**ASSIGNMENT 04**

1. Assume that XYZ plant is running at 90% of its monthly capacity. XYZ has just received   
   a special order to produce 40,000 cases of chicken noodle soup for a national   
   supermarket. The supermarket will sell the soup under its own private brand label. The   
   soup will be the same in all respects, except for the label, which will cost XYZ’s an extra   
   $5,000 in total to design. The supermarket has offered to pay only $19.00 per case, which is well under XYZ’s normal sales price.

Costs at the current production level (450,000 cases) are as follows:  
Table

Description automatically generated

1) Is there enough excess capacity to fill this order?

Yes, there is enough capacity to fill this special order.

If the plant is produces 450,000 cases a month, and is operating at 90% of capacity, that means it has a capacity level of $450,000/90% = 500,000 cases per month.

This means the plant has excess capacity of 50,000 cases per month, which is enough to fill the special order of40,000 cases without increasing the current level of fixed costs which is $2,700,000.

The current level of fixed costs is not needed to make the decision. XYZ will not incur an additional $6.00 of fixed MOH for every case produced in this order.

2) Will XYZ’s operating income increase or decrease if it accepts this special order? By   
how much?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SNo | Op | Incremental Analysis for Special Order Decision | Per Unit | Total Order |
| 1 |  | Revenue from special order | $19.00 | $760,000 |
| 2 | - | Variable Expenses associated with order | $15.00 | $600,000 |
| 3 |  | Contribution margin | **$4.00** | $160,000 |
| 4 | - | Additional fixed expenses associated with order |  | $5000 |
| 5 |  | Increase in operating income from special order |  | **$155,000** |

1. Assume ABC grocery store is deciding whether to eliminate the salad bar section of its   
   stores. The product line income statement shows the following quarterly data for the   
   salad bar operations:  
   Sales revenue= $750,000  
   Fixed costs = $100,000  
   Variable costs= $600,000  
   Requirement:  
   1) Only $20,000 of fixed costs can be eliminated if the salad bar is eliminated. The   
   remaining $80,000 of fixed costs are unavoidable. What will happen to ABC’s operating   
   income if it discontinues the salad bars and does nothing with the freed capacity?

|  |  |  |  |
| --- | --- | --- | --- |
| SNo | Op | Incremental Analysis for Discontinuation Decision | Total |
| 1 |  | Sales revenue from salad bars | $750,000 |
| 2 | - | Variable expenses related to salad bar | $600,000 |
| 3 |  | Contribution margin lost if salad bar is discontinued | $150,000 |
| 4 | - | Fixed costs savings if salad bar is discontinued | $20,000 |
| 5 |  | Operating Income lost if salad bar is discontinued | **$130,000** |

2) Management is thinking about replacing the salad bar section of the stores with a   
specialty olive bar, which is projected to bring in $200,000 of contribution margin each   
quarter while incurring no additional fixed costs. What will happen to ABC’s operating   
income if it replaces the salad bars with olive bars?

|  |  |  |  |
| --- | --- | --- | --- |
| SNo | Op | If salad bar is replaced with olive bars | Total |
| 1 |  | Contribution margin provided by olive bar | $200,000 |
| 2 | - | Operating Income lost if salad bar is discontinued | $130,000 |
| 3 |  | Increase in operating income from replacing with olive bar | **$70,000** |

1. Company A makes downhill ski equipment. Assume that company B has offered to   
   produce ski pole for company A for $18 per pair. Company A needs 100,000 pairs of   
   poles per period. Company A can avoid $125,000 of fixed costs if it outsources; the   
   remaining fixed costs are unavoidable. Company A currently has the following costs at a   
   production level of 100,000 pairs of poles.

Table

Description automatically generated

1. Should company A outsource ski pole production if the next best use of freed capacity is to leave it idle? What affect will outsourcing have on company A operating income?

The total cost of outsourcing the ski poles and leaving the freed capacity idle is $325,000 greater than the cost to produce the poles in-house. Company A should not out- source production because its operating income would decline by $325,000.

1. If the freed capacity could be used to produce ski boots that would provide $500,000 of operating income, should company A outsource ski pole production?

The income will increase by $175,000 if it outsources production and uses the freed capacity to make ski boots.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| SNo | op | Incremental Analysis Outsourcing Decision | Make Ski Poles | Outsource Ski Poles | Difference |
| 1 |  | Variable Costs: |  |  |  |
| 2 |  | If make: $13.50 \* 100,000 units  If outsource: $18.00 \* 100,000 units | $1350,000 | 1800,000 | 450,000 |
| 3 | + | Fixed Costs | 650,000 | 525,000 | 125,000 |
| 4 |  | Total Cost of producing 100,000 units | $2,000,000 | 2325,000 | **325,000** |
| 5 | - | Income from ski boots if outsource | 0 | 500,000 | 500,000 |
| 6 |  | Net Cost | **$2,000,000** | **$1,825,000** | **$175,000** |

1. Assume company A’s sales budget shows projected sales of 32,000 cases in April and   
   40,000 cases in May. The company’s manager would like to maintain ending safety stock   
   equal to 10% of the next month’s projected sales. How many units should be produced in April?

|  |  |  |  |
| --- | --- | --- | --- |
| SNo | op |  |  |
| 1 |  | Unit sales for April | 32,000 |
| 2 | + | Desired ending inventory (10% of May sales of 40,000) | 4,000 |
| 3 |  | Total units needed | 36,000 |
| 4 | - | Beginning inventory (March ending inv = 10% of April sales of 32,000) | 3,200 |
| 5 |  | Units to produce | **32,800** |

Therefore, company should produce 32,800 cases.

1. Assume company A has the following budgeted sales for the quarter:

Table

Description automatically generated

Determine company A for March cash collections assuming credit sales are collected as   
follows: 90% is collected the month after sale, 8% is collected two months after the   
month of sale, and 2% is never collected.

|  |  |  |
| --- | --- | --- |
| SNo |  |  |
| 1 | COD sales in March | $15,000 |
| 2 | Credit Sales from Feb (110,000 \* 90%) | 99,000 |
| 3 | Credit Sales from Jan (100,000 \* 8%) | 8,000 |
| 4 | Total Cash Collections | **$122,000** |

1. Company A is another one of Company B’s divisions. For fiscal year 2012, the division   
   had assets of $966 million, operating income of $695 million, and sales revenue of   
   $2,636 million.

1) Compute company A’s ROI, sales margin, and capital turnover.

ROI = Operating Income / Total Assets

$695 / $966 = **$71.9%**

Sales Margin = Operating Income / Sales Revenue

$695 / $2636 = **$26.4%**

Capital Turnover = Sales Revenue / Total Assets

$2936/$966 = **$2.73**

2) Compute company A’s residual income, assuming the minimum acceptable rate of   
return is 25%.

Residual Income = Operating Income – (Target rate of return \* Total assets)

= $695 – (25% \* $966) = **$453.5 million**

1. Andrea operates his own summer lawn-mowing business using a truck and equipment   
   used solely for business purposes. Andrea budgets $10 per job for variable expenses (gas for his truck and equipment) and $500 per month for fixed expenses (insurance and lease payments). Andrea expected to have 100 mowing jobs during the month of June, but actually had 125. How much should be reflected in the flexible budget for

1) variable expenses

2) total operating expenses?

The flexible budget is prepared using the original master budget assumptions for the actual volume achieved (125 jobs) rather than the volume originally anticipated (100 jobs).

The flexible budget will reflect the following expenses:

1. 125 jobs \* $10/job = **$1250** of variable expenses
2. $1,250 + $500 = **$1,750** for total operating expenses