Accounting and Corporate Reporting

Chapter 4

Costing Methods I: Specific Order Costing

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Introduction
This chapter focuses on the description on how costing accounting records kept in terms of cost determination of:
(i) Individual jobs.
(ii) Jobs undertaken in batches
(iii) Contracts
(iv) Procedures or processes, etc.

What is Costing Method?
A costing method refers to a particular procedure or technique designed to ascertain or determine the cost of a product or service. It is defined as the processes involved or adopted in the accumulation and ascertainment of a product of a product or service. It therefore follows that each firm develops or design its own costing method which suits its own nature of business or service delivery method.

Basically, we have two categories of product costing methods, namely specific order costing and continuous operation. Continuous operation is also known as process costing, unit or average costing method.

Specific Order Costing
Specific order costing is a basic costing method applicable where the work consists of separate jobs, contracts or batches (CIMA). Under these methods, expenses can be directly linked or associated with the cost unit such as in job costing, batch costing for a specific clients and contract costing. One basic feature of this method of costing is that the job is carried out according to the customer's specific requirement.

The main sub-divisions of specific order costing are job costing, batch costing and contract costing.

Job and Batch Costing
Job Costing
Job costing is the determination or ascertainment of cost of an individual job, work or contract separately. The primary objective in job costing is to determine the cost of material, labour and factory overheads used to produce a specific order or contract. Manufacturing firms that adopt this method are printing presses, block moulding, manufacturing of goods for customers specifications, auto engineering units, general workshops, etc.

Examples of job costing include home builders who design specific houses for each customer, and accumulate the costs for each job separately, and caterers who accumulate the costs of banquet separately, land, and public accounting firms use job costing to measure the costs of serving each client.

Main Features of Job Costing

1. The products are produced only against a customer's order and not for maintain stock for sale.
2. Costs are accumulated for each job separately.
3. A job is performed according to the customer's specifications.
4. The job costing method falls under the category of specific order costing.
5. Each job is comparatively of short duration.
6. Work is undertaking to customer's requirement
7. Each job moves through stages as a continuously identifiable unit.

Advantages of Job Costing

1) It helps in identifying profitable and unprofitable jobs.
2) It helps in preparation of estimates as well as submission of quotations for similar jobs.
3) Cost data under job costing enable management in preparing budgets for future.
4) It enables actual costs with estimated ones.
5) Spoilage and defective work can be identified with a specific job and responsibility for the same can be fixed on individuals easily.

Disadvantages of Job Costing

1. It involves too much clerical work; hence it is expense and labourious.
2. This method is historical in nature therefore cannot be used as a means of cost control unless it is used with costing it is used with costing techniques like standard costing.

Procedures Adopted in Job Costing

1. Job request is received from client.
2. The details are agreed with client after one or more meetings with client.
3. The estimating department prepares an estimate for the job and submits a quotation.
4. If the quotation is accepted to client, he/she will then raises a job order.
5. A distinct job number will be assigned to the job and a job card is opened. This job number is quoted on all the requisition tickets, etc.

Illustration

The following information is available for job 1000, which is being produced at the request of a customer.

	Department A	**Department B**	**Department C**
Materials Used	₦5000	₦2500	₦1500
Direct Labour			
Labour rate per Hour	₦2	₦3	₦4
Direct Labour Hours	300	300	400

According to the company policy, the following are chargeable to jobs:

Fixed production overhead 5 per direct labor hours
Fixed administration overhead 80% of total production cost
Profit margin 20% margin on selling price

Required: Calculate the total cost and selling price of job 1000

Suggested Solution

(a) Calculating of Total Cost and Selling Price of the Job

	Department A	Department B	Department C
Direct Materials:		₦	₦
Department A		5000	
Department B		2500	
Department C		1500	9000
Direct Labour:			
Department A	300 (2)	600	
Department B	300 (3)	900	
Department C	400 (4)	1600	3100
Fixed Production Overheads	1000 (5)		5000
Total Production Cost			17100
Fixed administration overhead	(80% x 1700)		13,680
Total Cost of Sales			30,780
Profit: 20/88 x N30,700			7695
(b) Setting Price			₦38,475

Another Method of Computing the Profit
20% margin on selling price
20% = 1 i.e. margin
5
To convert 1 to markup
5
= 1 = 1
5 – 1 4 x ₦30,780
Profit = ₦7,695

Computation of the Selling Price
80% = ₦30,780
10% = ₦30,780 ÷ 80
= ₦384.75
100% = 100 (384.75)
= ₦38,475

Illustration 2
The following details of prime costs were incurred in respect of job No A. 100:
Direct materials : 40kg at ₦15 per kg
Wages: Department A: 25 hours at ₦10 per hour
Department B : 35 hours at ₦12 per hour
Budgeted overhead for the year was based on the normal capacity as follows:
Viable Overhead:
Department A : ₦8000 for 10,000 direct labor hours
Department B : ₦1000 for 12,000 direct labor hours

Fixed Overhead:
Total budgeted direct labor hours for the entire factory is ₦10,000 hours, and the total budged expenditure for the year is ₦8,000.00 only.

