 3 p.u.)	50	150
			By Costing P/L A/C		125

Costing P/L Account

	₹		₹
To Abnormal Loss	125	By Process A A/C	375
To Net Profit	249		

Answer to Question no.2:**Process B Account**

Particulars	Units	₹	Particulars	Units	₹
To Direct Material	45,000	4,50,000	By Normal Loss @ ₹ 2	900	4,500
To Additional Material		65,500	(@ ₹ 5 p.u.)		
To Labour		90,800	By Abnormal Loss	300	4,739
To Overheads		1,80,700	By Finished Goods Stock A/C	42,000	7,51,977
			By Closing WIP	1,800	25,784
	45,000	7,87,000		45,000	7,87,000

Abnormal Loss Account

	Units	₹		Units	₹
To Process B A/C	300	4,739	By Bank A/C (@ ₹ 2 p.u.)	300	600
			By Costing P/L A/C		4,139
	300	4,739		300	7,739

Statement of Equivalent Production

Units In	Particulars	Units out	Material		Labour		Overheads	
			%	Quantity	%	Quantity	%	Quantity
45,000	Quantity Introduces							
	Normal Loss	900	—	—	—	—	—	—
	Abnormal Loss	300	100	300	80	240	60	180
	Quantity Completed	42,000	100	42,000	100	42,000	100	42,000
	Closing WIP	1,800	100	1,800	50	900	40	720
45,000		45,000		44,100		43,140		42,900

Statement of Equivalent Production

Type of Cost	Amount	Equivalent Units	Cost p.u.
Materials (4,50,000 + 65,500 – 4,500)	5,11,000	44,100	11.5873
Labour	90,800	43,140	2.1048
Overheads	1,80,700	42,900	4.2121

Statement of value of Equivalent Production

Particulars	Type	Equivalent Units	Cost p.u.	Cost	Total Cost
Abnormal Loss	Materials	300	11.5873	3,476	4,739
	Labour	240	2.1048	505	
	Overheads	180	4.1048	758	
Quantity Completed	Materials	42,000	11.5873	4,86,667	7,51,977
	Labour	42,000	2.1048	88,402	
	Overheads	42,000	4.2121	1,76,908	
Closing WIP	Materials	1,800	11.5873	20,867	25,784
	Labour	900	2.1048	1,894	
	Overheads	720	4.2121	3,033	

Answer to Question no.3:**Distribution of Selling Expenses:-**

Total selling expenses = ₹ 85,000

Ratio of quantity = $\frac{4,500}{8,500} : \frac{2,500}{8,500} : \frac{1,500}{8,500}$

Product M = $\frac{85,000}{8,500} \times 4,500 = ₹ 45,000$.

Product P = $\frac{85,000}{8,500} \times 2,500 = ₹ 25,000$.

Product Q = $\frac{85,000}{8,500} \times 1,500 = ₹ 15,000$.

(i) Allocation of Joint Cost:-

Total Joint Cost is 2,50,000 and important point to be noted is that information regarding estimated profit is given only in respect of P and Q. Let us adopted NRV method for calculation of joint cost related to P and Q in the following manner:-

	Product P	Product Q
Final Sales Value	2,500 x 80 = 2,00,000	1,500 x 50 1,500 x 50
(-) Estimated Profit	30% of 2,00,000 = 60,000	25% of 75,000 = 18,750
(-) Separate Cost		
(a) Selling-related	25,000	15,000
(b) Production-related	60,000	30,000
Estimated Share in Joint Cost (Actual)	55,000	11,200

Total of Joint Cost related to P & Q = ₹ 66,250.

Share in Joint Cost related to M = 2,50,000 – 66,250 = ₹ 1,83,750

(ii) Computation of Individual profit and total profit:-

	Product M	Product P	Product Q
Final Sales Value	4,500 x 170 = 7,65,000	2,00,000	75,000
(-) Share in Joint Cost	(1,83,750)	(55,000)	(11,250)
(-) Separate Cost			
(c) Selling-related	(45,000)	(25,000)	(15,000)
(d) Production-related	Nil	(60,000)	(30,000)
Profit	5,36,250	60,000	18,750

Overall Profit = 5,36,250 + 60,000 + 18,750 = ₹ 6,15,000

(iii) Evaluation of the decision regarding further processing of product P:-

It is already ascertained that Product P yields profit of ₹ 60,000 if sold after further processing. However, if it is sold at split-off stage, in such a case, the amount of profit or loss is ascertained below:-

Sale value at split-off stage (2,500 x 60)	₹ 1,50,000
(-) Share in Joint Cost	(55,000)
Profit	<u>95,000</u>

Hence, it is advised to sell total output of P at split-off as it will yield extra profit to the extent of ₹35,000 (95,000 – 60,000)