IPCC – November 2017

COSTING

Test Code –
Branch (MULTIPLE) (Date : 04.06.2017)

(50 Marks)

Note: All questions are compulsory.

Question 1 (5 marks)

Solution:

(a) Working Notes:

(i) Total Productive hours = Estimated Working hours – Machine Maintenance hours
= 2,200 hours – 200 hours = 2,000 hours **(1 mark)**

(ii) Depreciation per annum = $\frac{10000-1000}{10 \text{ years}} = 900$

(iii) Chemical Solution cost per annum = 20* 50 weeks = 1000

(iv) Wages of the attendants (per annum) = $\frac{120*50\text{weeks}}{6 \text{ machines}} = 1000$

Calculation of Machine hour rate

Particulars	**Amount (per Annum)**	**Amount (per hour)**
A. Standing Charges **(1 mark)**		
(i) Wages of attendants	1,000	
(ii) Department and general works overheads	2,000	
Total Standing Charges	3,000	
Standing Charges per hour $\left[\frac{3,000}{2,000}\right]$		1.5
B. Machine Expenses **(2 marks)**		
(iii) Depreciation	900	0.45
(iv) Electricity $\left[\frac{\text{Rs. } 0.09 \times 16\text{units} \times 1,900\text{hours}}{2,000\text{hours}}\right]$	-	1.37
(v) Chemical solution	1,000	0.50
(vi) Maintenance cost	1,200	0.60
Machine operating cost per hour (A+B) (1 mark)		**4.42**

Question 2 (5 marks) (1 mark each)

(i) Re-order quantity (ROQ)

Annual consumption of raw material (A) = 72,000 units
Cost of placing an order (O) = Rs.2,250
Carrying cost per unit per annum(c x i) = Rs. 300x 12%=Rs. 36

Economic Order Quantity (EOQ)/ROQ $= \sqrt{\frac{2AO}{c \times i}}$

$= \sqrt{\frac{2 \times 72{,}000\ units \times Rs.2{,}250}{Rs.36}} = 3{,}000\ units$

(ii) **Re-order level (ROL)** =Maximum consumption x Maximum lead time

=400 units x 20 days =8,000 units

(iii) **Minimum Level** =ROL –(Average consumption x Average lead time)

= 8,000 units –(300 units x 14 days)

= 3,800 units

(iv) **Maximum Level** =ROL +ROQ –(Minimum consumption x Minimum lead time)

= 8,000units +3,000units –(200 units x 8 days)

=9,400 units

(v)**Danger level** = Average Consumption x Emergency Delivery Time

=300 units x 5 days = 1,500 units
Or,
=Minimum Consumption x emergency Delivery Time

=200 units x 5 days = 1,000 units.

Question 3 (4 marks)

The following are the differences between allocation and apportionment.

1. Allocation costs are directly allocated to cost centre. Overheads which cannot be directly allocated are apportioned on some suitable basis. **(1 mark)**
2. Allocation allots whole amount of cost to cost centre or cost unit where as apportionment allots part of cost to cost centre or cost unit. **(1 mark)**
3. No basis required for allocation. Apportionment is made on the basis of area, assets value, number of workers etc. **(2 marks)**

Question 4 (4 marks)

Scrap: **(2marks)**

a) Scrap is incidental residence from certain type of manufacture, usually of small amount and low value, recoverable without further processing.
b) The cost of scrap is borne by good units and income from scrap is treated as other income.

Defectives: **(2marks)**

a) Defectives are portion of production which can be rectified by incurring additional cost. Normal defectives can be avoided by quality control.
b) Normal defectives are charged to good products. Abnormal defectives are charged to Costing Profit and Loss Account

Question 5 (8 marks)

Apportionment of Joint Costs (2 marks)

Particulars	**A(Rs.)**	**B(Rs.)**
Selling Price	16,000	8,000
Less: Estimated profit	4,000 (25% of Rs. 16,000)	1,600 (25% of Rs. 8,000)
Cost of sales	12,000	6,400
Less :Selling & Distribution exp . (Refer to working note)	267 (Rs.400 x2/3)	133 (Rs.400 x 1/3)
Less :Subsequent cost	5,000	3,000
Share of Joint cost	**6,733**	**3,267**

So, Joint cost of manufacture is to be distributed to A & B in the ratio of 6733: 3267