You are required:
(a) To determine the cost of job. No A100
(b) To calculate the percentage profit or loss on the job if the price quoted to the customer was ₦2,000.00.

Suggested Solution
Initial Workings:
(i) Calculation of Overhead Absorption Rates:

	Department A	Department B
	₦	₦
Estimated Overhead	8,000	10,000
Estimated No of D. Labor Hours	10,000	12,000
∴OAR	₦0.80/hr	₦0.83/hr

(ii) Calculation of Fixed Overhead Absorption Rate for the entire factory

	₦	
Estimated Overhead	8,000	
Estimated No of D. Labor Hours	10,000	= ₦0.80/hr

(a) Calculation of the Cost of Job No A100

	₦	₦
Direct Materials: 40kg @ ₦15		
Direct Wages:		
Department A – 25 hours @ ₦10	250	670.00
Department B – 35 hours @ ₦12	450	
Prime Cost		1,270.00
Variable Overhead:		
Department A – 25 hours @ ₦0.80	20.00	
Department B – 35 hours @ ₦0.83	29.05	49.05
		1,319.05
Fixed Overhead (60 hrs @ ₦0.80		48.00
		1,367.05

Calculation of Profit or Loss Made on Safe of Job No. A 100

	₦
Selling price of the Job	2,000.00

Less: Cost of Production	1,367.05
Profit made on the Job in Naira (₦)	632.95

∴Profit % on Sale = 632.95 x 100
1,367.05 1 = 46%

Illustration 3

Nwankwoala Ltd. Receives an order to supply a local farmers with a delivery of poultry and cattle feed. The job passes through three departments, collecting cost as followers:-

Mixing Department:	150kg of Owen at ₦5 per kg
	80kg of Howe at ₦3 per kg
	100kg of Benn at ₦2 per kg
Boiling Department:	15 hour of labor at ₦5 per hour
	20 hour of labor at ₦3 per hour
	50 hours of baking machine
Cooling and Skimming Department	30 hours of labor at per hour
	Hire of giant thermometer and Soap ₦5000

The job does not disrupt normal activity levels, which are as follows:

Department	Labor Hours	Machine Hours	Budgeted Overhead ₦
Mixing	200	-	62,000
Mixing	200	800	1600
Boling	450	-	9000
Basis of Absorption:	Mixing	Labor Hours	
	Boling	Machine Hours	
	Cooling	Labor Hours	

Selling and administration expenses are 32% of factory cost. You are required to prepare a statement sharing the profit of loss on the job, if the price is ₦16,000.00.

Suggested Solution

Nweakeala Ltd.

		₦	₦
Mixing Department:			
Materials:	Owen 150kg at ₦5	750	
Boling	Howe 80kg at ₦3	240	
Benn	100kg at ₦2	200	1,190.00
	15 hours at ₦5		75.00
	20 hours at ₦3		60.00
			1,325.00
Boiling Department:		₦	₦

Labour:	20 hours at ₦3	60	
Overheads:	50 hours at ₦8	400	460.00
Cooling and Skimming Dept:			
Labour:	50 hours at ₦4	200	
Overheads:	50 hours at ₦20	1000	
Direct Expenses	(Thermometer Hire)	5000	6,200.00
Factory Cost:			7,985.00
Add: Setting and Administration (30% x ₦7,985)			2,395.50
Cost of Sales			10,380.50
Price agreed			10,000.00
Profit			380.50

Batch Costing

Batch costing is that form of job costing which applies where similar articles are manufactured in-batches either for sale or for use within an organization. A batch is a number of similar items made for each order. It is a group of similar articles which maintains its identify during one or more stages of productions and it is treated as a cost unit.

The cost per unit manufactured in a batch is the total batch cost divided by the numbers of units in that batch. It is a type of job costing. In batch costing, instead of one unit being made in response to a customer's request, a batch of identical units in made.

