**Managerial Accounting Handout**

**P10-1 page 442**

Ohno Company specializes in manufacturing a unique model of bicycle helmet. The model is well accepted by consumers, and the company has enough orders to keep the factory production at 10,000 helmets per month (80% of its full capacity). Ohno’s monthly manufacturing cost and other expense data are as follows.

|  |  |
| --- | --- |
| Rent on factory equipment | $11,000 |
| Insurance on factory building | 1,500 |
| Raw materials used (plastics, polystyrene, etc.) | 75,000 |
| Utility costs for factory | 900 |
| Supplies for general office | 300 |
| Wages for assembly line workers | 58,000 |
| Depreciation on office equipment | 800 |
| Miscellaneous materials (glue, thread, etc.) | 1,100 |
| Factory manager’s salary | 5,700 |
| Property taxes on factory building | 400 |
| Advertising for helmets | 14,000 |
| Sales commissions | 10,000 |
| Depreciation on factory building | 1,500 |

***Instructions***

1. Prepare an answer sheet in the table provided **(page 2)**. Enter each cost item on your answer sheet, placing the dollar amount under the appropriate headings. Total the dollar amounts in each of the columns.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Product Costs** | | |  |
| **Cost Item** | **Direct Materials** | **Direct Labor** | **Manufacturing Overhead** | **Period Costs** |
| Rent on factory equip |  |  | $11,000 |  |
| Insurance on Factory Building |  |  |  | $1,500 |
| Raw materials used | $75,000 |  |  |  |
| Utility Costs for factory |  |  | $900 |  |
| Supplies for general office | $300 |  |  |  |
| Wages for assembly line workers |  | $58,000 |  |  |
| Depreciation on office equip |  |  | $800 |  |
| Misc. materials |  |  | $1,100 |  |
| Factory managers salary |  | $5,700 |  |  |
| Property taxes on factory building |  |  | $400 |  |
| Advertising for helmets |  |  | $14,000 |  |
| Sales commissions |  |  |  |  |
| Depreciation on factory building |  |  |  |  |
| **TOTALS:** |  |  |  |  |

(a)DM $75,000

 DL $58,000

 MO $22,100

 PC $25,100

1. Compute the cost to produce one helmet.

**P10-2 page 443**

Bell Company, a manufacturer of audio systems, started its production in October 2017. For the preceding 3 years, Bell had been a retailer of audio systems. After a thorough survey of audio system markets, Bell decided to turn its retail store into an audio equipment factory.

Red is variable cost

Blue is fixed cost

Raw materials cost for an audio system will total $74 per unit. Workers on the production lines are on average paid $12 per hour. An audio system usually takes 5 hours to complete($60). In addition, the rent on the equipment used to assemble audio systems amounts to $4,900 per month. Indirect materials cost $5 per system. A supervisor was hired to oversee production; her monthly salary is $3,000.

Factory janitorial costs are $1,300 monthly. Advertising costs for the audio system will be $9,500 per month. The **factory** building depreciation expense is $7,800 per year. Property taxes on the **factory** building will be $9,000 per year.

**Bold means it’s a product**

***Instructions***

1. Prepare an answer sheet in the table provided below.

Assuming that Bell manufactures, on average, **1,500 audio** systems per month**(1500 units)**, enter each cost item on your answer sheet, placing the dollar amount per month under the appropriate headings. Total the dollar amounts in each of the columns.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Product Costs** | | |  |
| **Cost Item** | **Direct Materials** | **Direct Labor** | **Manufacturing Overhead** | **Period Costs** |
| 1. Raw materials | 111,000 |  |  |  |
| 1. Wages for workers |  | $90,000 |  |  |
| 1. Rent on equiptment |  |  | $4,900 |  |
| 1. Indirect materials |  |  | $7,500 |  |
| 1. Factory supervisor salary |  |  | $3,000 |  |
| 1. Janitorial cost |  |  | $1,300 |  |
| 1. Advertising |  |  |  | $9,500 |
| 1. Depreciation on factory building |  |  | $650 |  |
| 1. Property taxes on factory building |  |  | $750 |  |
| **TOTALS** | **$111,000** | **$90,000** | **$18,000** | **$9,500** |

