**Jimmy’s APP Jumble**

Jimmy has been tasked with aggregate production planning for XYZ Corp. Jimmy’s boss suggested they just follow the demand, a chase strategy, through the quarters to minimize un-needed inventory. However, Liz in HR always complains about hiring and firing costs so they have suggested a pure level strategy. Jimmy needs to develop a Level, Chase, and a Hybrid aggregate production plan (APP) for the data given that minimizes costs but complies with all company policies. Help Jimmy out.

Hiring cost = $100 per worker    Firing cost = $500 per worker

Inventory carrying cost = $0.60 /unit per quarter

Production per employee = 200 units per quarter

Beginning work force = 50 workers

Quarter Demand/Forecast (units)

Spring 500,000

Summer 1,200,000

Fall 800,000

Winter 1,500,000

**Figure 1.1 Aggregate Production Plan Using a Pure Level Strategy**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **AGGREGATE PRODUCTIN PLANNING – LEVEL STRATEGY** | | | | | |  |  |  |  |
|  |  |  |  | **Prod./Wrkr =** | **Hire Cost =** | **Fire Cost =** |  |  |  |
| **Level** | **Begin Wrks =50** |  |  | **200** | **$100** | **$500** |  | **inv. Cst =** | **$0.60** |
|  | **Needed** | **Produced** | **Act. Produced** | **Wrks Nd'd** | **Hire** | **Fire** | **Ttl Wrks** | **End Inv.** | **Inv. Cst** |
| **Q1** | **500,000** |  |  |  |  |  |  |  |  |
| **Q2** | **1,200,000** |  |  |  |  |  |  |  |  |
| **Q3** | **800,000** |  |  |  |  |  |  |  |  |
| **Q4** | **1,500,000** |  |  |  |  |  |  |  |  |
| **Totals** |  |  |  | **Hire/Fire Costs =** |  |  |  | **Total Inv. Cost =** |  |
|  |  |  |  |  |  |  | **Level Plan** | **Total Cost =** |  |

**Figure 1.2 Aggregate Production Plan Using a Pure Chase Strategy**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **AGGREGATE PRODUCTIN PLANNING – CHASE STRATEGY** | | | | | |  |  |  |  |
|  |  |  |  | **Prod./Wrkr =** | **Hire Cost =** | **Fire Cost =** |  |  |  |
| **Chase** | **Begin Wrks =50** |  |  | **200** | **$100** | **$500** |  | **inv. Cst =** | **$0.60** |
|  | **Needed** | **Produced** | **Act. Produced** | **Wrks Nd'd** | **Hire** | **Fire** | **Ttl Wrks** | **End Inv.** | **Inv. Cst** |
| **Q1** | **500,000** |  |  |  |  |  |  |  |  |
| **Q2** | **1,200,000** |  |  |  |  |  |  |  |  |
| **Q3** | **800,000** |  |  |  |  |  |  |  |  |
| **Q4** | **1,500,000** |  |  |  |  |  |  |  |  |
| **Totals** |  |  |  | **Hire/Fire Costs =** |  |  |  | **Total Inv. Cost =** |  |
|  |  |  |  |  |  |  | **Chase Plan** | **Total Cost =** |  |

**Figure 1.3 Aggregate Production Plan Using a Hybrid Strategy**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **AGGREGATE PRODUCTIN PLANNING – HYBRID STRATEGY** | | | | | |  |  |  |  |
|  |  |  |  | **Prod./Wrkr =** | **Hire Cost =** | **Fire Cost =** |  |  |  |
| **Hybrid** | **Begin Wrks =50** |  |  | **200** | **$100** | **$500** |  | **inv. Cst =** | **$0.60** |
|  | **Needed** | **Produced** | **Act. Produced** | **Wrks Nd'd** | **Hire** | **Fire** | **Ttl Wrks** | **End Inv.** | **Inv. Cst** |
| **Q1** | **500,000** |  |  |  |  |  |  |  |  |
| **Q2** | **1,200,000** |  |  |  |  |  |  |  |  |
| **Q3** | **800,000** |  |  |  |  |  |  |  |  |
| **Q4** | **1,500,000** |  |  |  |  |  |  |  |  |
| **Totals** |  |  |  | **Hire/Fire Costs =** |  |  |  | **Total Inv. Cost =** |  |
|  |  |  |  |  |  |  | **Hybrid Plan** | **Total Cost =** |  |