ACC81210

Accounting for Managers

Assignment 3

**Question 1**

1. Contribution margin per unit

|  |  |
| --- | --- |
| Selling price Per unit | $65 |
| Less: |  |
| Variable cost per unit | $25 |
| Contribution per unit | $40 |

1. Contribution margin Ratio

Contribution margin Ratio =$40/$65 \*100 = 61.538% (David Kieso,Jerry J. Weygandt and Terry D. Warfield, 2012, 15th edition)

1. BEP

BEP (in units) = Fixed cost / Contribution per unit =$58,000 / $40 = 1450 units

BEP (in Dollars) = Fixed cost / Contribution margin Ratio =$58,000 / 61.538% = $94,250.70

1. Number of nights required for a target net profit of $80,000

Units Required for a profit of $80,000 = (Fixed cost + target Profit )/ Contribution per unit =($58,000 +80,000) / $40 = 3,450 units

Revenue Required for a profit of $80,000 = (Fixed cost + target Profit )/ Contribution margin Ratio = ($58,000+80,000) / 61.538% = $ 224,251.68. (Datar, 2012)

1. Margin of safety

MOS = actual sales – BEP sales = 2500 room units – 1450 units = 1050 units

1. New BEP

|  |  |
| --- | --- |
| Selling price Per unit | $65 |
| Less: |  |
| Variable cost per unit (12+1.2 + 7+6) | $26.2 |
| Contribution per unit | $38.8 |

New BEP (in units) = Fixed cost / Contribution per unit = ($58,000+5,000) / $38.8 = 1623.71 units or 1624 units

**Question 2**

**a)**

|  |  |
| --- | --- |
|  | $ |
| Sales | 140,000 |
| Less:  cost of goods sold | 65,000 |
| Paper products (variable costs) | 11,300 |
| Total variable costs | 76300 |
| Contribution margin | 63,700 |
| Contribution Margin Ratio | 45.5% |

This means the juice Bar has a Contribution Margin Ratio of 45.5% or for every $100 of sales it generates a contribution of $45.5

The fixed costs of the firm are as follows:

|  |  |
| --- | --- |
|  | $ |
| Wages | 40,000 |
| Cost of electricity | 13,700 |
| Depreciation of Equipment’s | Not a relevant cost being a noncash expense |
| Depreciation of Building | Not a relevant cost being a noncash expense |
| Store managers salary | 14,000 |
| Total fixed costs | 67,700 |

|  |  |
| --- | --- |
|  | $ |
| Sales | 140,000 |
| Less:  cost of goods sold | 65,000 |
| Paper products | 11,300 |
| Total variable costs | 76,300 |
| Contribution margin | 63,700 |
| Less: Fixed costs | 67,700 |
| Profit(loss) | (4,000) |

BEP (in $) = Fixed cost/ Contribution Margin Ratio = 67,300 /45.5% = $147,912.1

If we take all the relevant costs to account then the firm needs a total revenue of only $147,912 for Breaking even and current revenue is $140,000. There is only a gap of $7,912 between the desired BEP and current revenue and its less than 6% of current revenue (Carl S Warren, 2011).

**b)**

**the current profit and loss statement under relevant costing is as follows:**

|  |  |
| --- | --- |
|  | $ |
| Sales | 140,000 |
| Less:  cost of goods sold | 65,000 |
| Paper products | 11,300 |
| Total variable costs | 76,300 |
| Contribution margin | 63,700 |
| Less: Fixed costs | 67,700 |
| Profit(loss) | (4,000) |

Thus, the losses are not as big as being made out. More efforts can be made to increase the revenue by $7,912 to reach BEP and after which the profits would be higher.

So, it is recommended to continue operating the juice bar as a 6% increase in the revenue would make the juice bar profitable and it has the potential to make good profits if necessary adjustments are made by the Bars management (Belverd E. Needles , Susan V. Crosson and Matt Poers, 2011).

**Question 3**

1. **Calculate the Overhead Recovery Rate**

Specialized Labor cost = $250,000

Total overhead costs =

170,000+110,000+140,000+22,000+15,000+45,000+8,000+110,000+16,000+14,000 = 650,000

Overhead recovery rate = $650,000/$250,000 = 2.6

So, the overhead recover rate is $2.6 for every $1 of standardized costs.

1. **Calculation of cost of jobs**

**Calculation of specialized costs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Senior accountant-assistants** | **Graduate accountant** | **Senior accountant** | **Total Specialized cost** |
| Royal pines | 20 hrs @ 40=800 | 90 @ 20 = 1800 | 5 hrs @ 150 =750 | $ 3,350 |
| Emerald Lakes | 35 hrs @ 40= 1400 | 85 @ 20 = 1700 | 10 hrs @ 150 = 1500 | $ 4,600 |
| Colonial | 55 hrs @ 40= 2200 | 120 @ 20 = 2400 | 15 hrrs @ 150 = 2250 | $ 6,850 |

**Calculation of job costs**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Total Specialized cost** | **Overheads** | **Total cost of the jobs** |
| Royal pines | $ 3,350 | 3350\*2.6 = 8,710 | $ 12,060 |
| Emerald Lakes | $ 4,600 | 4600\*2.6 = 11,960 | $ 16,560 |
| Colonial | $ 6,850 | 6,850\*2.6 = 17,810 | $ 24,660 |