The procedures are the same as for job costing, with the batch constituting the unit.
Industries where batch costing can be applied include footwear, clothing, printing presses, and engineering components. Others include readymade, batteries, biscuit factories, television sets, watches etc.

Illustration 1

Batch No x 350 incurred the following costs
Department A – 450 Labour hours at ₦4
Department B – 450 Labour hours at ₦3.50

Factory overheads are absorbed on labor hours and the rates are ₦7 per hour for Department A and ₦5 per hour for Department B.

The firm uses a cost plus system for selling prices and expects a 25% gross profit (sales minus total cost).

Administration overheads are absorbed as 15% of selling price. Assuming that 1100 units were produced in batch No. x 350.

(a) The selling price per unit.
(b) The total amount of administrative overheads recovered by batch No. x 350.
(c) The notional profit per unit.

Suggested Solution

Batch No. x 350

(a) Calculate of the selling Price

	₦	₦
Direct Labour:		
Department A: 450 (₦4)	1,800	
Department B: 680 (₦3.50)	2,380	4,180.00
Factory Overheads:		
Department A: 450 (₦7)	3,150	
Department A: 680 (₦5)	3,400	6550.00
Total Factory Cost (60%)		10,730.00
Add: Administrative Overhead (.15 x 17883)		2,682.45
Total Cost of Sales		13,412.15
Gross Margin		4,470.00
Selling Price		17,883.00

b) Calculation of administration overhead recovered by batch No. x 350 = 15% x ₦17,883 = ₦2,682.45.

c) The National net profit per batch = ₦4,470.85
1,100
= ₦4.06

Illustration 2

Umunagbo Ltd is handling a job order which has been dividing into batches. Batch No. 150 incurred the followings costs: Department A Labour hours at ₦5, Department B 750 Labour hours at ₦4.50. Factory overheads are absorbed on the basis of labour hours at ₦10 per hour for department A at ₦7.5 per hour department B. The firm sets selling prices using a cost plus system and the profit is expected to be 25% of selling price.

Administrative overheads are absorbed at 15% of selling price. If 650 units were produced in this batch. You are required to calculate:

a) The selling price.
b) The total administrative overhead costs.
c) The national profit per unit of this batch.

Suggested Solution

Umunagbu Ltd.

Labor Cost	₦	₦
Department A: 500 (₦5)	2,500	
Department B: 750 (₦4.50)	3,375	5,875.00
Factory Overheads:		
Department A: 500 (₦10)	5,500	
Department A: 750 (₦7.5)	5,625	10,625.00

Total Factory Cost	16,500.00
Add: Administrative Overhead (Wb)	4,125.00
Total Cost of Sales	20,625.00
Profit (WC)	6,875.00
Selling Price (Wa)	27,500.000

Working

(a) Calculation of the selling price from the Factory Cost. Based on the information supplied in the question, the building of the selling is a follows:

Factory Cost	60%	
Administrative Overhead	15%	
Gross Profit		25%
Selling Price		100%

Hence Selling Price:

60% = ₦16,500
1% = ₦16,500 ÷ 60
100% = ₦275
= ₦100 (275)
= ₦27500

(b) Calculation of Administrative Overhead Cost:
15% of ₦27500 = ₦4125

(c) Calculation of Total Profit:
25% of ₦27500 = ₦6875

(ci) Calculation of Notional Profit per Unit of the Batch:
₦6875
650 Units = ₦10.58/Units

Contract Costing

CIMA Official Terminology defines contract costing as "that form of specific order costing which applies where work is undertaken to customer(s) special requirement and each order is of a long duration (compared with those to which job order costing applies)".

A Contract is a big job. Another name for contract costing is Terminal costing. The work is usually constructional and generally the method of costing is similar to job costing. Contract work is usually site based.

In contract costing, we have four(4) main accounts necessary to be prepared and, they are:
(i) Contract Account
(ii) **Contractee's** Account
(iii) Work-in-Progress Account and
(iv) Statement of Financial Position (Balance Sheet)

Distinguishing Features of Contract Costing
(i) The work is of a relatively long duration.
(ii) The work is undertaken to customers' specific requirements.
(iii) The price is usually fixed in advance.
(iv) The completion date is fixed in advance, and penalties follow delays.

(v) The work is usually site-based.
(vi) The end product is usually guaranteed, and final payment is received only after testing.
(vii) Payments on accounts are often made against work certified.
(viii) Most payments can be classified direct, since they can be identified with the contract.
(ix) A certain amount of profit at the end of the year on uncompleted contracts.
(x) Special plant is often purchased for the plant when required.

