**Chapter 20 Alternate Demo Problem**

**ABC Company started business on January 1, 2021. The company estimated that sales for the first six months would be as follows:**

|  |  |  |
| --- | --- | --- |
| **Month** | **Units** | **Dollars** |
| **January** | **10,000** | **$ 50,000** |
| **February** | **8,000** | **40,000** |
| **March** | **15,000** | **75,000** |
| **April** | **17,000** | **85,000** |
|  |  |  |
| **May** | **22,000** | **110,000** |
| **June** | **30,000** | **150,000** |
|  |  |  |

**The company sells all items on account and expects collections of accounts receivable to be as follows: 60% in the month of the sale, and the remaining 40% in the month after the sale.**

***Required:***

1. **Compute the expected cash collections during the months of January, February, March, April, May and June.**
2. **The company has decided that finished goods inventory at the end of each month should ideally be equal to 40% of next month’s sales. What should budgeted production be for each of the first four months?**
3. **It takes two pounds of raw material to make one unit of finished product. The company wants to keep an ending inventory of raw material equal to 30% of next month’s production needs. How many pounds of raw material should be purchased in each of the first three months?**
4. **The raw material costs $2 per pound. The company pays for 70% of its purchases during the month of purchase and the remainder in the following month. How much cash will be disbursed during the month of March for the purchase of raw material?**
5. **The projected cash balance on March 1 is $13,500. What is the estimated cash balance at the end of the month? (Prepare a formal cash budget for the month of March.)**

**Chapter 20 Solution: Alternate Demo Problem**

**(a)**

 **Collections**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Month** | **Sales** | **Jan.** | **Feb.** | **March** | **April** | **May** | **June** |
| **Jan.** | **$ 50,000** | **$30,000** | **$20,000** |  |  |  |  |
| **Feb.** | **40,000** |  | **24,000** | **$16,000** |  |  |  |
| **March** | **75,000** |  |  | **45,000** | **$30,000** |  |  |
| **April** | **85,000** |  |  |  | **51,000** | **$ 34,000** |  |
| **May** | **110,000** |  |  |  |  | **66,000** | **$ 44,000** |
| **June** | **150,000** |  |  |  |  |  | **90,000** |
| **Total collected** | **$30,000** | **$44,000** | **$61,000** | **$81,000** | **$100,000** | **$134,000** |

 **Note: 60% of sales collected in month of sale; 40% in the following month.**

**(b)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **Jan.** | **Feb.** | **March**  | **April** |
|  |  | **Ending inventory** | **3,200**  | **6,000** | **6,800** | **8,800** |
| **+** |  | **Estimated sales** | **10,000** | **8,000** | **15,000** | **17,000** |
| **=** |  | **Total requirements** | **13,200** | **14,000** | **21,800** | **25,800** |
| **-** |  | **Beginning inventory** | **0** | **3,200** | **6,000** | **6,800** |
| **=** |  | **Budgeted Production** | **13,200** | **10,800** | **15,800** | **19,000** |

 **Note: Ending inventory is equal to 40% of next month’s sales (in units), and beginning inventory is equal to last month’s ending inventory.**

**(c)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **Jan.** |  | **Feb.** | **March** |
|  |  | **Ending inventory** | **6,480**  | (1) | **9,480** | **11,400** |
| **+** |  | **Budgeted production** | **26,400** | (2) | **21,600** | **31,600** |
| **=** |  | **Total requirements** | **32,880** |  | **31,080** | **43,000** |
| **-** |  | **Beginning inventory** | **0** |  | **6,480** | **9,480** |
| **=** |  | **Raw material needed** | **32,880** |  | **24,600** | **33,520** |

 **Note: It takes two pounds of raw material to make one unit of product and ending inventory should equal 30% of next month’s production.**

1. **6,480 = 10,800 units x 2 pounds x 30%**
2. **26,400 = 13,200 units x 2 pounds**

**(d)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | **Jan.** | **Feb.** | **March** |
|  |  | **Purchases (in units)** | **$32,880** | **24,600** | **33,520** |
| **X** |  | **Price per pound** | **2.00** | **2.00** | **2.00** |
| **=** |  | **Purchase cost** | **$65,760** | **$49,200** | **$67,040** |
|  |  |  |  |  |  |

**March cash payments equals 70% of March purchases plus 30% of February purchases.**

**Therefore, March cash payments equal:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Purchases from:** |  |  |  |
| **February**  | **30% x $49,200** |  | **$14,760** |
| **March** | **70% x $67,040** | **+** | **46,928** |
| **Total cash paid for materials** |  |  | **$61,688** |
|  |  |  |  |

**(e)**

ABC COMPANY

Cash Budget

For the Month of March 2021

|  |  |
| --- | --- |
|  |  |
| **Beginning cash balance** | **$13,500** |
| **Cash receipts from customers** | **61,000** |
| **Total cash available** | **74,500** |
| **Cash payments** | **61,688** |
| **Ending cash balance** | **$12,812** |