



INTER CA – MAY 2018

Sub: Costing

Topics: Contract Costing, Labour Cost Control, Stock Valuation & Control, Reconciliation, Joint product & by – product, Absorption Costing, Overheads.

Test Code – M18

Branch: MULTIPLE Date: 07.01.2018

(50 Marks)

Note: All questions are compulsory.

Question 1 (8 marks)

Note : It is assumed that the value of Opening Stock 58.50 is at Landed Cost, i.e inclusive of Freight.

1. Computation of Total Value of Purchases (2 marks)

Date	Quantity (Kgs)	Rate including Freight(Rs.)	Value of Purchases(Rs.)
3 rd March	35,000	59.00 + 1.75 = 60.75	21,26,250
18 th March	32,000	59.50 + 1.75 = 61.25	19,60,000
25 th March	22,000	60.00 + 1.75 = 61.75	13,58,500
TOTAL	89,000		54,44,750

2. Value of Closing Stock using FIFO : (2 marks)

- Closing Stock of 23,000 kg will be valued at the latest purchase rates under FIFO. This is because the earliest/ first available rates will be considered for the purpose of pricing material issues / consumption.
- Hence, closing stock of 23,000 Kg will be valued as under –
 Stock in hand, Out of purchases on 25th March (22,000 Kg at Rs. 61.75) (fully available on hand)
 + Stock in hand, Out of purchases on 18th March (1,000 Kg at Rs. 61.25) (available balance on hand)
 = **Rs. 14,19,750**

3. Cost of Goods Sold = Opening Stock + Purchase – Closing Stock

$$= (22,000\text{kg at Rs. } 58.50) + \text{Rs. } 54,44,750 (-) \text{Rs. } 14,19,750 = \text{Rs. } 53,12,000$$

(2 marks)

4. Profit for the Month = Sales (-) Cost of Goods Sold (-) Admin Cost (i.e. Salary)

$$= \text{Rs. } 62,00,000 (-) \text{Rs. } 53,12,000 (-) \text{Rs. } 11,000 = \text{Rs. } 8,77,000 \text{ (2 marks)}$$

Question 2 (8 Marks)

Working Notes:

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

(ii) Depreciation per annum = $\frac{\text{₹ } 10,000 - \text{₹ } 1,000}{10 \text{ years}} = \text{₹ } 900$

(iii) Chemical solution cost per annum = ₹ 20 × 50 weeks = ₹ 1,000

(iv) Wages of attendants (per annum) = $\frac{\text{₹ } 120 \times 50 \text{ weeks}}{6 \text{ machines}} = \text{₹ } 1,000$

Calculation of Machine hour rate

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

3 marks

Question 3 (6 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 $\left(\frac{\text{Rs. } 58,87,200}{52,000 \text{ units}}\right) \times 2,000 \text{ units}$	(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
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(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 4 (8 Marks)

Apportionment of Joint Costs (2 marks)

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

Elovements 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
					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 5 (8 marks)

(i) **M/s ABID Constructions**

Contract Account (4 marks)

Particulars		Amount (` in '000)	Particulars		Amount (` in '000)
To Material issued		7,700	By Material returned		175
To Direct wages	3,300		By Profit & Loss A/c (Material Destroyed by fire)		130
Add: Outstanding	100	3,400	By W-I-P:		
To Site Office Cost	550		- Work uncertified	225	
Less: Prepaid	50	500	- Work certified	12,650	12,875
To Depreciation*		40	By Material at site		110
To Notional Profit		1,650			
		13,290			13,290
To Profit & Loss A/c (Working Note -2)		880	By Notional Profit		1,650
To W-I-P (Reserve)		770			
		1,650			1,650

* Depreciation on plant = ` 8,00,000 × 15% × $\frac{4 \text{ months}}{12 \text{ months}}$ = ` 40,000

(ii) **Contractee's Account (1 mark)**

Particulars	Amount (` in '000)	Particulars	Amount (` in '000)
To Balance c/d	10,120	By Bank A/c	10,120
	10,120		10,120

(iii) **Relevant items of Profit & Loss Account(1 mark)**

Particulars	Amount (` in '000)	Particulars	Amount (` in '000)
To Contract A/c (loss of material due to fire)	130	By Contract A/c (Profit on contract)	880
To Net Profit	750		
	880		880

(iv) **Balance Sheet (Extracts) as on 31st March, 2014(2 marks)**

(Amount in '000)

Liabilities	Amount (`)	Amount (`)	Assets	Amount (`)	Amount (`)
			Plant at cost	800	

Add: Profit	750		Less: Dep.	40	760
Outstanding Wages		100	Contract W-I-P:		
			-Uncertified	225	
			-Certified	12,650	
			-Reserve	(770)	
			Less: Advances	(10,120)	1,985
			Materials at site		110
			Prepaid exp.		50

Working Notes: (2 marks)

$$1. \text{ Percentage of Completion} = \frac{\text{Work Certified}}{\text{Value of contract}} \times 100$$

$$= \frac{1,26,50,000}{1,71,00,000} \times 100 = 73.98\%$$

2. Profit from the incomplete contract

$$= \text{Notional Profit} \times \frac{\text{Cash Received}}{\text{Work Certified}}$$

$$= 16,50,000 \times \frac{2}{3} \times \frac{1,26,50,000}{1,01,20,000}$$

$$= 8,80,000$$

(Note: The above figures calculated on traditional prudent basis followed in Contract costing.)