Characteristics of Contract Costing
(i) It may continue for more than one year.
(ii) The work is carried out away from the premises of the contract.
(iii) Architect's certificate is used for the various payments by the contractor
(iv) Contract price is normally estimated in advance for the work.
(v) Most times, there is higher proportion of direct cost.
(vi) **Element** of surplus materials at the end of the contract.
(vii) There is problem of valuation of work in progress.
(viii) There problem of determination of profit to be recognized in the accounts.

Items on the Debit Side of the Contract Account
They are:
(i) Direct Material
(ii) Direct Labour
(iii) Direct Expenses
(iv) Indirect Material (Overheads)
(iv) Plant brought Forward (b/f)
(vi) Vertical maintenance
(vii) Plant and Tools
(viii) New Plant From H/Q
(ix) Accrued Expenses
(x) Sub-Contract Cost
(xi) Supervisor(s) Salary
(xii) Extra Work done
(xiii) Provision for Contingencies
(xiv) Cost of work to date b/f
(xv) Notional Profit taken
(xvi) National profit not taken

Items On the Credit Side of the Contract Account
(i) Materials returned to Store
(ii) Materials transferred to another contract
(iii) Prepaid expenses
(iv) Income from jobbing work
(v) Plant returned
(vi) Plant transferred to other contract
(vii) Net book value of plant c/f
(viii) Materials on side c/f
(ix) Cost of Work to date c/f
(x) Value of work certified
(xi) Cost of work not yet certified

Accounting for Contracts
Determination of profit on an going contract poses a problem. This determination is important because the owners of the company would want to be abreast with the performance of the

contract at the end of each financial year, hence there is the need to determine and recognized a certain amount as the profit for the year.

In order to achieve this, contracts are classified into three different categories according to their stage of completion.

(a) **Early Stage of the Contract**

When the contract less than thirty percent (30%) of the contract is completed, it is generally advised that no profit should be taken on such contract. But the total expense incurred to date will be carried as cost. If loss is sustained, it should charged fully to the income statement (Profit or Loss Account) of the company concerned.

(b) **Fairly Advanced Stage**

When the contract is between 30% - 80% complete, it is generally advised that a proportion of the notional (apparent) profit of the contract to date is determined, recognized and taken to the contract account. The formula usually applied is:

$$\frac{2}{3} \text{ or } \frac{3}{4} \times \text{Notional Profit} \times \frac{\text{Cash Received}}{\text{Value of Work Certified}}$$

Notional profit is determined thus:
Value of work certified less (Cost of Work to Date Plus Cost of Work yet to be Certified) = Apparent Profit.

(c) When the contract is nearing completion (80% and above). At this stage of completion, the cost of completing the whole contract can easily be determined. The formula below can be applied to determine the profit taken. When provision for retention percentage of the contract is made, the formula is:

$$\text{Profit taken} = \frac{\text{Progress Payment to Date}}{\text{Contract Price}} \times \text{Estimated Total Profit on Completion}$$

When there is no provision for retention percentage, the formula is:

$$\text{Profit taken} = \frac{\text{Value of Work Certified}}{\text{Contract Price}} \times \text{Estimated Total Profit}$$

Profit taken can also be determined thus:
Profit taken = Value of Work Certified minus Cost of Work Certified

$$\text{Profit taken} = \frac{\text{Cost of Work Done}}{\text{Estimated Total Cost of Contract}} \times \text{Estimated Toto Profit}$$

Calculation of Estimated Cost to Completion and Estimated Total Profit

	₦	₦
Total Contract Price		**xx**
Less: Total Contract Cost:		
Cost to Date	xx	
Estimated Cost to Completion	xx	
Rectification Cost (if any)	xx	
Estimated Total Cost		(xx)
Estimated Total Profit		Xx
Valuation of Work-in-Progress		₦
Cost Date		xx
Add: Profit Taken		xx
Less: Cash Received		xx
		(xx)

WIP	xx

Illustration 1

ILL Plc, a construction company, accepted a construction contract of an office complex in Victors Island Lagos: Work started on the site on 1st January, 1993. By 31st December, 1993, the expenditure on the contract was as follows:

	₦
Material issued to site	65,877
Material bought on site	196,490
Direct Expenses	43,043
Wages Paid	129,451
Head Office Expenses	15,022
Cash received relating to work certified	449,190
Cost of plant in use at site	92,260

At that date, stock of material at site was ₦22,148; ₦2,800 was owed on wages and ₦350 on account of direct expenses. The amount received on the basis of work certified was in respect of work completed as at 31st December 1993, after deducting 10% retention money. Depreciation on own plant is to be provided at the rate of 20%. The company only takes credit for $^2/_3$ of the profit on work certified.