1. **$74/unit \*1500units = 111,000**
2. **$12/hr \* 5hr/unit \* 1500units**
3. **A**
4. **$5/unit \* 1500units = $7,500**
5. **A**
6. **A**
7. **A**
8. **$7800/12months = $650/month**
9. **$9,000/12months = $750/month**

**4**

DM $111,000 MO $ 18,100

 DL $ 90,000 PC $ 9,500

1. Compute the cost to produce **one** audio system.

DM -------------------------------- $111,000

DL --------------------------------- $90,000

MOH ------------------------------ $18,000

Total---------------------------------------------

---------------------------------- $219,100/1500units ----------

Cost per unit:

**P10-4 page 444**

The following data were taken from the records of Clarkson Company for the fiscal year ended June 30, 2017.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Raw Material |  | Work in Process |  | Factory Utilities | 27,600 |
| Inventory 7/1/16 | $ 48,000 | Inventory 7/1/16 | 19,800 | Office Utilities Expense | 8,650 |
| Raw Material |  | Work in Process |  | Sales Revenue | 534,000 |
| Inventory 6/30/17 | 39,600 | Inventory 6/30/17 | 18,600 | Sales Discounts | 4,200 |
| Finished Goods |  | Direct Labor | 139,250 | Plant Manager’s Salary | 58,000 |
| Inventory 7/1/16 | 96,000 | Indirect Labor | 24,460 | Factory Property Taxes | 9,600 |
| Finished Goods |  | Accounts Receivable | 27,000 | Factory Repairs | 1,400 |
| Inventory 6/30/17 | 75,900 | Factory Insurance | $ 4,600 | Raw Material Purchases | 96,400 |
|  |  | Factory Machinery |  | Cash | 32,000 |
|  |  | Depreciation | 16,000 |  |  |

***Instructions***

1. Prepare a cost of goods manufactured schedule **(page 5).** (Assume all raw materials used were direct materials.)

CGM $386,910

|  |  |  |  |
| --- | --- | --- | --- |
| June 30, 2017  **Cost of Goods manufactured to completion schedule** | | | |
| Work in process July 1, 2016 |  |  | $19,800 |
| Direct materials |  |  |  |
| Raw materials beg. Balance 7/1/16 | $48,000 |  |  |
| +Raw materials that were purchased | $96,400 |  |  |
| **Total raw materials available to use** | =$144,400 |  |  |
| -Raw materials ending 6/30/17 | -$39,600 |  |  |
| **Direct materials used** |  | =$104,800 |  |
| Direct labor |  | $139,250 |  |
| Manufacturing overhead -factory(plant) |  |  |  |
| Plant manager Salary | $58,000 |  |  |
| Factory (plant) utilities | $27,600 |  |  |
| Indirect labor | 24460 |  |  |
| Factory machine depreciation | 16000 |  |  |
| Factory property tax | 9,600 |  |  |
| Factory insurance | 4,600 |  |  |
| Factory repairs | 1400 |  |  |
| Total manufacturing overhead |  | 141,660 |  |
| Total manufacturing costs |  |  | $385,710 |
| Total cost of work in process |  |  | $405,510 |
| Less: Work in process, June 30, 2017(ending) |  |  | $18,600 |
| Cost of goods manufactured to completion |  |  | $386,910 |

1. Prepare an income statement through gross profit. Gross profit $122,790

|  |  |  |
| --- | --- | --- |
| Partial Income statement for the year ending 6/30/17 | | |
| Sales revenues |  |  |
| Sales revenue | 534,000 |  |
| Less sales discounts | 4200 |  |
| Net sales |  | 529,800 |
| Cost of goods sold |  |  |
| F/G beginning 7/1/16 | 96,000 |  |
| COGM to completion | 386,910 |  |
| COGAS | 482,910 |  |
| Finished goods ending 6/30/17 | -75,900 |  |
| Cost of goods sold |  | 407,010 |
| Gross Profit |  |  |

