Module 5

Problem 1

Using an excel spreadsheet, complete the following problem. Jared Corp. invests in a piece of equipment that cost $150,000, has a useful life of five years with no salvage value and will be depreciated using straight-line depreciation. The equipment will generate annual revenues of $60,000 and the company will incur annual cash Expenses of $24,000 in operating the equipment. Jared has a tax rate of 40%.

Required:
(1) What is the expected annual after-tax cash flow from this equipment?
(2) What is the internal rate of return (rounded to the nearest tenth of a percent) on the equipment?
(3) What is the net present value of the equipment if the required rate of return is 10%?
(4) Would you recommend the investment?

Problem 2

Using an excel spreadsheet, complete the following problem. Charmed Enterprises, a chocolate distribution company, prepares its master budget on a monthly and quarterly basis. For the months of January, February and March, you are to compute the:
(a) Schedule of expected cash collections
(b) Inventory purchase budget and Cash Disbursements
(c) Cash budget
(1) Actual Sales in December were $60,000
(2) Budgeted Sales for January, February, March and April are

<table>
<thead>
<tr>
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<th>Budgeted Sales</th>
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<tbody>
<tr>
<td>January</td>
<td>$ 70,000</td>
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<tr>
<td>February</td>
<td>$ 85,000</td>
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<tr>
<td>March</td>
<td>$ 90,000</td>
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<tr>
<td>April</td>
<td>$ 50,000</td>
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(3) Sales are collected at a rate of 30% for cash, and 70% on credit. All payments on credit sales are collected in the month following the sale. $42,000 is the balance in accounts receivable at December 31, 2005. The beginning cash balance is $10,000 with no loans outstanding.
(4) Beginning inventory at January 1, 2006 is $12,600
(5) The companies gross profit rate is 40%  
(6) Monthly expenses are budgeted as follows:  

(a) Shipping is 5% of sales  
(b) Depreciation $2,000 per month  
(c) Other expenses 6% of sales  
(d) Salaries and Wages are fixed at $9,000 per month  
(e) Advertising is $4,500  

(7) In January, the company expects to purchase equipment of $11,000 and in February they expect to purchase equipment of $3,000 and $4,000 in March.  
(8) At the end of each month, inventory on hand should equal 30% of the following month’s sales needs, stated at cost.  
(9) December cash purchases for inventory were $36,600. We pay for inventory ½ in the current month and ½ in the month following (therefore we will pay $18,300 in January for December purchases).  
(10) The company is required by its loan covenants to maintain a cash balance of $10,000. Further, it has an open line of credit with the bank. To reduce banking transaction cost, borrowing must be done at the beginning of a month and all repayments must be made at the end of a month. Finally, loans and repayments of principal must be in multiples of $1,000. Interest is paid only at the time of repayment of principal. The annual interest rate is 6%.