**Finance 486 Final Exam**

1. **EFN Calculation – 25 points**

The most recent Financial Information for Golf Pro Inc. are shown here:

Income Statement Balance Sheet

Sales $3,400 Current Assets $4,400 Current Liabilities $880

Costs 2,800 Fixed Assets 5,700 Long Term Debt 3,580

Taxable Income 600 Equity 5,640

Taxes @ 34% 204 Total 10,100 Total $10,100

Net Income $ 396

Assets, costs and current Liabilities are proportional to sales. Long –term Debt and equity are not. The company maintains a constant 50% dividend payout ratio. As with every other firm in its industry, the next year’s sales are projected to increase by exactly 15%. What is the external financing needed? Show your work on how you came up with the EFN needed.

1. **Financial Statement Analysis – 25 points**

The Financial Statements for Johnson Inc. for the year ended December 31, 2009, follow.

Johnson Inc Johnson Inc

Income Statement Balance Sheet

For the year ended December 31, 2009 For year ended December 31, 2009

Sales Revenue $160,000 **Assets**

Less: Cost of goods sold 106,000 Cash $ 500

Gross profits $ 54,000 Marketable Securities 1,000

Less: Operating Expenses Accounts Receivable 25,000

Selling Expenses $ 16,000 Inventories 45,500

General and Admin 10,000 Total Current Assets $ 72,000

Lease Expense 1,000 Land $ 26,000

Depreciation 10,000 Buildings & Equip 90,000

Total Operating Expense $ 37,000 Less : Accumulated Depreciation 38,000

Operating Profits $ 17,000 Net Fixed Assets $ 78,000

Less: Interest Expense 6,100 Total Assets $ 150,000

Net Profits before Taxes $ 10,900

Less: Taxes 4,360 **Liabilities and Stockholders’ Equity**

Net profit after taxes $ 6,540 Accounts Payable $ 22,000

Notes Payable 47,000

Total Current Liabilities $ 69,000

Long Term Debt $ 22,950

Common Stock $ 31,500

Retained Earnings $ 26,550

Total Liabilities and Equity $ 150,000

Use the preceding financial information to complete the following table. Assume the industry averages given in the table are applicable for both 2008 and 2009.

Ratio Industry Avg Actual 2008 Actual 2009

Current Ratio 1.80 1.84

Quick Ratio .70 .78

Inventory turnover 2.50 2.59

Average collection period 37.5 days 36.5 days

Debt Ratio 65% 67%

Gross Profit margin 38% 40%

Net profit margin 3.5% 3.6%

Return on total assets 4.0% 4.0%

1. Calculate the above ratios for 2009 and comment on how they relate to the actual ratios for 2008 and the industry average.
2. **NPV – 15 points**

Calculate the net present value (NPV) for the following 20 year projects. Comment on the acceptability of each. Assume that the firm has an opportunity cost of 14%.

1. Initial investment is $10,000; cash inflows are $2,000 per year
2. Initial investment is $25,000; cash inflows are $3,000 per year
3. Initial investment is $30,000 ; cash inflows are $5,000 per year
4. **Pro forma Income Statement Preparation – 15 points**

The sales department of PreFab Inc. estimates that its sales in 2010 will be $1.5 million. Interest expense is expected to remain unchanged at $35,000, and the firm plans to pay $70,000 in cash dividends during 2010. PreFab’s income statement for the year ended December 31, 2009, is given below, along with a breakdown of the firm’s cost of goods sold and operating expenses.

PreFab Inc

Income Statement

For the year ended December 31, 2009

Sales Revenue $1,400,000

Less: Cost of goods sold 910.000

Gross Profits 490,000

Less Operating Expenses 120,000

Operating Profits $ 370,000

Less: Interest Expense 35,000

Net Profits before taxes $ 335,000

Less: Taxes @ 40% 134,000

Net profits after taxes $ 201,000

Less: Cash Dividends 66,000

To Retained Earnings $ 135,000

1. Use the percent-of-sales method to prepare a pro forma income statement for the year ended December 31, 2010
2. **Cash conversion cycle – 10 points**

American Products is concerned about managing cash efficiently. On the average, the inventories have an age of 90 days, and accounts receivable are collected in 60 days. Accounts payable are paid approximately 30 days after they arise. The firm has annual sales of about $30 million. Assume there is no difference in the investment per dollar of sales in inventory, receivables, and payables; and a 365- day year.

1. Calculate the firm’s operating cycle.
2. Calculate the firm’s cash conversion cycle.
3. Calculate the amount of resources needed to support the firm’s cash conversion cycle.
4. **Sunk and opportunity Cash flows – 10 points**

Don and Betsy Draper have been living at their present home for the past 6 years. During that time, they have replaced the water heater for $375, replaced the dishwasher for $599, and have had to make miscellaneous repair and maintenance expenditures of approximately $1,500. They have decided to move out and rent the house for $975 per month. Newspaper advertising will cost $75. Don and Betsy intend to paint the interior of the home and power-wash the exterior. They estimate that will run about $900.

The house should be ready to rent after that. In reviewing the financial situation, Don views all of the expenditures as being relevant, and so he plans to net out the estimated expenditures discussed above from the rental income.

1. Do Don and Betsy understand the difference between sunk costs and opportunity costs? Explain the two concepts to them.
2. Which of the expenditures should be classified as sunk costs and which should be viewed as opportunity cash flows?