**ACC 231 Practice Problems Name**

Mr. McDermott

1. Viking Sports is a manufacturer of sportswear. It produces all of its products in one department. The information for the current month is as follows:

Beginning work in process 20,000 units

Units started 40,000 units

Units completed 50,000 units

Ending work in process 8,000 units

Spoilage 2,000 units

Beginning work-in-process direct materials $12,000

Beginning work-in-process conversion $ 4,000

Direct materials added during month $60,000

Direct manufacturing labor during month $20,000

Beginning work in process was half complete as to conversion. Direct materials are added at the beginning of the process. Factory overhead is applied at a rate equal to 50% of direct manufacturing labor. Ending work in process was 60% complete. All spoilage is normal and is detected at end of the process.

**Required**:

Prepare a production cost worksheet if spoilage is recognized and the weighted-average method is used. (Show all work)  
2. For supply item ABC, Andrews Company has been ordering 125 units based on the recommendation of the salesperson who calls on the company monthly. A new purchasing agent has been hired by the company who wants to start using the economic-order-quantity method and its supporting decision elements. She has gathered the following information:

|  |  |  |  |
| --- | --- | --- | --- |
| Annual demand in units | | 250 | |
| Days used per year | | 250 | |
| Lead time, in days | | 10 | |
| Ordering costs | | $100 | |
| Annual unit carrying costs | | $20 | |

**Required**:

Determine the EOQ, average inventory, orders per year, average daily demand, reorder point, annual ordering costs, and annual carrying costs. (Show all work)3. The Jarvis Corporation produces bucket loader assemblies for the tractor industry. The product has a long term life expectancy. Jarvis has a traditional manufacturing and inventory system. Jarvis is considering the installation of a just-in-time inventory system to improve its cost structure. In doing a full study using its manufacturing engineering team as well as consulting with industry JIT experts and the main vendors and suppliers of the components Jarvis uses to manufacture the bucket loader assemblies, the following incremental cost-benefit relevant information is available for analysis:

The Jarvis cost of investment capital hurdle rate is 15%.

One time cost to rearrange the shop floor to create the manufacturing cell workstations is $275,000.

One time cost to retrain the existing workforce for the JIT required skills is $60,000.

Anticipated defect reduction is 40%. Currently there is a cost of quality defect assessment listed as $150,000 per year.

The setup time for each of the existing functions will be reduced by 67%. Currently the forecast for setup costs are $225,000 per year.

Jarvis will expect to save $200,000 per year in carrying costs as a result of having a lower inventory.

The suppliers will require a 15% premium over the current level of prices in order to position themselves to supply the material on a smaller and more frequent schedule. Currently the materials purchases are $1,500,000 per year.

**Required**:

Determine whether it is in the best interest of Jarvis Corporation to install a JIT system. (Show all work)

4. Vision Enterprises manufactures converter boxes for high definition TVs. All processing is initiated when an order is received. For March there were no beginning inventories. Conversion Costs and Direct Materials are the only manufacturing cost accounts. Direct Materials are purchased under a just-in-time system. Backflush costing is used with a finished goods trigger point. Additional information is as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| Actual conversion costs | | $435,000 | |
| Standard materials costs per unit | | 115 | |
| Standard conversion cost per unit | | 85 | |
| Units produced | | 7,900 | |
| Units sold | | 7,600 | |

**Required**:

Record all journal entries for the monthly activities related to the above transactions if backflush costing is used. (Show all work)