Statement showing Cost of Production of A and B

Elopements of cost	Joint Cost **(3 marks)**		Subsequent Cost **(1 mark)**		Total Cost**(1 mark)**	
	A	B	A	B	A	B
Material	3,367	1,633	3,000	1,500	6,367	3,133
Labour	2,020	980	1,400	1,000	3,420	1,980
Overheads	1,346	654	600	500	1,946	1,154
				Cost of Production	**11,733**	**6,267**

Working Note:

Calculation of Selling and Distribution Expenses(1 mark)

Particulars	**(Rs.)**
Total Sales Revenue (Rs. 16,000+Rs.8,000)	24,000
Less : Estimated profit(Rs. 4,000+Rs. 1,600)	(5,600)
Cost of sales	18,400
Less :Cost of production:	
-Joint Costs	(10,000)
-Subsequent costs (Rs.5,000+Rs.3,000)	(8,000)
Selling and Distribution expenses (Balancing figure)	**400**

Question 6 (8 marks)

Preparation of Cost Sheet /Cost Statement (3 marks)

Particulars	**Amount (Rs.)**
Materials	26,80,000
Wages	17,80,00
Prime Cost	44,60,000
Add : Factory expenses (20% of Rs. 44,60,00)	8,92,000
Factory Cost	53,52,000
Add :Administrative expenses (10% of Rs. 52,52,000)	5,35,200
Cost of Production	58,57,200
Less closing stock $\left(\frac{Rs.\,58{,}87{,}200}{52{,}000\ units}\right) \times 2{,}000 units$	(2,26,431)
Cost of Goods Sold	56,60,769
Add :Selling expenses (Rs. 10 x 50,000 units)	5,00,000
Cost of Sales	61,60,769
Profit (Balancing figure)	**39,231**
Sales Value	62,00,000

(it has been assumed that administrative expenses are related with production activities)

Costing Profit and Loss Account (2 marks)

Particulars	Amount (Rs.)	Particulars	Amount (Rs.)
To Material	26,80,000	By Sales	62,00,000
To Wages	17,80,000	By Closing Stock	2,26,431
To Factory expense	8,92,000		
To Administrative expenses	5,35,200		
To Selling expenses	5,00,000		
To Profit (Balancing figure)	39,231		
	64,26,431		**64,26,431**

Reconciliation of profit as per Cost Accounts and as per Financial Accounts (3 marks)

Particulars	Amount (Rs.)
Profit as per Cost Accounts	39,231
Additions:	
Administrative expenses (Over –absorbed)(Rs. 5,35,200 –Rs.4,80,200)	55,000
Selling expenses (Overcharged)(Rs. 5,00,000 –Rs. 2,50,00)	2,50,000
Dividend received	20,000
	3,64,231
Deductions :	
Factory expenses (Under – absorbed)(Rs. 9,50,000 –Rs.8,92,000)	58,000
Closing stock (Over – valued)(Rs. 2,26,431 –Rs.1,50,000)	76,431
Preliminary expenses written off	50,000
	1,84,431
Profit as per Financial Accounts	**1,79,800**

(Reconciliation statement may also be prepared by taking financial profit as base.)

Question 7 (8 marks) (1 mark for each working)

Statement of Equivalent Units (Process- I)

Input (Units)	Particulars	Output (Units)	Equivalent Production			
			Materials		Labour and Overheads	
			Units	(%)	Units	(%)
40,000	Introduced and completed	36,000	36,000	100	36,000	100
	Normal Loss	2,000	-	-	-	-
	Closing stock	2,000	2,000	100	1,000	50
40,000		40,000	38,000		37,000	

Computation of cost per Equivalent Unit for each element of cost (Process- I)

Element of Cost	Total Cost(Rs.)	Equivalent units	Cost per Equivalent units (Rs.)
Direct Material	6,00,000	38,000	15.7895
Labour	1,20,000	37,000	3.2432
Factory Overheads	2,40,000	37,000	6.4865

Statement of Apportionment of Cost

Items	Elements	Equivalent units	Cost per units (Rs.)	Cost (Rs.)	Total(Rs.)
Units Introduced and completed	Material	36,000	15.7895	5,68,422.00	
	Labour	36,000	3.2432	1,16,755.20	
	Overheads	36,000	6.4865	2,33,514.00	9,18,691.20
Closing Stock	Material	2,000	15.7895	31,579.00	
	Labour	1,000	3.2432	3,243.20	
	Overheads	1,000	6.4865	6,486.50	41,308.70

