B. COM. (HONS. & GEN.) SEM. - II

CONTRACT COSTING

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PROBLEM AND SOLUTION ON CONTRACT COSTING

Problem – 1

From the following particulars relating to a contract, prepare (a) the Contract Account, (b) Contractee's Account and (c) relevant entries in the Balance Sheet:

	Rs.
Materials sent to site	85,349
Labour engaged on site	74,375
Plant installed at cost	15,000
Direct expenditure	4,126
Establishment charges	3,167
Materials returned to stores	549
Work certified	1,95,000
Cost of work not certified	4,500
Materials on hand, Dec. 31	1,883
Wages accrued on December, 31	2,400
Direct expenditure accrued on Dec. 31	240
Value of plant, Dec. 31	11,000

The contract price has been agreed at Rs.2,50,000. Cash has been received from the contractee amounting to Rs.1,80,000.

Solution

Contract Account

Dr.			Rs.				Cr. Rs.
To	Materials sent to site		85,349	By	Materials returned to store		549
"	Wages	74,375		"	Materials on hand		1,883
	Add Accrued	2,400	76,775	"	Plant		11,000
"	Plant		15,000				13,432
"	Direct Exp	4,126		"	Work-in-Progress :		
	Add Accrued	240	4,366		Work certified	1,95,000	
"	Establishment charges		3,167		Cost of work		
"	Profit c/d		28,275		not certified	4,500	1,99,500
			2,12,932				2,12,932
"	Profit & Loss a/c		17,400	By	Profit b/d		28,275
"	Work-in-Progress		10,875				
			28,275				28,275

Contractee's Account

		Rs.			Rs.
To	Contract A/c	1,95,000	By	Bank	1,80,000
			"	Balanced c/d	15,000
		1,95,000			1,95,000

Balance Sheet

as on Dec. 31

	Rs.			Rs.
Outstanding wages	2,400	Work-in-Progress :		
Outstanding expenditure	240	Value of work certified	1,95,000	
		Cost of work uncertified	4,500	
			1,99,500	
		Less : Profit in suspense	10,875	
			1,88,625	
		Less : Cash received	1,80,000	
				8,625
		Materials on hand		1,883
		Plant at site		11,000

Note : Calculation of Profit taken to the credit of Profit and Loss Account :

$$\frac{2}{3} \times 28{,}275 \times (1{,}80{,}000 \div 1{,}95{,}000) = \text{Rs. } 17{,}400$$

Problem – 2

The following information relates to contract 100 as at 31st Dec. 1998:

	Rs.
Wages	42,000
Materials direct to site	54,000
Materials transferred to River-view site	1,500
Plant purchased at cost	12,500
Plant transferred from River-view site	5,300
Sub-contractors charges	19,500
Site expenses (power etc.)	5,000
Materials on site (31.12.98)	18,300
Plant on site (31.12.98)	14,750
Prepayments at 31.12.98	500
Accrued wages at 31.12.98	920
Cost of work done but not certified at 31.12.98	7,250
Head office charges are 10% of wages	
Materials from Stores	650

The contract value is Rs.5, 50,000. From the above information prepare the Contract Account for the year ended 31st December, 1998 clearly showing the profit for the year. Value of work certified by the architect was Rs.1, 37,500 and the contractor had made progress payments of this amount less 15% agreed retention percentage.

