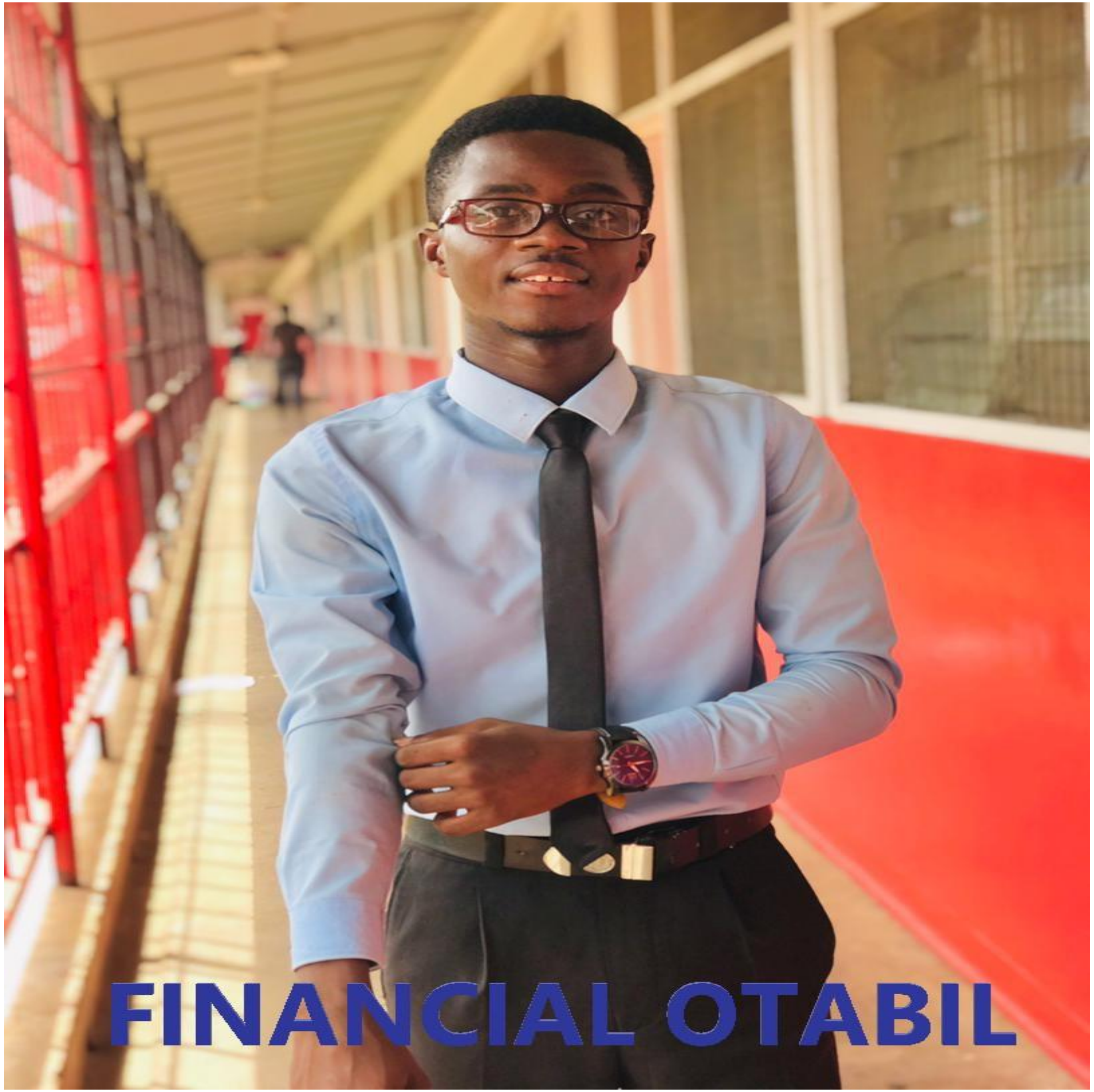
FINANCIAL OTABIL



Session 6 – Manufacturing Accounts

Learning Objectives

- Identify and explain the elements of cost of production.
- Prepare a manufacturing account by adjusting for work-in-progress.
- Show how cost of a product is built up in the final accounts of a manufacturing company.
- Determine manufacturing profit and adjust for unrealized profits.

