Chapter-wise Test (1009)
Process Costing

Instructions

- All questions are compulsory.
- Test Duration will be one hour and 10 minutes, starting from 11:00 AM to 12:10 PM
- 5 minutes of reading time will be provided before 11, i.e. question paper will be shared by 10:55 AM.
- Share your scanned answer sheets by 12:15 on the below link https://forms.gle/wLRZWiTvMELNpCeC6

1. Following information is available regarding Process-I of a manufacturing company for the month of February:

Production Record:	
Units in process as on 1st February	8,000
(All materials used, 1/4th complete for labour and overhead)	
New units introduced	32,000
Units completed	28,000
Units in process as on 28th February	12,000
(All materials used, 1/3rd complete for labour and overhead)	
Cost Records:	(`)
Work-in-process as on 1st February	
Materials	1,20,000
Labour	20,000
Overhead	20,000
	1,60,000
Cost during the month:	
Materials	5,12,000
Labour	3,00,000
Overhead	3,00,000

11,12,000

Presuming that average method of inventory is used, PREPARE the following:

(i) Statement of equivalent production.

(ii) Statement showing cost for each element.

(iii) Statement of apportionment of cost.

(iv) Process cost account for Process-I. **(10 Marks)**

Solution:

(i) Statement of equivalent production (Average cost method)

Particulars	Input Units	Particulars	Output Units	Equivalent Production			
				Material		Labour &O.H.	
				%	Units	%	Units
Opening WIP	8,000	Completed and transferred	28,000	100	28,000	100	28,000
Units introduced	32,000	Closing WIP	12,000	100	12,000	1/3rd	4,000
	40,000		40,000		40,000		32,000

(ii) Statement showing cost for each element

Particulars	Materials (`)	Labour (`)	Overhead (`)	Total (`)
Cost of opening work-in-process	1,20,000	20,000	20,000	1,60,000
Cost incurred during the month	5,12,000	3,00,000	3,00,000	11,12,000
Total cost: (A)	6,32,000	3,20,000	3,20,000	12,72,000
Equivalent units: (B)	40,000	32,000	32,000	
Cost per equivalent unit: (C) = (A ÷ B)	15.8	10	10	35.8

(iii) Statement of apportionment of cost

	Particulars	Amount (`)	Amount (`)
1.	Value of units completed and transferred (28,000 units × ` 35.8)		10,02,400
2.	Value of Closing W-I-P:		
	- Materials (12,000 units × ` 15.8)	1,89,600	
	- Labour (4,000 units × ` 10)	40,000	

-	Overheads (4,000 units × ` 10)	40,000	2,69,600

(iv) Process-I Cost Account

Particulars	Units	(`)	Particulars	Units	(`)
To Opening W-I-P	8,000	1,60,000	By Completed units	28,000	10,02,400
To Materials	32,000	5,12,000	By Closing W-I-P	12,000	2,69,600
To Labour	--	3,00,000			
To Overhead	--	3,00,000			
	40,000	12,72,000		40,000	12,72,000

2. KT Ltd. produces a product EMM which passes through two processes before it is completed and transferred to finished stock. The following data relate to May 2019:

Particulars	**Process**		**Finished stock**
	A (Rs.)	**B (Rs.)**	**(Rs.)**
Opening Stock	5,000	5,500	10,000
Direct Materials	9,000	9,500	
Direct Wages	5,000	6,000	
Factory Overheads	4,600	2,030	
Closing Stock	2,000	2,490	5,000
Inter-process profit included in opening stock		1,000	4,000

Output of Process A is transferred to Process B at 25% profit on the transfer price and output of Process B is transferred to finished stock at 20% profit on the transfer price. Stock in process is valued at prime cost. Finished stock is valued at the price at which it is received from Process B. Sales during the period are Rs. 75,000.