You are required to:

(a) Prepare the Contract Account for the period 31st Dec ember, 1993, showing the amount to be included in the contraction company's profit and Loss Account.

(ICAN November, 1986)

Suggested Solution

ILL PLC
Contract Account for the Year Ended 31st December, 1993

	₦		₦
Material Issued	65,877	Materials C/F	22,148
Materials Purchased	196,490	Cost to date C/F	449,337
Direct expenses	43,043		
Wages paid	129,451		
Head Office expenses	15,022		
Accruals: Wages	2,800		
Expenses	350		
Depreciation: (.20 x 92260)	18,452		
	171,485		
			471,485
Cost to date B/Forward	449,337	Value of Work certified	499,100
Profit taken	29,858		
Profit C/Forward	19,905		
	499,100		
			499,100
Material b/Forward		Profit b/Forward	19,905

Workings

(1) Calculation of Apparent (Notional) Profit

Value of Work Certified = Cost to date C/Forward

499,100 = ₦449,337

= ₦49,763

2. Calculation of Profit Take:

$= {}^{2}/_{3}$ x National Profit x $\frac{\text{Cash Received}}{\text{Value of Work Certified}}$

$= {}^{2}/_{3}$ x 49,763 x $\frac{449,190}{499,100}$

= ₦29,857.8

Calculation of Apparent (Notional) Profit where there is cost of Work not yet certified

	₦	₦
Value of Work Certified		xx
Less: Cost of Work to Date	Xx	
Cost of Work not yet Certified	xx	xx
Apparent Profit		xx

Illustration 2

The following information relates to contract No. ZC 121 which was started on January 10, 1991 and expected to last for 2 months.

The cost accountant estimated the total cost to be 118,750. By 31st December, 1991 the end of the contractor's accounting year, the costs incurred to date were as follows:

	₦
Labor	45,000
Material issued to site	30,000
Overheads	7,500
Plant transferred to site (1/3/91)	50,000
Written value of plant (31/12/91)	35,000
The full contract price was agreed at	₦112,500

At 31st December 1991, the value of work certified was ₦87,500 and progress payment received to date was ₦78,750.

Required to prepare:

(a) Contract account
(b) Contractual account
(c) Calculate the value in progress for Balance Sheet purpose (banking stock)

(ICAN May, 1996)

Suggested Solution

(a) Contract (ZC 121) Account As of 31/12/1991

	₦		₦
Labour	45,000	Material at Site	2,500
Material Issued	30,000	WDV of Plant	35,000
Overhead	7,500	Cost to date C/Forward	95,000
Plant	50,000		
	132,500		132,500
Cost to date b/Forward	95,000	Value of Work Certified	87,500
		Loss on Contract	7,500
	95,500		95,500
Material on Site c/forward	2,500		
Plant (NDV)	35,000		

(b) Contractee's Account As at 31/12/91

	₦		₦
Value of Work Certified	87,500	Cash received	78,750
		Balance C/Forward	8,750
	87,500		87,500

(c) Value of Work in – Progress for Balance Sheet Purpose

	₦
Cost to date	95,000
Loss on Contract	(7,500)
	87,500
Less: Cost received	78,750
Work – In – Progress (WIP)	8,750

Illustration 3

LCC Ltd engages in the building of an estimate. The work on the estate commenced on the 1st January, 1993 and after one year, on 31st December 1993, the date below were available:

You are Required to:

Prepare account for the contract for the year ended 31st December, 1993.

	₦
Plant sent to the site	100,000
Direct materials received at site	460,000
Direct expenses incurred	45,000
Direct wages incurred	350,000
Hire of Crane	40,000
Indirect Labour Costs	70,000

Supervision Salaries	42,000
Surveyor Fees	8,000
Services Cost	18,000
Hire of Scaffolding	20,000
Overhead incurred on site	60,000
Head office expenses apportioned to site	70,000
Cash received from Estate	1,000,000
Value of Plant on Site	75,000
Work Certified Value at 31st December	1,250,000
Cost of work not certified	250,000
Wages accrued	30,000
Services Cost accrued	2,000
Materials on Site	40,000

ICAN/ATS, 1994
(20 marks)