What is a Manufacturing Account?

- An account that details the cost of producing or manufacturing products (goods or services) in a given period.

- It determines the cost of production needed for the calculation of cost of goods sold in the general statement of profit or loss in a manufacturing company.

Elements of Cost of Production

- **Direct Material Cost**
  - ✦ Materials which become a physical part of the goods produced. E.g. raw materials
- **Direct Labour Cost**
  - ✦ Cost of labour actually working on the goods produced. E.g. wages of production workers.
- **Other Direct Expenses**
  - ✦ Other expenses directly attributed to the production of the goods. E.g. royalties
- **Indirect Manufacturing cost (Factory Overheads)** - All production costs which are indirect
  - ✦ Indirect materials e.g. lubricants
  - ✦ Indirect labour e.g. wages of foreman, cleaner
  - ✦ Indirect expense e.g. depreciation of production plant and equipment, rents, rates, etc.

Further Classification of Overheads

- Overheads/ Indirect Cost can be further classified as manufacturing and non-manufacturing.

- **Manufacturing overheads**
  - These include indirect materials costs, indirect labour costs and indirect expenses related to production. They can be called production or factory overheads.

- **Non-Manufacturing overheads**
  - These are costs not included in the cost of manufacturing the product and therefore not shown in the cost build up to determine cost of production. They are treated as period costs. Examples are Administrative expenses, selling and distribution expenses, and financial charges. They are shown in the P/L account.

Other Divisions of Cost

- **Prime Cost**
  - Aggregate of **all direct cost** of manufacturing i.e. **direct material cost plus direct labour cost plus direct expenses**.

- **Conversion cost**
  - Cost involved in converting raw materials into partly-finished product or finished product. i.e. **direct labour cost plus direct expenses plus all factory overheads**.

Production cost

- Cost of manufacturing the product i.e. **prime cost plus manufacturing overheads**

Kinds of Inventory in Manufacturing Firms

- **Inventory of Raw Materials**
  - Materials to be converted into finished goods. i.e. the materials that are used to make the product. For example, fruits in a fruit processing company.

- **Inventory of Work-in-Process**
  - Materials in their intermediate state of production. Thus, the units of product that are partially complete and will require further work before ready for sale. For example, the mixed dough in a bakery.

- **Inventory of Finished goods/products**
  - Units of products that have been completed but have not yet been sold to customers. For a commercial organisation, they are goods bought to be sold and awaiting sales.

Financial Statements for Manufacturing Firms

- **The Financial Statements of Manufacturing firms include:**
  - **Manufacturing account-** To determine cost of production to be transferred to the Trading account. **NB: For a Merchandising firm cost of production would be akin to purchases.**
  - **Statement of Profit or Loss-** This is the same as discussed in ACF 255 except for some slight adjustments that will be needed if goods transferred from production is at a markup, leading to possible unrealised profits.
  - **Statement of Financial Position-** This is also the same as discussed in ACF 255 except for differences in the types of inventory.

Format of Manufacturing Account

Manufacturing Account for the year ended …		
Direct Materials		
Opening Inventory	xx	
Purchases of raw materials	xx	
Carriage inwards	xx	
Return outwards	(xx)	
Raw materials available to use	xx	
Closing Inventory	(xx)	
Cost of raw materials used		xx
Direct labour (wages)	xx	
Accruals/Prepayment	xx/(xx)	xx

Other direct expenses (if any eg. royalties)	xx
Prime Cost	**xx**

Format of Manufacturing Account

Factory Overheads Expenses			
Indirect material		xx	
Indirect labour		xx	
Indirect Expense	xx		
Accruals/Prepayments	xx/(xx)	xx	
Total overheads			xx
Cost of production			**xx**
Work in process adjustment			
Opening work-in-progress		xx	
Closing work-in-progress		(xx)	Xx
Cost of goods produced			**xx**