1. Prepare the current assets section of the balance sheet at June 30, 2017.

Current assets $193,100

|  |  |  |
| --- | --- | --- |
| Balance sheet 6/30/17 | | |
| Current Assets |  |  |
| Cash |  | $32,000 |
| Accounts recievable |  | $27,000 |
| Inventory: |  |  |
| * Finished goods | 75,900 |  |
| * Work in process | 18,600 |  |
| * Raw materials | 39600 | 134,100 |
| Total current assets |  | 193,100 |

**P10-5 page 444**

Empire Company is a manufacturer of smart phones. Its controller resigned in October 2017. An inexperienced assistant accountant has prepared the following income statement for the month of October 2017.

| **EMPIRE COMPANY Income Statement For the Month Ended October 31, 2017** | | | |
| --- | --- | --- | --- |
| Sales revenue |  | $780,000 |  |
| Less: Operating expenses |  |  |  |
| Raw Material purchases | $264,000 |  |  |
| Direct labor cost | 190,000 |  |  |
| Advertising expense | 90,000 |  |  |
| Selling and administrative salaries | 75,000 |  |  |
| Rent on factory facilities | 60,000 |  |  |
| Depreciation on sales equipment | 45,000 |  |  |
| Depreciation on factory equipment | 31,000 |  |  |
| Indirect labor cost | 28,000 |  |  |
| Utilities expense | 12,000 |  |  |
| Insurance expense | 8,000 | 803,000 |  |
| Net loss |  | $ (23,000) |  |

Prior to October 2017, the company had been profitable every month. The company’s president is concerned about the accuracy of the income statement. As her friend, you have been asked to review the income statement and make necessary corrections. After examining other manufacturing cost data, you have acquired additional information as follows.

1. Inventory balances at the beginning and end of October were:

|  | **October 1** | **October 31** |
| --- | --- | --- |
| Raw materials | $18,000 | $29,000 |
| Work in process | 20,000 | 14,000 |
| Finished goods | 30,000 | 50,000 |

1. Only 75% of the utilities expense and 60% of the insurance expense(moh) apply to factory operations. The remaining amounts should be charged to selling and administrative activities.

***Instructions***

1. Prepare a schedule of cost of goods manufactured for October 2017.

CGM $581,800

|  |  |  |  |
| --- | --- | --- | --- |
| Cost of goods manufactured to completion schedule | | | |
| Work in process October 1 |  |  | 20,000 |
| Direct materials |  |  |  |
| Raw materials beginning bal. 10/1/17 | 18,000 |  |  |
| +Raw materials purchased | 264,000 |  |  |
| **Total Raw Materials available to use** | = |  |  |
| -Raw materials ending 10/30/17 | -29,000 |  |  |
| Direct materials used |  | = |  |
| Direct labor | 190,000 |  |  |
| Manufacturing overhead – factory(plant) |  |  |  |
| Factory faculty rent | $60,000 |  |  |
| Indirect labor (cost) | $28,000 |  |  |
| Factory machine deprivation | $31,000 |  |  |
| factory utilities | $9,000 |  |  |
| Factory insurance | $4,800 |  |  |
| Total manufacturing overhead |  | 132800 |  |
| Total manufacturing costs |  |  | 575,800 |
| Total cost of work in process |  |  | 595,800 |
| Less: Work in process, Oct 30, 2017 |  |  | 14000 |
| Cost of goods manufactured |  |  | 581,800 |

1. Prepare a correct income statement for October 2017.

NI $ 2,000

|  |  |  |
| --- | --- | --- |
|  | | |
| Sales revenue | $780,000 |  |
| Cost of goods sold |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| Cost of goods sold |  |  |
| Gross Profit |  |  |
| Operating expenses |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| Total operating expenses |  |  |
| Net Income |  |  |