Solution

CONTRACT ACCOUNT No. 100

Dr.	Rs.	Rs.	Cr.	Rs.	Rs.
To Wages	42,000				
Add Accrued	920	42,920	By Materials		
" Materials purchased	54,000		on site c/d		18,300
Materials from store	650	54,650	" Plant on site c/d		14,750
" Plant purchased	12,500		" Prepayment c/d		500
" Plant transferred	5,300	17,800	" Materials		
" Sub-contractors charges		19,500	transferred		1,500
" Site expenses		5,000	" Cost of contract		1,09,112
" Head office charges					
10% of wages		4,292			
		1,44,162			1,44,162
To Cost of contract b/d		1,09,112	By Value of		
" Profit & Loss A/c		10,097	Work certified		1,37,500
" Profit in Suspense A/c		25,541	Work not certified		7,250
		1,44,750			1,44,750
1st Jan, 1989			1st Jan. 1989		
To Prepayment b/d		500	By Profit in Suspense		25,541
" Materials b/d		18,300			
" Plant b/d		14,750			
" Work-in-Progress b/d		7,250			

Notes : Calculation of Profit to be taken to the credit of Profit and Loss A/c :

Notional Profit = Rs. 1,44,750 − 1,09,112 = Rs. 35,638

$\frac{1}{3}$ of 35,638 × $\frac{85}{100}$ = 10,097.

Problem – 3

Calculate profit on work certified, cost of work in progress at the year end from the following:

(a) Materials sent to site Rs.86,000;

(b) Labour on site Rs.70,000;

(c) Plant at site Rs.80,000;

(d) Direct Expenses Rs.3,000;

(e) Office expenses Rs.4,000;

(f) Materials returned to stores Rs.600;

(g) Work certified Rs.1,90,000;

(h) Work not certified Rs.7,700;

(i) Materials in stock at end Rs:2,000;

(j) Outstanding wages Rs.300;

(k) Cash received against bill Rs.1,61,500;

(l) Depreciation on plant Rs. 7,000.

Solution

Contract Account

Dr.	Rs.	Rs.		Rs.	Cr. Rs.
To Materials		86,000	By Materials		
" Wages	70,000		returned to store		600
Add Outstanding	300	70,300	" Stock of materials		2,000
To Direct Expenses		3,000	" Plant		73,000
" Plant		80,000	" Cost of contract		
" Office Expenses		4,000	(Balancing figure)		1,67,700
		2,43,300			2,43,300
To Cost of contract b/d		1,67,700	By Contractee's A/c		
" Profit & Loss a/c		8,500	Value of work		
" Profit in suspense		21,500	certified		1,90,000
			Cost of work not		
			certified		7,700
		1,97,700			1,97,700

Working Notes :

1. Assuming that 50% of contract has been completed and hence $\frac{1}{3}$ of notional profit has been considered.
2. $\frac{1}{3} \times 30,000 \times 1,61,500 \div 1,90,000$ = Rs. 8,500 credited to Profit and Loss A/c.
3. Value of Work-in-Progress :

		Rs.
	Cost of work not certified –	7,700
Add	Contractee's balance 1,90,000 – 1,61,500 =	28,500
		36,200
Less	Profit in Suspense	21,500
	Cost of Work-in-progress	14,700

Problem – 4

X & Y Construction Company undertook the construction of a bridge. The value of the contract was Rs. 25,00,000 subject to a retention money of 20% until one year after the certified completion of the contract and final approval of the contractee's engineer. The following are the details as shown in the Books on 30. 6. 2019:

Solution

	Rs.
Labour on site	8,10,000
Materials direct to site	6,40,000
Materials from Store	1,62,400
Hire and use of plant upkeep account	24,200
Direct Expenses	46,000
General Overhead	74,200
Materials on hand, June 30, 1987	12,600
Wages accrued on June 30, 1987	15,600
Direct expenses accrued on June 30, 87	3,200
Works not certified	33,000
Amount certified by the engineer	22,00,000
Cash received on account	17,60,000

Prepare (a) Contract Account, (b) Contractee's A/c; (c) Determine the cost of Work-in-progress :