Prepare the Process cost accounts and Finished stock account showing the profit element at each stage. **[7 MAarks]**

Solution:

Process-A A/c

Particulars	Total (Rs.)	Cost (Rs.)	Profit (Rs.)	Particulars	Total (Rs.)	Cost (Rs.)	Profit (Rs.)
Opening stock	5,000	5,000	-	Process B A/c	28,800	21,600	7,200
Direct materials	9,000	9,000	-				
Direct wages	5,000	5,000	-				
	19,000	19,000	-				
Less: Closing stock	(2,000)	(2,000)	-				
Prime Cost	17,000	17,000	-				
Overheads	4,600	4,600	-				
Process Cost	21,600	21,600	-				
Profit (33.33% of total cost)	7,200	-	7,200				
	28,800	21,600	7,200		28,800	21,600	7,200

Process-B A/c

Particulars	Total (Rs.)	Cost (Rs.)	Profit (Rs.)	Particulars	Total (Rs.)	Cost (Rs.)	Profit (Rs.)
Opening stock	5,500	4,500	1,000	Finished stock A/c	**61,675**	**41,550**	**20,125**
Process A A/c	28,800	21,600	7,200				
Direct materials	9,500	9,500	-				
Direct wages	6,000	6,000	-				
	49,800	41,600	8,200				
Less: Closing stock	(2,490)	(2,080)	(410)				
Prime Cost	47,310	39,520	7,790				
Overheads	2,030	2,030	-				
Process Cost	49,340	41,550	7,790				
Profit (25% of total cost)	**12,335**	**-**	**12,335**				
	61,675	41,550	20,125		61,675	41,550	20,125

Finished Stock A/c

Particulars	Total (Rs.)	Cost (Rs.)	Profit (Rs.)	Particulars	Total (Rs.)	Cost (Rs.)	Profit (Rs.)
Opening stock	10,000	6,000	4,000	Closing P&L A/c	**75,000**	**44,181**	**30,819**
Process B A/c	61,675	41,550	20,125				
	71,675	47,550	24,125				

Less: Closing sbck	(5,000)	(3,369)	(1,631)			
COGS	66,675	44,181	22,494			
Profit	8,325	-	8,325			
	75,000	44,181	30,819	75,000	44,181	30,819

3. N Ltd. produces a product which passes through two processes – Process – I and Process-II. The company has provided following information related to the Financial Year 2021-22:

	Process-I	**Process -II**
Raw Material @ ` 65 per unit	6,500 units	**-**
Direct Wages	` 1,40,000	` 1,30,000
Direct Expenses	30% of Direct Wages	35% of Direct Wages
Manufacturing Overheads	` 21,500	` 24,500
Realisable value of scrap per unit	` 4.00	` 16.00
Normal Loss	250 units	500 units
Units transferred to Process-II / finished stock	6,000 units	5,500 units
Sales	-	5,000 units

There was no opening or closing stock of work-in progress. You are required to prepare:

(i) Process-I Account

(ii) Process -II Account

(iii) Finished Stock Account **[8 Marks]**

Solution:

(b)

Process-I A/c

Particulars	Units	(₹)	Particulars	Units	(₹)
To Raw material used (₹ 65 × 6,500 units)	6,500	4,22,500	By Normal loss (250 units × ₹ 4)	250	1,000
To Direct wages	--	1,40,000	By Process- II A/c (₹ 100 × 6,000 units)	6,000	6,00,000
To Direct expenses (30% of ₹ 1,40,000)	--	42,000	By Abnormal loss (₹ 100 × 250 units)	250	25,000
To Manufacturing overhead		21,500			
	6,500	6,26,000		6,500	6,26,000

Cost per unit of completed units and abnormal loss: $\frac{\text{Total Cost-Realisable value from normal loss}}{\text{Inputs Units-Normal loss units}}$

$$=\frac{₹\ 6,26,000 - ₹\ 1,000}{6,500 \text{units} - 250 \text{ units}} = \frac{₹\ 6,25,000}{6,250 \text{ units}} = ₹\ 100$$

Process- II A/c

Particulars	Units	(₹)	Particulars	Units	(₹)
To Process - I A/c	6,000	6,00,000	By Normal loss (500 units × ₹16)	500	**8,000**
To Direct wages	--	1,30,000	By Finished Stock A/c (₹144 × 5,500 units)	5,500	7,92,000
To Direct expenses (35% of ₹ 1,30,000)	--	45,500			
To Manufacturing overhead	--	24,500			
	6,000	8,00,000		6,000	8,00,000

Cost per unit of completed units and abnormal loss:

$$\frac{\text{Total Cost - Realisable value from normal loss}}{\text{Inputs units - Normal loss units}}$$

$$= \frac{₹\ 8,00,000 - ₹\ 8,000}{6,000 \text{ units} - 500 \text{ units}} = \frac{₹\ 7,92,000}{5,500 \text{ units}} = ₹144$$

