3 MANUFACTURING ACCOUNT

Objectives

At the end of this chapter, students should be able to:

- Explain manufacturing account;
- Explain direct material, direct labour and direct expenses;
- Determine prime cost, factory cost of production;
- Prepare manufacturing account.

3.1 Introduction

Manufacturing account is one of the final accounts of a business that produces goods. Such goods are produced from raw materials or semi-manufactured goods for sale. Manufacturing account is usually prepared by firm as as supplementary account to show the cost of production.

3.2 Terminologies:

The three manufacturing elements of finished production are:
- Material
- Labour
- Expenses

Each item of expenditure is classified into:
- Direct cost
- Indirect cost

Direct cost: This is also known as prime cost. It consists of direct material, labour, and expenses.
Direct materials: These are the raw materials which are important parts mainly used and can be traced to the finished products e.g. tins for packaging, gum glue, bricks, nails, etc.
Direct Labour: These are wages paid to the employees whose time and effort can be braced to product, e.g. labour cost of a member of products, e.t.c
Direct Expenses: These are the expenses on specific items of production such as, for cost of special design, hire of special tools, carriage purposes, e.t.c.
Indirect costs: These are costs which cannot be directly traced to finished products. They are indirect materials, indirect labour and indirect expenses e.g. depreciation of plant, rate, rent electricity, salaries, and wages e.t.c. All indirect costs are termed, overhead costs.
Overhead costs
The available types are as follows: Production overhead - Administrative overhead Selling overhead The sum direct and indirect cost is usually cost of production.

(a) Cost of Production: This is otherwise known as cost of goods manufactured or simply cost of manufacture. It is the sum total of the cost of raw materials used, cost of carriage, factory wages and factory overhead.

(b) Prime Cost:

Prime cost is otherwise called Direct or Variable Expenses. The expenses vary according to the volume of output i.e. they increase as output increases or decreases as output decreases. Prime cost consists of; cost of raw material consumed, factory wages, carriage inwards and other expenses directly related with the manufacturing process. Therefore: Prime cost = Direct material + Direct Labour + Direct Expenses.

(c) Factory Overheads:

Factory overheads can be referred to as works overhead or factory on cost. They are expenses that do not increase or decrease in direct proportion to the volume of goods produced. Such expenses include: factory fuel, power, rent, factory salaries, lighting, heating, depreciation insurance, internal transport repairs, etc. Factory overheads, therefore, include all direct materials, labour and other expenses.

(d) Work-in-Progress:

Work-in-progress are partially finished goods; semi manufactured goods or incomplete work at the end of a financial period. In other words, they are goods which the factory has not completed at the time of preparing the final account.

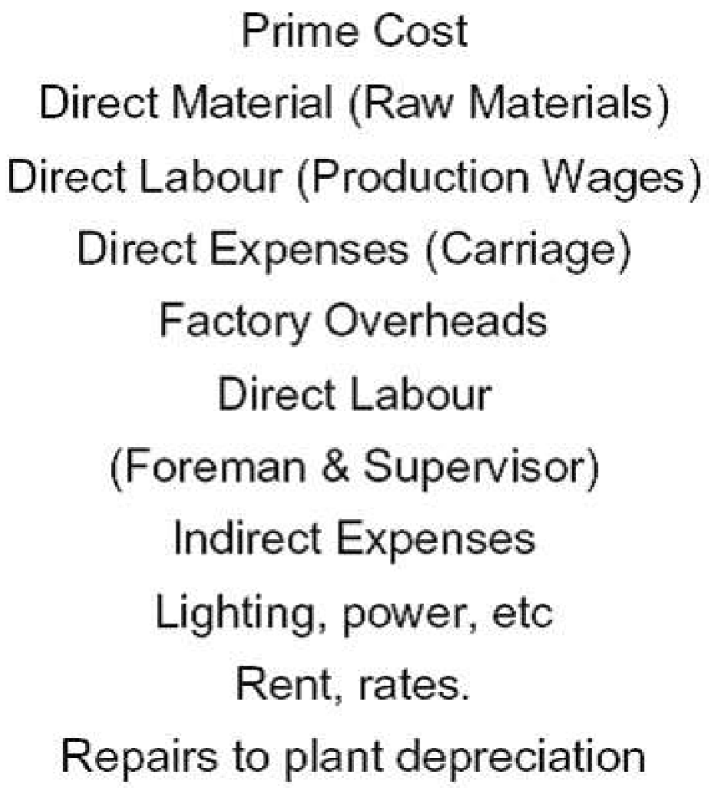

Fig. 1 diagram illustrating cost of production

(e) Finished Goods:

They are manufactured products which are ready for sale during the accounting period. They could be finished goods at opening or at close. The value of opening stock of finished goods are added to the cost of goods produced during the accounting period while the closing value of finished goods are deducted to arrive at the cost of goods sold during the period.