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Contract Account

Dr. *Cr.*

	Rs.	Rs.		Rs.	Rs.
To Materials		6,40,000			
" Materials from Stores		1,62,400	By Materials on hand		12,600
" Wages	8,10,000		" Cost of contract		
Add Accrued	15,600	8,25,600	(balancing figure)		17,63,000
" Direct Expenses	46,000				
Add Accrued	3,200	49,200			
" Hire charge of Plant		24,200			
" General Overhead		74,200			
		17,75,600			17,75,600
To Cost of Contract b/d		17,63,000	By Contractee's A/c		22,00,000
" Profit & Loss A/c		2,50,667	work certified		
" Profit in Suspense		2,19,333	" Cost of work not		
			certified		33,000
		22,33,000			22,33,000
" Materials in hand		12,600	By Wage b/d		15,600
			" Direct Exp. b/d		3,200

Contractee's Account

Dr.					Cr.
	Rs.	Rs.		Rs.	Rs.
To Contract A/c (Value of work certified)		22,00,000	By Bank		17,60,000
			By Balance c/d		4,40,000
		22,00,000			22,00,000

Working Notes :

1. **Profit taken to the credit of P & L A/c :**

Notional Profit = Rs. 22,00,000 + 33,000 – 17,63,000 = Rs. 4,70,000

Since more than 75% of contract had been completed, profit to be taken to the credit of Profit & Loss A/c as follows :

$\frac{2}{3} \times 4{,}70{,}000 \times 17{,}60{,}000 \div 22{,}00{,}000 =$ Rs. 2,50,667.

		Rs.
2.	**Value of work-in-progress :**	
	Cost of work not certified –	33,000
	Balance of Contractee's A/c	4,40,000
		4,73,000
Less	Profit in Reserve –	2,19,333
	Value of Work-in-progress :	2,53,667

Problem – 5

Calcutta Construction Ltd. undertook a contract for construction of a bridge on 1st July, 2019. The contract price was Rs.5,00,000. The Company incurred the following expenses up to December, 2019:

	Rs.
Materials consumed	1,10,000
Wages	40,000
Direct expenses	20,000
Plant purchased on 1. 1. 1991	1,00,000
Materials in hand	5,000

Depreciation 10% p.a. on plant

Charge other works expenses @ 20% of wages and office expenses @ 10% of works cost.

The amount certified by the engineer was Rs.3,00,000, retention money being 20% of the certified value.

Prepare the Contract Account showing therein the amount of profit that the company can reasonably take to its Profit and Loss Account.

Solution

In the Books of

CALCUTTA CONSTRUCTION LTD.

Contract Account

for the half-year ended 31st Dec. 1984

Dr.		Rs.		Cr. Rs.
To	Materials purchased	1,15,000	By Materials in hand	5,000
"	Wages	40,000	" Cost of Contract	2,01,800
"	Direct Expenses	20,000		
"	Works Expenses 20% of wages	8,000		
"	Depreciation on Plant (for 6 months @ 10%)	5,000		
	Works Cost	1,88,000		
"	Office Expenses @ 10% of works cost	18,800		
		2,06,800		2,06,800
"	Cost of Contract	2,01,800	By Work-in-Progress :	
"	Profit & Loss A/c	52,373	Work certified	3,00,000
"	Profit in Reserve	45,827		
		3,00,000		3,00,000
"	Materials b/d	5,000	By Profit in Reserve	45,827
"	Plant	95,000		

Note :

1. Depreciation has been charged for 6 months as the same has been used from 1st July, 1991 to 31st Dec. 1991.
2. In the problem the amount of materials consumed is given, so, no adjustment is required for closing stock of materials. Alternatively, materials sent to site can be determined as :

	Materials consumed	1,10,000
Add :	Materials in hand	5,000
		1,15,000

In this case, materials in hand will appear on the credit side of Contract Account.

3. Profit transferred to P & L A/c

$$\frac{2}{3} \times 98,200 \times \frac{80}{100} = \text{Rs. } 52,373$$

or, $\frac{2}{3}$ of Notional Profit × (Cash received ÷ work certified)

$$\frac{2}{3} \times 98,200 \times (2,40,000 \div 3,00,000) = \text{Rs. } 52,373.$$