Suggestion Solution

LCC Limited
Contract Account for the Year Ended 31st December, 1993

	₦,000		₦,000
Plant sent to the site	100	Value of Plant c/down	75
Direct materials	460	Material c/down	40
Direct Wages	350	Cost to date c/down	1,200
Direct expenses	45		
Hire of Crane	40		
Indirect Labour Costs	70		
Supervision Salaries	42		
Surveyor's Fees	8		
Services Cost	18		
Hire of Scaffolding	20		
Overhead incurred on site	60		
Head office expenses	70		
Wages Accrued	30		
Services Cost accrued	2		
	1,315		1,315
Cost to date b/d	1,200	Value of Certified	1,250
Profit taken	160	Work not Certified	250
Profit C/fwd	140		
	1,500		1,500
Plant b/d	75		
Material b/d	40	Profit b/d	140

Calculation of Profit taken:

$= {}^{2}/_{3}$ x National Profit x $\frac{\text{Cash Received}}{\text{Value of Work Certified}}$

$= {}^{2}/_{3}$ x 300,000 x $\frac{1,000,000}{1,250,000}$

= ₦160,000

Calculation of Apparent (Notional) Profit

	₦
Value of Worked	1,250,000
Cost of Work not Certified	250,000
	1,500,000
Less: Cost to date	1,200,000
Apparent (Notional) Profit	300,000

Illustration 4

Nwuzi Ltd is a civil engineering company which has obtained a contract to build a civic centre at Amaji village in Omuma Local Government Area of Rivers State. The following information relates to the contract during the second month ended 31st July, 1996 of the contract execution process:

	₦
Contract price	850,000
Work Certified by Architects	630,000
Cash received	600,000
Work not get Certified at 31/7/95	2,000
WIP brought forward 1/7/95	500,000
Stock of materials 31/7/95	2,000
Profit included in WIP b/Fwd	10,000
Plant at 1/7/95	75,000
Materials for the month	30,000
Labour charges for the month	10,000
Overhead charges for the month	10,000
Plant value 31/7/95	15,000
Stock of Materials 31/7/95	4,500
Cost to Completion	20,000

Value of Plant and Materials at Completion 5,000

Required:
(a) Prepare the contract account, and
(b) Calculation the profit to be taken to income statement for the 2nd Month ended 31/7/95

Suggested Solution

Nwuzi Limited

(a) Contract Account for Amaji Village Civic Center for the Period ended 31st July, 1995

	₦		₦
Work – in I progress	500,000	Plant c/fwd	150,000
Materials be/fwd	2,000	Materials c/fwd	4,500
Plant b/fwd	75,000		19,500
Materials for the Month	30,000	WIP	758,735
Labour for the Month	35,000		
Overhead for the Month	10,000		
	652,000		
Income Statement (P2 L)	126,235		
	778,235		778,235

(b) Profit taken: Cash Received / Contract Price x Total Estimated Profit / 1

= 600,000 / 850,000 x 19,500 / 1 = 136,235

Less: Profit Taken earlier which is include in WIP b/fwd (10,000)

₦126,235

Working

(i) Calculation of Actual Cost to Date	₦	₦
Total cost as per contract account		652,000
Less: Plant and Material c/fwd	19,500	
Profit included in WIP b/fwd	10,000	29,500
Actual Cost to date		622,500

(ii) Calculation of Estimated Total Profit		
Actual Total Cost to date		622,500
Cost to Completion	20,000	
Plant and Materials at Completion	19,500	
Value of plant and Materials at Completion	(5000)	34,500
Estimated to Cost		(657,000)
Contract Price		850,000
Estimated Total Profit		₦193,000

Exercises

1. Explain the term job enter costing. What are the main features of this method of costing?

2(a) Compare and contract job costing from Batch Costing.

(b) Suggest two types of businesses where batch costing would be appropriate.

3. Job number 419 was completed in three departments of a factory. Cost details for this job were:

	Direct Materials	Direct Wages	Direct Labours
X	650	800	1,000
X	940	300	400
X	230	665	700

Works overhead is covered on the basis of direct labour hours and administrative overhead as a percentage of work cost.

The figure for the fast cost period for the three departments on which the current overhead recovery rates and based were:

Departments	**X**	**Y**	**Z**
Direct Materials	₦6,125	11,360	25,700
Direct Wages	₦9,375	23,400	54,400
Direct Labour hours	12,500	36,000	60,000
Works overhead	₦5,000	₦7,200	₦9,600
Administrative overhead	₦2,870	₦14,648	₦8,978

You are required to draw up a cost ledger showing the cost of job 419 and to show the price charged assuming a profit margin of 20% on total cost.

