

CHAPTER FIFTEEN

MANUFACTURING ACCOUNTS

CHAPTER OUTLINE

- ❖ Manufacturing accounts.
- ❖ Items of cost of production.
- ❖ Manufacturing account format

Learning Objectives:

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

- Explain the meaning of a manufacturing account
- Describe the components of a prime cost
- Explain how manufactured goods are transferred to the trading account.
- Show the different components of a manufacturing account such as raw materials, work-in-progress and finished goods.

15.1 MANUFACTURING ACCOUNTS

A manufacturing account is prepared to show or find out the cost of goods manufactured during the accounting period. It is prepared by business organizations that engage in the manufacture of goods for sale. Every business organization employs two major ways of getting stock for sale. One is by wholesale purchase of finished goods. Two is by manufacturing such finished goods if it has the needed capacity. If the organization is only engaged in wholesale purchases, then the final

accounts will be limited to statement of comprehensive income. However, if the business manufactures the goods, there will be need to prepare the manufacturing account before preparing the statement of comprehensive income.

The aim of preparing the manufacturing account is to ascertain the cost of goods produced during the year in order to know the gross profit or loss in the production as well as determine the selling price to be fixed for the finished goods.

15.2 ITEMS OF COST OF PRODUCTION

There are various cost items that make up the cost of production. These items include:

1. Direct expenses: These are those expenses that vary according to the volume of output. Whenever the output increases, such expenses would increase and vice versa.. This implies that these expenses vary directly with the output. These expenses can be referred to as variable expenses. Such direct expenses include:

a. Costs of raw material: These can be called direct material and are items or materials used in production of other goods. The term raw material is mostly determined by what the goods are used for because raw materials of one entity may be the finished goods of another entity. The cost of raw materials includes carriage inwards of raw materials.

b. Direct labour: This is the cost of wages if it is directly traceable to the volume of production. It is referred to as direct expenses. In a situation where it is not directly traceable to the volume of production, it is referred to as salary and will form part of indirect expenses.

c. Direct expenses: There are other direct expenses outside the cost of raw materials and direct labour. Such direct expenses are those specifically incurred on the units being produced. It should be noted that when the units are not being produced, the direct expenses will cease.

d. Prime cost: The addition of the above three elements of cost is known as prime cost. Prime cost therefore, is all cost attributable to the items produced.

2. Indirect Expenses: These are costs incurred in producing goods which are not directly traceable to the items produced. They are referred to as factory overheads. That is all other expenses or costs incurred in the factory which are not directly traceable to units of goods produced.

3. Work-in-Progress: Raw materials undergo some processes before they become finished goods. At the end of the accounting period, there may be some materials already in process but not yet completed. At that stage, they are neither raw materials nor finished goods, hence they are called work-in-progress. The cost of work-in-progress is part of cost of production. It is therefore, adjusted by adding opening work-in-progress and deducting closing work-in-progress.

4. Finished Goods: These are items which have been manufactured and are ready for consumption or distribution. If the business organization is engaged in both manufacturing and distribution/sales of goods, the value of the finished goods is transferred from manufacturing account to statement of comprehensive income by adding the opening stock of the finished goods to purchases (if any) to obtain the value of goods available for sale.

Finished goods can be transferred using either of the following two methods:
Method 1: Finished goods transferred at cost: In this method, there is no profit margin for the effort/resources put in production. This method is rarely used as every business will always expect profit from its activities. Companies that engage in inter-departmental transfer of products (i.e where finished goods of one department become raw materials of another department) may find this method useful.

Method 2: Finished goods transferred at market value: Here, the goods are transferred at market value or a value above the cost of production. Note that no two goods are exactly the same, hence the market value can be an assumption of the value of an alternative good. The difference between the

cost of producing the goods and its market value is known as the manufacturing profit.

When goods are transferred at market value, it has the effect of reducing the gross profit on trading by a sum equal to the manufacturing profit. The manufacturing profit is added back to the gross profit to obtain the total gross profit. Again, when goods are transferred at market value, the implication will be that closing stock of finished goods is carried at a value above cost.