Question 6 (8 Marks)

Overhead Distribution Statement (2 marks)

	Production Departments		Service Departments	
	Machine Shops	Packing	General Plant	Stores
Allocated Overheads:	(₹)	(₹)	(₹)	(₹)
Indirect labour	80,000	60,000	40,000	1,10,000
Maintenance Material	34,000	16,000	21,000	28,000
Misc. supplies	15,000	29,000	9,000	6,000
Supervisor's salary	--	--	1,60,000	--
Cost & payroll salary	--	--	8,00,000	--
Total allocated overheads	1,29,000	1,05,000	10,30,000	1,44,000
Add: Apportioned Overheads (As per Schedule below)	18,43,500	7,01,250	2,27,750	7,31,500
	19,72,500	8,06,250	12,57,750	8,75,500

Schedule of Apportionment of Overheads (2 marks)

Item of Cost	Basis	Production Departments		Service Departments	
		Machine Shops	Packing	General Plant	Stores

		Shops (₹)	(₹)	Plant (₹)	(₹)
Power	HP hours (7 : 1 : - : 2)	5,46,000	78,000	--	1,56,000
Rent	Floor space (5 : 2 : 1 : 4)	3,00,000	1,20,000	60,000	2,40,000
Fuel & Heat	Radiator sec. (3 : 6 : 2 : 4)	1,20,000	2,40,000	80,000	1,60,000
Insurance	Investment (10 : 3 : 1 : 2)	75,000	22,500	7,500	15,000
Taxes	Investment (10 : 3 : 1 : 2)	52,500	15,750	5,250	10,500
Depreciation	Investment (10 : 3 : 1 : 2)	7,50,000	2,25,000	75,000	1,50,000
		18,43,500	7,01,250	2,27,750	7,31,500

(b) Re-distribution of Overheads of Service Departments to Production Departments: (4 marks)

Let, the total overheads of General Plant = 'a' and the total overheads of Stores = 'b' a = 12,57,750 + 0.3b(i)

b = 8,75,500 + 0.2a.....(ii)

Putting the value of 'b' in equation no. (i)

$$a = 12,57,750 + 0.3 (8,75,500 + 0.2a)$$

$$\text{Or } a = 12,57,750 + 2,62,650 + 0.06a$$

$$\text{Or } 0.94a = 15,20,400 \quad \text{Or } a = 16,17,447 \text{ (appx.)}$$

Putting the value of a = 16,17,447 in equation no. (ii) to get the value of 'b'

$$b = 8,75,500 + 0.2 \times 16,17,447 = 11,98,989 \text{ (appx.)}$$

Particulars	Total (₹)	Machine Shops (₹)	Packing (₹)
Allocated and Apportioned overheads as per Primary distribution	27,78,750	19,72,500.00	8,06,250.00

- General Plant	16,17,447	8,08,723.50 $(16,17,447 \times \frac{5}{10})$	4,85,234.10 $(16,17,447 \times \frac{3}{10})$
- Stores	11,98,989	5,99,494.50 $(11,98,989 \times 50\%)$	2,39,797.80 $(11,98,989 \times 20\%)$
		33,80,718	15,31,281.9

Question 7 (4 marks)

(a) Labour Turnover by Replacement Method = $\frac{\text{No. of workers replaced during the quarter}}{\text{Average no. workers on roll during the quarter}}$

Or, $0.03 = \frac{\text{No. of workers replaced during the quarter}}{(990+1,010) \div 2}$

Or, No. of worker replaced during the quarter = $0.03 \times 1,000 = 30$ workers

(i) Labour Turnover by Separation Method (2 marks)

$$= \frac{\text{No. of workers replaced during the quarter}}{\text{Average no. workers on roll during the quarter}} \times 100$$

$$= \frac{\text{Worker at begining} + \text{Fresh recruitment} + \text{Replacements} - \text{workers at closing}}{\text{Average no. workers on roll during the quarter}} \times 100$$

$$= \frac{990 + 4030 - 1,010}{(990 + 1,010) \div 2} \times 100 = \frac{50 \text{ workers}}{1,000 \text{ workers}} \times 100 = 5\%$$

(ii) Labour Turnover by Flux Method (2 marks)

$$\frac{\text{No. of workers (Separated + replaced + Fresh Recuriment) during the quarter}}{\text{Average no. workers on roll during the quarter}} \times 100$$

$$= \frac{50 + 30 + 40}{(990 + 1,010) \div 2} \times 100 = \frac{120 \text{ workers}}{1,000 \text{ workers}} \times 100 = 12\%$$