4. A printing press is proposing offering a leaflet advertising service to local traders. The following costs have been estimated for a batch of 10,000 leaflets.

Setting Up Machine	6 hours at ₦10 per hour
Art Work	₦20 per batch
Paper	₦1.80
Other printing materials	₦15 per 100 sheets
Direct Labor cost	4 hours at ₦6 per hour

Fixed overheads allocated to this side of the business are ₦1,000 per annum and recovered on the basis of orders received, which are expected to be two per week for 50 weeks in the year.

The management required 25% profit on selling price:

(a) Calculate a price to be quoted per 1,000 leaflets of 2,000, 5,000, 10,0000 and 20,000 leaflets.

(b) Calculate the individual cost per leaflet at the various batch quantities.

5. Nwakela Ltd in business has the following data, calculate the amount to be quoted for jobs A, B and C.

	A	**B**	**C**
Bought in Components, Cost	₦240	₦380	-

Materials from Own Stores	₦560	₦160	₦480
Direct Labour hours:			
Machine	15	21	18
Assembling	9	12	7
Finishing/Spraying	5	4	4
Hourly Wage Rates:			
Machine	₦0.6		
Assembling	₦0.5		
Finishing/Spraying	₦0.4		
Factory Overhead Rates Per Labour Hours:			
Machine Shop	₦4.0		
Assembling Shop	₦2.0		
Finishing/Spraying	₦1.50		

Your cost estimates include allowance for:
(a) 20% of factory cost for estimating and administration costs.
(b) Profit of 15% on selling price.

6. Lagos Construction Company Plc. Won a contract to build a sport centre in Oloba Local Government Area in 1994. The contract would take five years to complete. Retention percentage is 20%. The following costs were extracted from the books for 1994.

	₦
Purchases of materials to main store in Lagos	80,000
Materials issued to site	100,000
Plant purchase and delivered direct to site	190,000
Plant purchased to main store	200,000
Materials transferred from site to other site	10,000
Materials transferred from other sites	15,000
Sub-Contractors Charges	50,000
Site expenses	48,000
Site Wages	200,000
Plant Transferred from main Store	300,000

Plant Transferred to other sites		20,000
Head Office Charges		25,000
Estimated Cost to Completion		730,000
Rectification Cost		50,000
Closing Stock 31/12/94 – Materials		38,000
	Accrued wages	10,000
	Prepaid expenses	2,000
	Accrued Charges	20,000
	Contract Value	1,600,000

Required:
(a) Using the percentage of completion method as required by S.A.S 5. Prepare the Contract Account for the year ended 31st December, 1994.
(b) Ascertain the profit to be recognized in 1994.

7. The following information relates to Amanze Construction Company Ltd.

	₦
Contract price	180,000
Direct Materials issued	27,500
Materials returned to store	500
Direct Labor Payments	20,000
Wages accrued as at 31st December, 2007	2,000
Plant Installed at Cost	30,000
Establishment Charges	6,000
Architects Certificate (Work Certified)	7,000
Direct Expenses accrued as at 31st December, 2007	1,000
Cost of Uncertified Work	8,000
Value of Plant as at 3st December, 2007	20,000
Materials on site as at 3st December, 2007	10,000
Cash received from Contractor	100,000

You are required to prepare the following accounts as at 31st December, 2007, assuming the contract started on 1st July 2007:
(a) Contract Account
(b) Contractor's Account and
(c) The computation of profit taken to the Contract Account

Suggested Answers
Question 3: JOB COSTING

Job No. 419 Cost Sheet

	₦	₦
Direct Materials:		
Department X	650	
Department Y	940	
Department Z	230	1,820
Direct Wages:		
Department X	800	
Department Y	300	
Department Z	665	1,765
Works Overhead:		
Department X(1000 x ₦0.4)	400	
Department Y(400 x ₦0.2)	80	
Department Z(700 x 0.15)	105	585
Administrative Overhead:		
Department X(14% x ₦1,850)	259	
Department Y(35% x ₦132)	462	
Department Z(10 x ₦1000)	1000	821
Total Cost		4,991
Profit Margin (20% on Total Cost)		998
Selling Price		5,989

Workings

1. Calculation of Works Overhead Rates

	Dept X	**Dept Y**	**Dept Z**
Works Overhead	₦5,000	11,360	25,700
Direct Labour Hours	₦12,500	23,400	54,400
Hence Overhead absorption Rates = Overhead Cost / Labor Hours	=₦5,000 / 12500hrs	₦7,200 / 36000hrs	₦7,200 / 64000hrs
	₦0.4	₦0.2	₦0.15