(f) Market Price or Value:

Market price or value is the charge the manufacturing department gives to the marketing department, as if the finished goods were bought by the final consumers i.e. the goods produced are charged at market rate. Goods valued at market price are produced at a cheaper rate than could be bought by consumers which result in profit actualisation for manufacturers. If produced at an expensive rate, it would result in a loss for manufacturers. Valuation of goods at market price is carried out to determine .Manufacturing profit.

(g) Inventory:

Inventory commonly refers to stock. A manufacturing firm has three categories of inventories, viz:
i. Stock of Raw Materials: The quantity of unused portion of raw materials bought. This is valued at the beginning and at the end of the trade period.

ii. Stock of Work-in-progress: These are the quantities of partly completed goods. This is valued at the beginning and at the end of the trade period.
iii. Stock of Finished Goods: These are the quantities of completed goods. Also, they are valued at the beginning and the end of the trade year.

3.3 Preparation of Manufacturing Account:

Manufacturing account is a main part of the final accounts of a manufacturing organisation. It is prepared to show the cost of production of finished goods. Thus, any cost connected with factory operation is added to manufacturing account. A manufacturing account is classified into three sections, these include:

- Cost of materials available.
- Consumed prime cost.
- Cost of manufactured goods.

Cost of manufactured or finished goods are transferred to the Trading account and added to the opening stock of finished goods held at the beginning of the period.
Fig 3.2 Format of manufacturing account
The operation to arrive at cost of goods sold is as follows:

Manufacturing Account for the year ended 31st December, 2009

Opening Stock of Raw material	–		Factory cost of Production	
Add Purchase of Raw material	–		finished good	
Add Carriage Inwards				
Total Material Available	xx			
Less Closing Stock of Raw material	–		(transferred to trading accounts)	xxx
Cost of Raw material used		x		
Add factory wages		–		
Prime Cost		xx		
Manufacturing Overheads:				
Factory expenses	–			xxx
Rent etc .goods		–		
Cost of manufactured		xxx		
Add work-in-progress at start		–		
Less work-in-progress at end		–		
Cost of Finished goods produced		xxx		

Example 3.1
Bosade Ltd, is a manufacturing company. At the end of December, 2009 the following information was reflected in its records.

Opening Stock:	
Raw materials	20,000.00
Work-in-progress	24,000.00
Purchases:	
Raw materials	204,000.00
Expenses:	
Manufacturing wages	400,000.00
Heat, Light& Power (Factory)	16,000.00
Rent	10,000.00
Rate (Factory)	4,000.00
Depreciation: Plant & Machinery	8,000.00
Insurance: Plant & Machinery	5,500.00
Carriage inwards: : Raw materials	5,000.00
Closing Stock	
Raw Materials	24,000.00
Work-in-progress	350,000.00

You are required to prepare manufacturing account to reflect:
(a) Cost of raw materials available
(b) Cost of raw materials consumed
(c) Prime cost
(d) Cost of production

SOLUTION (T Format)

BOSADE LTD

Manufacturing Account for the year ended 31st December, 2009

	₦	₦		₦
Opening stock of raw material		20,000.00	cost of production (transferred to	322,500.00
Add Purchases of raw material	204,000.00		trading account)	
Add Carriage Inward	5,000.00	209,000.00		
Cost of raw materials available		229,000.00	642,000.00	
Less closing stock raw materials		24,000.00		
Cost of materials Consumed		205,000.00		
Manufacturing wages		400,000.00		
Prime cost		605,000.00		
Manufacturing overheads				
Heat, light & power	16,000.00			
Rent	10,000.00			
Rates	4,000.00			
Depreciation: Plant & Machinery	8,000.00			
Insurance: Plant & Machinery	5,500.00	43,500.00		
		648,500.00		
Add opening work-in-Progress		24,000.00		
		672,500.00		
Less closing work-in-progress		350,000.00		
Cost of production		322,500.00		322,500.00