Format of Income Statement

Income Statement for the year ended …		
Sales		xxx
Returns Inward		(xxx)
Net Sales		**xxx**
Cost of Goods Sold		
Opening Inventory of finished goods	xx	
Cost of goods manufactured/produced	xx	
Purchases from outside suppliers (if any)	xx	
Goods available for sale	xx	
Closing Inventory	(xx)	(xxx)

Gross Profit		xxx
Other Incomes		xxx
		xxx

Format of Income Statement

Income statement for the year ended …

Profit and other income b/d		xxx
Expenses		
Administrative expenses	xx	
Selling and distributive expenses	xx	
Other Expenses	xx	(xxx)
Net Profit		**xxx**

Example

Question 1 on Worksheet 4 (Manufacturing Accounts)- Okukuseku Ltd.

Manufacturing Account for the year Ended……			
	GHC 000	GHC 000	GHC 000
DIRECT MATERIALS			
Opening Inventory		6,000	
Purchases		25,000	
carraige inwards		1,200	
materials available		32,200	
Closing Inventory		(8,000)	
Materials used			24,200
Direct wages (Labour)			10,000
Direct expenses			4,000

PRIME COST			38,200
OVERHEADS;			
Opening Indirect material	7,000		
Purchases indirect material	12,000		
Indirect materials available	19,000		
Closing Indirect material	(5,000)		
Indirect materials used		14,000	
Indirect factory wages		16,500	
Indirect/factory expenses			
General factory expenses	15,000		
Depn: Factory assets (0.1*40,000)	4,000		
Motor vehicle (0.1*35000*0.5)	1,750		
Rent expense (0.7*10000)	7,000		

		27,750	
Total Overheads			58,250
Cost of Production			96,450

Adjustment for W.I.P			
Opening work in progress			2,500
Closing work in progress			(4,500)
Cost of goods produced (NB - to income statement)			**94,450**

Income Statement for the year ended…	

Sales		160,000
COGS		
Opening Finished goods	8,000	
Cost of goods produced	94,450	
Goods available for sale	102,450	
Closing Finished goods	(12,000)	
		(90,450)
Gross profit		69,550
Commission received		2,200
Total Income		71,750
Expenses;		
Rent expense (0.3*10000)	3,000	

Depn; Office assets (0.05*30000)	1,500	
Motor Vehicle (0.1*35000*.5)	1,750	
Bad debts	1,500	
Office expenses	12,000	
		(19,750)
Net profit		52,000

- Prepare Statement of Financial Position on your own

Transfer of Goods at Market Value

- Sometimes the manufacturing firm may decide to transfer the goods manufactured at market value instead of the cost of production.

- This leads to the generation of a profit on manufacturing if production cost is less than the market value of the goods produced.

Lets see how this will be treated in the books

Market Value of Goods Manufactured

- Profit on manufacturing (manufacturing profit) is the difference between the market value of goods manufactured and the cost of goods manufactured.

Market value of goods manufactured	**xx**
Cost of goods manufactured	(xx)
Manufacturing profit	xx

- Manufacturing profit is accounted for in the **income statement** and disclosed separately.

- Where there are unsold manufactured goods, **unrealized manufacturing profit** must be provided for.

Income Statement for the year ended …

Treatment of Manufacturing Profit

Sales		xxx
Returns Inward		(xxx)
Net Sales (A)		**xxx**
Cost of Goods Sold		
Opening Inventory of finished goods	xx	
Market value of goods manufactured	xx	
Purchases from outside suppliers (if any)	xx	
Goods available for sale	xx	
Closing Inventory	(xx)	(xxx)

Gross profit on trading c/d		xxx
Manufacturing profit		xxx
Gross profit		xxx

Provision for Unrealised Profit

- Recall treatment of provision for doubtful debt?