2(i) Calculation of Administrative Overhead Recovery Rate

	Dept X ₦	**Dept Y** ₦	**Dept Z** ₦
Direct Material	6,125	11,360	25,780
Direct Wages	9,375	23,400	54,400

Works Overhead	5000	7200	9600
	20,500	41,960	89,780
Administrative Overhead Recovery Rate Rates = Admin Overhead x 100% / Work Cost	=2,870 x 100 / 20,500	14,646 x 100 / 41960	89780 x 100 / 89.780
	14%	35%	10%

2(ii) Calculation of Works Cost on Job No 419 by Department

	Dept X	Dept Y	Dept Z
	₦	₦	₦
Direct Materials	650	940	230
Direct Wages	800	300	665
Works Overhead	400	80	105
	1,850	1,320	1,000

Question 4 BATCH COSTING

Expected orders per annum = 2 orders x 50weeks = 100 orders

Fixed Overhead per order = ₦1000 / 100 = ₦10

(a) Calculation of Price Per 1000 Leaflets

Batch Size Leaflets	2,000	5,000	1,000	20,000
	₦	₦	₦	₦
Set up machine	60.00	60.00	60.00	60.00
Artwork	20.00	20.00	20.00	20.00
Paper	36.00	90.00	180.00	30.00
Other Printing Materials	3.00	7.50	15.00	
Direct Labor Cost	4.80	12.00	24.00	48.00
Fixed Overhead	10.00	10.00	10.00	10.00
Total Cost	133.80	199.50	309.50	528.00
Profit	44.60	66.00	103.00	176.00
Selling Price	178.40	266.00	412.00	704.00

(b) Calculation of Individual

Cost Per Leaflets

= TC / Batch Size =	133.80 / 2000	199.50 / 5000	309.00 / 1000	528.00 / 20000
	₦0.0669	₦0.0399	₦0.0309	₦0.0264

Workings

1. Calculation of Cost of Paper = 2000 x 1.8 / 100 1 | 5000 x 1.8 / 100 1 | 10000 x 1.8 / 100 1 | 10000 x 1.8 / 100 1
   ₦36 | ₦90 | ₦180 | ₦360

2. Calculation of other printing materials = 15 x 2000 / 10000 | 15 x 5000 / 10000 | 15 x 10000 / 10000 | 15 x 20000 / 10000
   ₦3 | ₦7.5 | ₦15 | ₦30

3.	D. Labor Cost Computation. Note (₦6 x 4 = ₦24) =	24 x 2000 / 10000	24 x 5000 / 10000	24 x 10000 / 10000	24 x 20000 / 10000
		₦4.80	₦12	₦24	₦48
4.	Calculation of Profit =	25 x 133.8 / 75 1	25 x 199.5 / 75 1	25 x 309 / 75 1	25 x 528 / 75 1
		₦44.60	₦66.50	₦103.00	₦176.00

Another method of Calculating Profit:

25% = 1/4 ∴Converting Margin	1/3 x 133.8	1/3 x 199.5	1/3 x 309	1/3 x 528
	₦44.60	₦66.50	₦103.00	₦176.00

Question 6 Contract Costing

(a) Lagos Construction Company Plc, Oloba Local Government Sport Centre Contract Account for the Year Ended 31st December, 1994.

	₦		₦
Materials issued	100,000	Materials transferred	10,000
Plant purchased	190,000	Plant transferred	20,000
Materials transferred	15,000	Materials c/d	38,000
Sub-Contractor's charges	50,000	Plant c/d	350,000
Site Expenses	48,000	Cost to date	520,000
Site wages	210,000		
Plant transferred	300,000		
Head office expense	25,000		
	938,000		938,000
Balance b/d – Materials	38,000	Wages b/d	10,000
Balance b/d – Plant	850,000	Sub-Contractors b/d	20,000
Cost to date b/d	520,00		
Expense b/d	2000		

(b) Profit taken: Cash of Work to Date / Estimated Cost to Completion x Estimated Profit / 1

$$= \frac{520{,}000}{1.300{,}000} \times \frac{300{,}000}{1} = ₦120{,}000$$

Workings

1. Calculation of Estimated Cost to Completion:

	₦
Cost to Date	520,000
Add: Cost to Completion	730,000
Ratification Cost	50,000
Estimated Cost to Completion	1,300.000

2. Calculation of Estimated Total Profit:

	₦
Contract Value	1,600,000

Less: Estimated cost to Completion	1,300,000
Estimated Profit to date (Notional Profit)	300.000

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