15.3 MANUFACTURING ACCOUNT FORMAT.

The format of a manufacturing account is shown below:
 Manufacturing, Trading and Statement of Comprehensive Income Account for the year ended

Opening stock of raw material	N	N
Purchases of raw materials	X	
Purchase returns	(X)	X
Carriages inwards on raw material	X	X
Cost of raw materials available for use	X	X
Closing stock of raw materials	(X)	(X)
Cost of raw materials used	X	X
Direct Wages	X	X
Direct expenses	X	X
Prime cost	X	XX
Add: Factory Overheads:		
Depreciation of Plant and Machinery	X	
Factory light and power	X	
Foreman's salary	X	
Factory rent	X	
Factory insurance	X	
General factory expenses	X	
Other factory overheads	X	
		XX
Opening work in progress	X	
Closing work in progress	(X)	XX
Cost of goods produced		XXX

Add manufacturing profit (if any)		X
Market value of goods produced		XXX
Sales		X
Less Sales returns	X	XXX
Less: Cost of goods sold:		
Opening stock of finished goods	X	
Goods produced		X
Purchases of finished goods (if any)	X	
Purchase returns	(X)	
Carriage on finished goods	X	
Goods available for sale	XX	
Closing stock of finished goods	(X)	
Cost of goods sold		(XX)
Add/(Deduct): increase/(Decrease) provision for unrealized Profit on stock		X
Add manufacturing profit (if any)		X
Add: other incomes		X
Discount received	X	
Rent received	X	
Interest received	X	
Commission received	X	
Less: Administrative expenses		X
Administrative salaries	X	
Office electricity	X	
Office rent and rates	X	
Printing and stationery	X	
Administrative Insurance	X	
Other Administrative expenses	X	
Less: Selling and distribution expenses.		(X)
Salesman's salaries and commission	X	
Bad debt	X	
Advertising	X	
Discount allowed	X	
Depreciation on sales van	X	
Carriage inwards	X	
Net Profit		(X) XXX

Illustration 15.1.

The following balances were extracted from the books of Ochinanwata Enterprises, a manufacturer in Onitsha as at 1st December, 2013.

Raw materials purchased		77,440
Manufacturing wages		37,740
Factory expenses		20,240
Stocks at 1/1/2006:		
-Raw materials		16,920
-Work-in-progress		6,140
-Finished goods		24,760
Sales		270,000
Depreciation:		
-Plant and machinery		15,120
-Delivery vans		6,080
-Office equipment		1,614
Repair of plant and machinery		6,040
Factory power		6,200
Foreman's salary		5,060
Advertising		7,112
Discount allowed		3,048
Office expenses		5,820
Rent and rates		6,800
Salesmen's salaries		2,840
Carriage inwards on raw materials		5,440
Other direct factory expenses		4,200
Office salaries		10,340

Additional Information:

1. Closing stocks as at 31st December were as follows:

Raw materials	N21,970
Work-In-progress	N4,920
Finished goods	N29,140

2. Rent and rates should be apportioned as follows

Factory	50%
Administration	30%

Selling and distribution 20%
Required: Prepare the Manufacturing, Trading and Statement of Comprehensive income of Ochinanwata Enterprises for the year ended 31st December, 2013.

Solution 15.1

Manufacturing, Trading, and Statement of Comprehensive Income for the year ended 31st December, 2013.

	N	N
Opening stock of raw materials		16,920
Purchases of raw materials		77,440
Carriage Inwards on raw materials		5,440
Cost of raw materials available for use		99,800
Closing stock of raw materials		(21,970)
Cost of Raw materials used		77,830
Manufacturing wages		37,740
Direct expenses		4,200
Prime cost		19,770
Factory overheads:		
Factory sundry expenses	20,240	
Depreciation on Plant and machinery	15,120	
Repair of Plant & Machinery	6,040	
Factory power	6,200	
Foreman's salary	5,060	
Rent and rates (50% of 16,800) (Note2)	5,060	
		61,060
		180,830
Opening work-in-progress	6,140	
Closing work-in-progress	(4,920)	
		1,220
Cost of goods produced		182,050
Sales (Revenue)		270,000
Less: Cost goods sold		
Opening Stock of finished goods	24,760	
Cost of goods produced	182,050	
Cost of goods available for sale	206,810	
Closing Stock of finished goods	29,140	
Cost of goods sold		(177,670)
Gross profit		92,330
Administrative expenses		

