PROCESS COSTING

1. Y Ltd. manufactures a chemical product which passes through three processes. The cost records shows the following particulars for the year ended 30th June, 2014.

Input to Process I 20,000 units @ ₹ 28 per unit

Particulars	Process I ₹	Process II ₹	Process III ₹
Materials	48,620	1,08,259	1,03,345
Labour	32,865	84,553	77,180
Expenses	2,515	10,588	16,275
Normal Loss	20%	15%	10%
Scrap value per unit	1	2	3
Actual output (units)	18,000	16,000	15,000

Prepare Process Accounts, Abnormal Gain/Loss Account. Also show process cost per unit for each process.

2. Product A is manufactured after it passes through three distinct processes. The following information is obtained from the records of a company for the year ended 31st December, 2013.

Particulars	Process I ₹	Process II ₹	Process III ₹
Direct material	2,500	2,000	3,000
Direct wages	2,000	3,000	4,000

Product overheads are ₹ 9,000. 1,000 units at ₹ 5 each were introduced to Process I. There was no stock of materials or work in process at the beginning and at the end of the year. The output of each process passes direct to the next process and finally to the Finished Stock Account. Production overheads are recovered on 100% of direct wages. The following additional data is available :

Particulars	Output during the week	Percentages of normal loss to input	Value of scrap per unit (₹)
Process I	950	5%	3
Process II	840	10%	5
Process III	750	15%	5

Prepare Process Cost Accounts and Abnormal Gain or Loss Accounts for the year ended 31st December, 2013.

3. Product X is obtained after it is processed through three distinct processes.

The following information is available for the month of March, 2014 :

Particulars	Total ₹	Process A ₹	Process B ₹	Process C ₹
Material Consumed	22,500	10,400	8,000	4,100

Direct Labour	29,320	9,000	14,720	5,600
Production Overhead	29,320	–	–	–

2,000 units at ₹ 4 per unit were introduced in Process A. Production overheads to be distributed as 100% on direct labour. The actual output and normal loss of the respective processes are :

Processes	Output in units	Normal loss on inputs	Value of Scrap per unit (₹)
Process A	1800	10%	2.00
Process B	1360	20%	4.00
Process C	1080	25%	5.00

There is no stock of work in progress in any process. You are required to prepare Process Accounts.

4. Savita Chemicals Ltd. is manufacturing a product which passes through three consecutive processes, Process X, Process Y and Process Z. The following figures have been taken from its books for the month ended 31st January, 2015.

Particulars	Process X	Process Y	Process Z
Quantitative information :			
Basic Raw Materials at ₹ 10 per kg	25,000 kgs.	–	–
Output during the month (kg)	24,000	23,200	22,250
Other additional information :			
Process Materials (₹)	1,50,000	2,70,000	3,50,000
Direct Wages	80% of Process Materials	70% of Process Materials	60% of Process Materials
Indirect Materials (₹)	10,000	8,000	2,000
Indirect Wages (₹)	2,000	980	1,620
Machine Overheads (₹)	10,000	8,000	12,000
Other Factory Overheads	80% of Direct Wages	90% of Direct Wages	75% of Direct Wages
Normal Loss (% on input)	2%	4%	4%
Scrap Value per kg (₹)	2	3	5

You are required to prepare Process Accounts.

5. Abad Chemicals Co. Ltd. produced three types of chemicals during the month of March, 204 by three consecutive processes. In each process 2% of the total weight put in is lost and 10% is scrap. Scrap of Process I and Process II realise ₹ 100 a ton and that of Process II ₹ 20 a ton. The products of the processes are dealt with as follows :

Particulars	Process I	Process II	Process III
Passed on the next process	75%	50%	–
Sent to warehouse for sale	25%	50%	100%
Details of Cost : Raw Materials used (tonnes)	1,000	140	1,348
Raw Materials used (₹)	1,20,000	28,000	1,07,840

Direct Wages	20,500	18,520	25,000
General expenses	10,300	7,240	4,320

Prepare Process Cost Accounts showing cost per ton of each process.

6. M/s. XYZ & Co. Ltd. manufactures a product which passes through three processes. The following particulars gathered for the month of March, 2016.

Particulars	Process X	Process Y	Process Z
Basic Materials Introduced (kg.)	800	416	336
Cost of Basic Material per kg. (₹)	96	90	35
Indirect Materials (₹)	7,000	7,000	22,000
Direct expenses (₹)	680	840	9,496
Wages (₹)	15,360	15,200	4,400
Overheads (%)	50% of Wages	50% of Wages	50% of Wages
Normal loss (% of total input)	4%	5%	5%
Sales scrap value per kg. (₹)	–	6	–
Output transferred to next process (%)	50%	40%	–
Output transferred to warehouse (%)	50%	60%	100%

Prepare Process Accounts.