Same principle

Finding the amount of unrealised profit

- Find the margin percentage

- Apply the percentage on the value of closing inventory of finished goods to get the profit unrealised or use the formula:

$$\frac{\text{Closing inventory}}{\text{Market value}} * \textbf{Manufacturing Profit}$$

- Compare current unrealised profit to previous provision for unrealised profit if any

Provision for Unrealised Profit

- If there is an increase in provision;

  -charge the "increase" to the P/L account as an expense (loss)

  - In statement of financial position, reduce the value of closing inventory of finished goods by the amount of unrealised profit (i.e. the new/computed unrealised profit)

Provision for Unrealised Profit

- If there is a decrease in provision;
  - Add the “decrease” to gross profit in the P/L account since it is a gain
  - In the statement of financial position, reduce the value of closing inventory of finished goods by the amount of unrealised profit (i.e.
    the new/computed unrealised profit)

EXAMPLE

Question 2 of Worksheet 4 (Manufacturing Accounts)- Okukuseku Refined Ltd.

- NOTE THE DIFFERENCE BETWEEN THIS AND THE PREVIOUS EXAMPLE?

b. Goods produced are transferred at a mark-up of 20%

- Provision for unrealized profit- 1,600

	Okukuseku Refined Ltd		
Manufacturing account for the year ended….			
	GHC 000	GHC 000	GHC 000
DIRECT MATERIALS			
Opening Inventory		6,000	
Purchases		25,000	
carraige inwards		1,200	
materials available		32,200	
Closing Inventory		(8,000)	
Materials used			24,200
Direct wages (Labour)			10,000

Direct expenses			4,000
PRIME COST			38,200

OVERHEADS;			
Opening Indirect material	7,000		
Purchases indirect material	12,000		
Indirect materials available	19,000		
Closing Indirect material	(5,000)		
Indirect materials used		14,000	
Indirect factory wages		16,500	
Indirect expenses:			
General factory expenses	15,000		
Depn: Factory assets (0.1*40,000)	4,000		

Motor vehicle (0.1*35000*0.5)	1,750		
Rent expense (.7*10000)	7,000		
		27,750	
Total Overheads			58,250
Cost of Production			96,450

Adjustment for W.I.P			
Opening work in progress			2,500
Closing work in progress			(4,500)
Cost of goods produced			94,450

Manufacturing Profit (0.2* 94,450) (note mark-up is on cost)		18,890
Market value (to trading department)		113,340

- Transfer at market value gives rise to manufacturing profit and hence provision must be made for any unrealised profit;
- NB: Since finished goods are at market value, find unrealised profit by Multiplying margin% by inventory of finished goods;
- Converting from mark-up to margin= 20/100+20 = 0.166667 * 100= 16.67
- 16.7% * 12,000 = 2,000
- Previous provision= 1,600
- Hence, increase of (2,000- 1,600)= 400

- 400 to Income Statement
- 2,000 to statement of financial position- to reduce value of finished goods

Income Statement for the year ended…		
Sales		160,000
COGS		
Opening Finished goods	9,600	
Market value (from manufacturing)	113,340	
Goods available for sale	122,940	
Closing Finished goods	(12,000)	

		(110,940)
Gross profit		49,060
Manufacturing profit		18,890
Commission received		2,200
Total Income		70,150

Expenses;		
Rent expense (0.3*10000)	3,000	
Depn; Office assets (0.05*30000)	1,500	
Motor Vehicle (0.1*35000*.5)	1,750	
Bad debts	1,500	

Office expenses	12,000	
Increase in prov. For unrealised profit	400	
Net profit		(20,150) 50,000

INCOME SURPLUS	
Opening bal.	12,000
Net profit	50,000

	61,996
Dividend	(3,500)
Closing bal.	58,500

Statement of Financial Position as at….			
Non-current assets;	Cost (GHC'000)	Depn (GHC'000)	NBV (GHC'000)
Office Assets	30000	1500	28500
Factory Assets	40000	4000	36000
Motor Vehicle	35000	3500	
	105000	9000	31500 96000
Current assets:			
Inventory; Direct materials		8000	

Indirect materials		5000	
Work-in-progress		4500	
Finished goods (12,000 – 2,000)		10000	
Receivables		7000	
Bank		20000	
		54500	
Current liabilities:			
payables		(5000)	
Working capital			
			49500
Net assets			145500

Financed by;			
Capital			48000
Income surplus			58500
			106500
Loan			39000
			145500