1. **Calculation of fees based on charge out rates**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Senior accountant-assistants** | **Graduate accountant** | **Senior accountant** | **Price to be charged for the job** |
| Royal pines | 20 hrs @ 200= 4,000 | 90 @ 140 = 12,600 | 5 hrs @ 450 = 2,250 | $ 18,850 |
| Emerald Lakes | 35 hrs @ 200= 7,000 | 85 @ 140 = 11,900 | 10 hrs @ 450 = 4500 | $23,400 |
| Colonial | 55 hrs @ 200= 11,000 | 120 @ 140 = 16,800 | 15 hrrs @ 450 = 6750 | $ 34,550 |

**Question 4**

1. **Advantages and Disadvantages of each option**

**Advantages**

**Option 1**

1. The expansion option would make sure more revenue is generated and capacity is utilized.
2. It would also increase the PBT by $80,000 which is 75% of current PBT.

**Option 2**

1. Using issue of shares to fiancé the operations would be more recommended because of the fact that it does not increase debts and stocks sold wont have to be refunded (Atrill, 2010).
2. It won’t increase the interest costs.

**Disadvantages**

**Option 1**

1. If this option is used , it would lead to increase in financial risk.
2. More debts means the risk of the operations would increase as well.

**Option 2**

1. Issuing new stocks would lead to dilution of current ownership
2. Profit of the firm would have to be shared 50% each which would lead to lower dividends for current owners.
3. **Calculation in support of the above option and decisions**

Option 1

Profit of the Firm (expansion) 80,000

Less: Interest costs (8,000)

PBT 72,000

All the profits would be kept by the firm’s owners after paying the interest costs. Profits would be generated forever. So excess profits of $72,000 would be generated forever. And at the end of the 5 years of the loan , the firms owners would be able to pay a loan of $400,000.

The cash flow from the expansion is as follows:

Profits after interest and Depreciation but before tax 72,000

Add:

Depreciation 80,000

(400,000/5)

Cash flow after Taxes 152,000

In five years, the expansion would generate a cash flow of more than 760,000 of which 400,000 would be required to pay off the loan. Assuming the plant and equipment is being depreciated over a life of five years.

Option 2

If the shares are issued then the cash flows would remain the same but the profits would be shared equally between the current owners and the new fiancé providers. This means the fiancé providers would also claim a profit before tax of 100,000 which includes profits which is being generated now (ANTHONY A ATKINSON, 2012).

So it does not make any sense for the owners to bring in new shareholders and pay them half of the profits but stick to taking a loan @8% and the same option 1 would be able to generate adequate profits and cash flows to pay off the interest costs for five years and also enough cash flow to pay off the loans at the end of the year 5. The loan is not required to be rolled over (Drury, 2006 ).

**Question 5**

**Cash Budget for the Months of October, November and December**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **October** | **November** | **December** |
| cash balance opening | 20,000 | 57,100 | 102,750 |
| cash sales (30%) | 45,000 | 49,500 | 57,000 |
| Credit sales: |  |  |  |
| collection for Sept | 33,600 | 16,800 | 0 |
| collection for October | 31,500 | 42,000 | 21,000 |
| collection for November | 0 | 34,650 | 46,200 |
| collections for December | 0 | 0 | 39,900 |
| Cash collection for august | 14,000 | 0 | 0 |
| **Total cash receipts** | **144,100** | **200,050** | **266,850** |
|  |  |  |  |
| **Cash payments:** |  |  |  |
| Wages | 40,500 | 43,500 | 49,000 |
| Rent | 5,000 | 5,000 | 5,000 |
| Utilities | 1,900 | 2,000 | 2,200 |
| Insurance | 0 | 0 | 0 |
| Commission | 39,600 | 46,800 | 52,500 |
| **Total cash payments** | **87,000** | **97,300** | **108,700** |
| **Closing cash balance** | **57,100** | **102,750** | **158,150** |

**Working notes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Estimation of cash collection (credit sales)** | | | | |
|  | sept | October | Nov | Dec |
| sales | 120,000 | 150,000 | 165,000 | 190,000 |
| cash sales | 36000 | 45000 | 49500 | 57000 |
| credit sales | 84,000 | 105,000 | 115,500 | 133,000 |
|  |  |  |  |  |
| collection for Sept | 25200 | 33600 | 16800 |  |
| collection for October |  | 31500 | 42000 | 21000 |
| collection for November | |  | 34650 | 46200 |
| collections for December |  |  |  | 39900 |
| Cash collection for august | 28000 | 14000 |  |  |
|  |  |  |  |  |
|  | sept | October | Nov | Dec |
| Commission Expenses | 36000 | 45000 | 49500 | 57000 |
| 40%-same month | 14400 | 18000 | 19800 | 22800 |
| 60% next month |  | 21600 | 27000 | 29700 |
| **Total commission expenses** | | **39600** | **46800** | **52500** |
|  | sept | October | Nov | Dec |
| Wage Expenses | 40000 | 42000 | 48000 | 52000 |
| 25%-same month | 10000 | 10500 | 12000 | 13000 |
| 75% next month |  | 30000 | 31500 | 36000 |
| **Total wage expenses** |  | **40500** | **43500** | **49000** |

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