7. Reliable Yarn Ltd. manufactures a yarn product. The product passes through three consecutive processes. F.Y., S.Y. and T.Y. Relevant details for the month of March, 2014 are as under :

Particulars	F.Y. Process	S.Y. Process	T.Y. Process
Quantitative information in kgs. :			
Basic Input kg. @ ₹ 10 per kg.	2,000	–	–
Output during the month	1,950	1,925	1,679
Stock of Process :			
– On 1st March, 2014	200	300	100
– On 31st March, 2014	150	400	59
Percentage of Normal Loss to input in process	2%	5%	8%
Monetary Information	₹	₹	₹
Process Material	9,000	2,100	2,716
Wages	9,064	1,860	4,000
Value of Opening Stock	3,880	6,720	2,800
Scrap Value per kg.	₹ 1	₹ 2	₹ 4

Closing Stock is to be valued at the respective cost of each process.

Prepare Process Accounts, Process Stock Accounts, Abnormal Loss and Abnormal Gain Account.

Find out the costing profit, when the sales of T.Y. process stock are made at ₹ 40 per kilogram.

8. Satyug Times Ltd. submits the following information in respect of its product which passes through three consecutive processes viz. Ingestion Process, Digestion Process and Assimilation Process, for the month ended 31st January, 2014.

	Ingestion Process	Digestion Process	Assimilation Process
Quantitative information (kgs.) :			
Basic Raw Material @ ₹ 40 per kg	80,000	–	–
Normal yield	80%	60%	50%
Output during the month	62,000	36,000	21,000
Stock of Process output :			
31/12/2013	8,000	8,000	5,000
31/01/2014	10,000	4,000	4,000
Other Additional Information :			
Process material	₹ 3,45,000	₹ 8,26,000	₹ 6,17,000
Labour man days	2,400	1,500	1,000
Labour rate per man day	₹ 80	₹ 100	₹ 150
Machine overheads	60% of Wages	50% of Process material	₹ 2,34,000
Other manufacturing overheads	₹ 2,75,800	₹ 1,63,000	₹ 1,27,000
Value of opening stock per kg.	₹ 60	₹ 140	₹ 300
Scrap value per kg.	₹ 10	₹ 15	₹ 20

Finished stock of Assimilation process was sold at ₹ 350 per kg.

Prepare Process Accounts, Process Stock Account, Normal Loss Account and the Abnormal Gain/Loss Account.

9.

Particulars	Process A (₹)	Process B (₹)	Process C (₹)
Indirect Materials	1,00,000	18,750	16,550
Direct Wages	56,250	35,000	44,900
Direct Expenses	51,250	6,875	11,500
Value of Opening Stock per unit	25	31	40
Scrap value per unit	13.50	11.25	21.00
	Units	Units	Units
Output	9,750	9,625	8,000
Stock of Process Output :			
1/1/2013	1,500	1,375	2,000
31/12/2013	1,250	2,000	1,000
Percentage of wastage	2%	5%	10%

10,000 units of Direct Material were introduced in Process A at the rate of ₹ 5 per unit. The percentage of wastage is computed on the number of units entering the process concerned.

From the above information of 'DE' Enterprise prepare : (i) Process Accounts; (ii) Process Stock Accounts; (iii) Normal Loss Account; (iv) Abnormal Loss Account; (v) Abnormal Gain Account. Value closing stock at the respective Process Cost.

10. The following details for the year ending 31st December, 2013 are available from the books of a firm having three workshops and a wholesale warehouse.

Particulars	Workshop A	Workshop B	Workshop C
Raw materials used (tonnes)	250	152	145
Cost per ton (₹)	600	400	250
Direct wages (₹)	4,29,000	1,01,250	52,800
Direct expenses (₹)	69,000	69,350	11,250
Loss of tonne due to processing	4%	5%	2.5%
Proportion of Production transferred :			
To workshop B at cost	20%		
To workshop C at cost		50%	
Proportion of production transferred :			
To wholesale warehouse	80%	50%	100%
Wholesale warehouse :			
Stock on 1/1/2013 at cost (₹)	12,500	10,000	20,000
Stock on 31/12/2013 in tonne	10	20	

Sales were ₹ 20,00,000, Salaries ₹ 2,00,000 and Administration expenses ₹ 1,00,000.

Prepare the respective Workshop Accounts showing the cost per tonne in each workshop and an account showing the net profit of the firm for the year 2013. Closing stock in warehouse to be valued at cost per ton in each workshop.

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