Process- I Account

Particulars	Units	Amount (Rs.)	Particulars	Units	Amount (Rs.)
To Material	40,000	6,00,000	By Normal loss	2,000	-
To Labour		1,20,000	By Process II	36,000	9,18,691
To Overheads		2,40,000	By Closing stock	2,000	41,309
	40,000	**9,60,000**		**40,000**	**9,60,000**

Statement of Equivalent Units (Process –II)

Input (Units)	Particulars	Output (Units)	Equivalent Production			
			Materials		Labour and Overheads	
			Units	(%)	Units	(%)
36,000	Units transferred from Process –I					
	Normal Loss	1,500	-	-	-	-
	Completed	32,000	32,000	100	32,000	100
	Closing Stock (balancing figure)	2,500	2,500	100	1,250	50
36,000		36,000	34,500		33,250	

Computation of cost per Equivalent Unit for each element of cost (Process- I)

Element of Cost	Total Cost(Rs.)	Equivalent units	Cost per Equivalent units (Rs.)
Cost of 36,000 units transferred from Process –I	9,18,691	34,500	26.6287
Labour	1,60,000	33,250	4,8120
Factory Overheads	2,00,000	33,250	6.0150

Statement of Apportionment of Cost

Items	Elements	Equivalent units	Cost per units (Rs.)	Cost (Rs.)	Total(Rs.)
Units Introduced and completed	Material	32,000	26.6287	8,52118.40	
	Labour	32,000	4,8120	1,53,984.00	
	Overheads	32,000	6.0150	1,92,480.00	11,98,582.40
Closing Stock	Material	2,500	26.6287	66,571.00	
	Labour	1,250	4,8120	6,015.00	
	Overheads	1,250	6.0150	7,518.75	80,105.50

Process- II Account

Particulars	Units	Amount (Rs.)	Particulars	Units	Amount (Rs.)
To Units introduced	36,000	9,18,691	By Normal loss	1,500	-
To Labour		1,60,000	By Process II	32,000	11,98,582
To Overheads		2,00,000	By Closing stock	2,500	80,109
	36,000	**12,78,691**		**36,000**	**12,78,691**

***Difference arose due to rounding-off has been adjusted.**

Question 8 (8 marks) (1/2 mark for each entry)

Store Ledger Account
For the three months ending 30th June, 2014
(Weighted Average Method)

Date	Receipt				Issues				Balance		Rate for further Issues (Rs.)
	GRN No.PR No.	QTY. (Kg.)	Rates (Rs.)	Amount	MR No.	Qty. (Kg.)	Rates (RS.)	Amount (Rs.)	Qty (kg)	Amount	
2014											
April 1									1,500	7,200	4.80
April 4						1,100	4.80	5,280	400	1,920	4.80
April 10		1,600	5.00	8,000					2,000	9,920	$\frac{9,920}{2,000}$=4.96
April 20		2,400	4.90	11,760					4,400	21,680	$\frac{21,680}{4,400}$=4.93
April 24						1,600	4.93	7,888	2,800	13,792	$\frac{13,792}{2,800}$=4.93
May 5		1,000	5.10	5,100					3.800	18,892	$\frac{18,892}{3,800}$=4.97
May10						1,500	4.97	7,455	2,300	11,437	$\frac{11,437}{2,300}$=4.97
May 17		1,100	5.20	5,720					3,400	17,157	$\frac{17,157}{3,400}$=5.05
May 25		800	5.25	4,200					4,200	21,357	$\frac{21,357}{2,500,}$=5.09
May 26						1,700	5.09	8,653	2,500	12,704	$\frac{12,704}{32,500}$=5.09
May 31					Shortage	80			2,420	12,704	$\frac{12,704}{2,420}$=5.25
June 11		900	5.40	4,860					3,320	17,564	$\frac{17564}{3,320}$=5.229
June 15						1,500	5.29	7,935	1,820	9,629	$\frac{9,629}{1,820}$=5.29
June 21						1,200	5.29	6,348	620	3,281	$\frac{3,281}{620}$=5.29
June 24		1,400	5.50	7,700					2,020	10,981	$\frac{10,981}{2,020}$=5.44
June 30					Shortage	60			1,960	10,981	$\frac{10,981}{1,980}$=5.60

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