SOLUTION: (Vertical Method)
BOSADE LIMITED
Manufacturing Account
For the year ended 31st December, 2009

	₦	₦
Opening raw material		20,000.00
Add Purchases	204,000.00	
Add Carriage Inwards	5,000.00	209,000.00
a. Cost of material available		229,000.00
Less closing stock		24,000.00
b. Cost of raw material consumed		205,000.00
Manufacturing wages		400.000.00
c. Prime cost		605,000.00
Manufacturing overheads		
Heat, light& power	16,000.00	
Rent	15,000.00	
Rates	4,000.00	
Depreciation plant & machinery	8,000.00	
Insurance plant & machinery	500.00	38,500.00
		643,500.00
Add opening work-in-progress		24,000.00
		667,500.00
Less opening work-in-progress		30,000.00
Cost of production		**637,500.00**

3.4 Summary

In this chapter, students have learnt that:

1. A manufacturing account is an account prepared by a Manufacturing organisation that produces goods.
2. Cost of manufactured goods consist of prime cost and factory overheads.
3. Manufacturing account is one of the sub-division of the final accounts of the manufacturer and it is prepared to determine cost of production.
4. Costs of goods produced are charged at market value or price to trading account to determine profit made on manufacturing.

Revision Questions

Use the following information to answer questions 1-4

Raw materials:	₦
Opening stock	5,000.00
Closing stock	2,300.00
Purchases	39,200.00
Carriage inwards	1, 300.00
Factory wages	35,300.00
Depreciation of plant	8,700.00
Power and electricity	2,300.00
Factory rent	6,400.00
Work in progress	
Opening stock	2,400.00
Closing stock	5,800.00

1. Raw material available is _____.
A. N45,500
B. N55,500
C. N53,600
D. N45,000

2. Raw material purchased amount to _____.
A. N24,200
B. N39,200
C. N44,200
D. N42,200

3. Prime Cost amounts to _____.
A. N77,500
B. N83,900
C. N75,500
D. N82,900

4. Cost of Production of goods completed amounts to____.
A. N97,300
B. N85,600
C. N92,500
D. N94,900

5. In the preparation of manufacturing accounts, prime cost plus factory overheads equal to cost of _____.
A. material available
B. production
C. sales
D. Material consumed

6. From the following ledger balances of A. Temidayo Manufacturing Company. Prepare manufacturing account for the year 31st December, 2009.

Stock on hand 1/1 2009	₦
(a) Raw materials	26,000.00
(b) Work-in-progress	10,000.00
Stock on hand at 31/12/09	₦
(a) Raw material	17,500.00
(b) Work-in-progress	3,600.00
Purchases of raw materials	36,000.00
Manufacturing wages	4,000.00
General factory expenses	500.00
Carriage inwards	1,000.00
Factory insurance	1,440.00
Factory power	750.00
Depreciation of factory plant	580.00
Factory rent	1,200.00

7(a) What are the three manufacturing cost elements?
(b) Which of the following items listed below could be classified as a manufacturing cost?
A. indirect materials
B. direct labour
C. insurance/ factory
D. electricity (sales office)
E. depreciation factory equipment
F. sales supervisors salary
G. production supervisor's salary

8. Explain the difference between these manufacturing costs for the period:
(a) Cost of goods manufacture
(b) Cost of goods sold

9. Using the financial data of Temidayo Ltd for Dec. 31st, 2009; prepare the cost of goods produced during the year 2009.

	₦
Opening stock of raw materials	65,000.00
Closing stock of raw materials	63,000.00
Opening work-in-progress	50,000.00
Closing work-in-progress	44,000.00
Direct labour	410,000.00
Manufacturing overhead	250,000.00
Purchases of raw material	172,000.00

10. From the following ledger accounts of Balogun Manufacturing Company; prepare Manufacturing account for 31st December, 2009:

	₦
Stock in hand at 1/1 2009	
(a) Raw materials	13,000.00
(b) Work-in-progress	5,000.00
Stock in hand at 31/12/09	
(a) Raw material	87,500.00
(b) Work-in-progress	28,000.00
Purchase of raw material	18,000.00
Manufacturing wages	20,000.00
General factory expenses	2,000.00
Carriage inwards	5,000.00
Factory insurance	7,200.00
Factory power	3,500.00
Depreciation of factory plant	2,900.00