Finished Goods Stock A/c

Particulars	Units	(₹)	Particulars	Units	(₹)
To Process II A/c	5,500	7,92,000	By Cost of Sales (₹144 × 5,000 units)	5,000	7,20,000
			By Balance c/d	500	72,000
	5,500	7,92,000		5,500	7,92,000

4. Arnav Ltd. manufactures chemical solutions used in paint and adhesive products. Chemical

solutions are produced in different processes. Some ofthe processes are hazardous in nature which may results in fire accidents.

At the end of the last month, one fire accident occurred in the factory. The fire destroyed some of the paper files containing records of the process operations for the month.

You being an associate to the Chief Manager (Finance), are assigned toprepare the process accounts for the month during which the fire occurred. From the documents and files of other sources, following information could be retrieved:

Opening work-in-process at the beginning of the month was 500 litres, 80% complete for labour and 60% complete for overheads. Opening work-in- process was valued at `2,78,000.

Closing work-in-process at the end of the month was 100 litres, 20% complete for labour and 10% complete for overheads.

Normal loss is 10% of input (fresh) and total losses during the month were 800 litres partly due to the fire damage.

Output transferred to finished goods was 3,400 litres.

Losses have a scrap value of `20 per litre.

All raw materials are added at the commencement of the process.

The cost per equivalent unit is `660 for the month made up as follows:Raw Material `300 Labour `200 Overheads `160

The company uses FIFO method to value work-in-process and finished goods.The following information are required for managerial decisions:

i. How much quantity of raw material introduced during the month?
   - A. 4,300 Litres
   - B. 3,500 Litres
   - C. 4,200 Litres
   - D. 3,800 Litres

ii. The Quantity of normal loss and abnormal loss are:
   - A. Normal loss- 380 litres & Abnormal loss- 420 litres
   - B. Normal loss- 350 litres & Abnormal loss – 450 litres
   - C. Normal loss- 430 litres & Abnormal loss – 370 litres
   - D. Normal loss- 420 litres & Abnormal loss – 380 litres.

iii. Value of raw material added to the process during the month is:
   - A. 10,10,000
   - B. 10,33,600

C. `10,18,400

D. `10,20,000

iv. Value of labour and overhead in closing Work-in-process are:

A. `4,000 & `1,600 respectively

B. 20,000 & `16,000 respectively

C. `16,000 & `9,000 respectively

D. `13,200 & `6,600 respectively

v. Value of output transferred to finished goods is:

A. 22,57,200

B. `20,06,400

C. `22,44,000

D. `19,27,200

[10 Marks]

Solution:

i. D

Inflow into process	Litres	Outflow from process	Litres
Opening WIP	500	Transferred to finished goods	3,400
Quantity introduced (Balancing figure)	3,800	Total loss	800
		Closing WIP	100
	4,300		4,300

ii. A

Total loss	800 litres
Normal loss (10% of fresh input i.e. 3,800)	380 litres
Abnormal loss	420 litres

iii. B

Calculation of Equivalent production units

Input Details	Units	Output Particulars	Units	Equivalent Production					
				Material		Labour		Overheads	
				%	Units	%	Units	%	Units
Opening WIP	500	From Opening WIP	500	-	-	20	100	40	200
Fresh inputs	3,800	From fresh units	2900	100	2900	100	2900	100	2900
		Normal loss	380	-		-		-	
		Closing WIP	100	100	100	20	20	10	10
		Abnormal loss	420	100	420	100	420	100	420
	4,300		4,300		3,420		3,440		3,530

Value of raw materials introduced during the month

	Equivalent units	Cost per EU (₹)	Total cost (₹)
Total value of raw material	3420	300	10,26,000
Add: Scrap value of normal loss	380	20	7,600
Value of raw material introduced			**10,33,600**

iv. A

Value of labour and overhead in closing Work in process

Cost elements	Equivalent units	Cost per EU (₹)	Total cost (₹)
Labour	20	200	**4,000**
Overheads	10	160	**1,600**

v. C

Value of output transferred to finished goods

Output transferred (Units) × Equivalent cost per unit

3,400 Litres × ₹660 = ₹22,44,000