Depreciation of office equipment	1,614	
Office expenses	5,820	
Rent and rates (30% x 8,400)(Note 2)	5,040	
Office salaries	10,340	22,814
Selling and distribution expenses		
Depreciation of delivery van	6,080	
Advertising	7,112	
Discount allowed	3,048	
Rent and rates (20% x 8,400)(Note 2)	3,360	
Salesmen's salaries	12,840	
	<u>32,440</u>	
Net Profit		<u>37,076</u>

Illustration 15.2: Goodluck Manufacturing Firm extracted the following trial balance from his books:

	Dr. N'000	Cr. N'000
Capital		4,080
Freehold land and building at cost	3,000	
Plant and Machinery at cost	2,900	
Deliver van	800	
Fixtures and fittings	400	
Provision for depreciation:		
Plant and machinery		1,400
Delivery van		560
Purchases:		
Raw materials	3,700	
Stock at 1 st January 2008:		
Raw materials	600	
Work-In-Progress	60	
Finished goods	1,320	
Sales		13,200
Wages:		
Factory	2,728	
Administration	1,080	
Sales department	600	

Rates and insurance	320	
Repairs	200	
Selling expenses	288	
Electricity	1,200	
Administrative expenses	562	
Provision for doubtful debts	200	
Trade debtors	1,220	
Trade creditors	716	
Bank overdraft	842	
Cash	20	
	<u>20,998</u>	<u>20,998</u>

Additional Information:

- Closing stock as at 31st December were as follows:

Raw Materials	400,000
Work-In-Progress	160,000
Finished Goods	770,000
- For a number of years, the firm had maintained a policy of transferring finished goods to trading account at market value which is obtained by adding a mark-up of 10% of cost of goods produced. Both the opening and closing stock were stated at transfer value.

Required: Prepare the Manufacturing, Trading and Statement of Comprehensive Income of Good luck Manufacturing Firm.

Solution 15.2

Goodluck Manufacturing firm's Manufacturing, Trading and Statement of Comprehensive Income for the year ended 31st December, 2008

	N	N
Opening stock (Raw Material)	600,000	
Purchases of Raw material	3,700,000	
Raw material available	4,300,000	
Closing stock of raw material	(400,000)	

Cost of raw material used		3,900,000
Manufacturing wages		2,728,000
Prime Cost		6,628,000
Opening W.I.P		60,000
Closing W.I.P	(160,000)	(100,000)
Cost of goods produced		6,528,000
Mark Up (manufacturing profit) 10% of	6,528,000	652,800
Market value of goods		7,180,800
Sales (Revenue)		13,200,000
Less: cost of goods sold:		
Opening stock of finished goods	1,320,000	
Market value of goods produced	7,180,800	
Goods available for sale	8,500,800	
Closing stock of finished goods		(770,000)
Cost of goods sold		7,730,800
Gross profit		5,469,200
Add manufacturing profit		652,800
Total gross profit		6,122,000
Less administrative expenses:		
Administrative wages	1,080,000	
Rates & Insurance	320,000	
Repairs	200,000	
Electricity	1,200,000	
Admin expenses	562,000	
	3,362,000	
Less Selling & distribution expenses		
Sales department wages	600,000	
Selling expenses	288,000	
	888,000	
Total Admin, selling & distribution expenses		<u>4,250,000</u>
Net profit		<u>1,872,000</u>

Goodluck Manufacturing Firm's
Statement of Financial position as at 31st December, 2008.

	N	N	N
Freehold land	3,000,000	-	3,000,000
Plant & Machinery	2,900,000	1,400,000	1,500,000
Delivery Van	800,000	560,000	240,000
Fixtures & fittings	400,000		400,000
			5,140,000
Current Assets:			
Raw material		400,000	
W.I.P		160,000	
Finished goods		770,000	
Debtors (1,220,000 - 200,000)		1,020,000	
Cash		20,000	
			<u>2,370,000</u>
			7,510,000
Current Liabilities:			
Creditors			716,000
Overdraft			842,000
Long term liability:			
Capital			4,080,000
Net profit			<u>1,872,000</u>
			7,510,000