A. MULTIPLE CHOICE QUESTIONS (30%)

1. **For the year just ended, Beechwood Corporation had income from operations of $198,000 and net income of $96,000. Additional financial information is given next.**

	January 1	December 31
7% bonds payable	$95,000	$77,000
Common Stock ($10 par value)	300,000	300,000
Reserve for bond retirement	12,000	28,000
Retained earnings	155,000	206,000

Beechwood has no other equity issues outstanding. Beechwood's return on shareholders' equity for the year just ended is:

a. 19.2%.
b. 19.9%.
c. 32.0%.
d. 39.5%.

2. **The Hatch Sausage Company is projecting an annual dividend growth rate for the foreseeable future of 9%. The most recent dividend paid was $3.00 per share. New common stock can be issued at $36 per share. Using the constant growth model, what is the approximate cost of capital for retained earnings?**

a. 9.08%
b. 17.33%
c. 18.08%
d. 19.88%

3. **Shown next are selected data from Fortune Company's most recent financial statements.**

marketable securities	$10,000
Accounts receivable	60,000
Inventory	25,000
Supplies	5,000
Accounts payable	40,000
Short-term debt payable	10,000
Accruals	5,000

What is Fortune's net working capital?

a. $35,000
b. $45,000
c. $50,000
d. $80,000

4. **Which of the following statements about supply and demand is (are) true?**
   I. There is a direct relationship between shifts in the demand curve and the equilibrium price and equilibrium quantity.
   II. An increase in supply with an increase in demand will result in an increase in equilibrium price and quantity.
   III. A perfectly elastic demand would be shown in a graph as a vertical line, while a perfectly inelastic demand is shown as a horizontal line.
   IV. A price elasticity of demand value greater than 1 is considered elastic or relatively elastic.
   a. I
   b. I and II
   c. I and IV
   d. I, II, III, and IV

5. **Which of the following statements about supply and demand are true?**
   I. When demand increases, the price of complementary products will increase.
   II. The substitution effect states that when the price of a product decreases, consumers will buy a substitute product.
   III. The law of diminishing marginal utility states that consumers will buy more of a product only if the price decreases.
   IV. An increase in the quantity supplied without a change in demand will result in a decrease in price.
   a. I and II
   b. I, II, and III
   c. I, III, and IV
   d. I, II, III, and IV

6. **Given fixed costs of $8,000, variable costs of $100, and a unit contribution margin of $200, how many units must be sold to reach a target operating income of $34,000?**
   a. 130
   b. 140
   c. 210
   d. 260

7. **The enterprise risk management model looks at:**
   a. financial risk.
   b. operating risk.
   c. compliance risk.
   d. all of the above.

8. **Mayson Company reported net income of $350,000 for last year. The company had 100,000 shares of $10 par value common stock outstanding and 5,000 shares of common stock in treasury during the year. Mayson declared and paid $1 per share dividends on common stock. The market price per common share at the end of last year was $30. The company's dividend yield for the year was:**
   a. 30.03%.
   b. 28.57%.
   c. 11.11%.
   d. 3.33%.

9. **All of the following are characteristics of preferred stock EXCEPT that**
   a. it may be callable at the option of the corporation.
   b. it may be converted into common stock.
   c. its dividends are tax deductible to the issuer.
   d. it usually has no voting rights.

10. **If the U.S. dollar appreciated against the British pound, other things being equal, we would expect that**
   a. the British demand for U.S. products would increase.
   b. U.S. demand for British products would decrease.
   c. U.S. demand for British products would increase.
   d. trade between the U.S. and Britain would decrease.

11. **Thomas Company's capital structure consists of 30% long-term debt, 25% preferred stock, and 45% common equity. The cost of capital for each component is shown below.**

Long-term debt	8%
Preferred stock	11%
Common equity	15%

If Thomas pays taxes at the rate of 40%, what is the company's after-tax weighted average cost of capital?
   a. 7.14%.
   b. 9.84%.
   c. 10.94%.
   d. 11.90%.

12. **Which one of the following is NOT explicitly considered in the standard calculation of Economic Order Quantity (EOQ)?**
   a. Level of sales.
   b. Fixed ordering costs.

c. Carrying costs.
d. Quantity discounts.

13. A company is planning to purchase a furnace that would cost $20,000 and save the company $4,000 pre-tax annually. It has an estimated useful life of seven years with no salvage value. The company would depreciate the furnace using the straight-line method. The company has an effective income tax rate of 30%. Assuming no change in working capital, the payback period for the furnace is

a. 4.12 years.
b. 5.00 years.
c. 5.47 years.
d. 7.14 years.

14. A company has $100,000 of sales, $60,000 of variable costs, and $30,000 of fixed costs. The degree of operating leverage is

a. 0.1.
b. 0.3.
c. 0.4.
d. 4.0.

15. A review of the inventories of Cedar Grove Company shows the following cost data for entertainment centers.

Invoice price	$400 per unit
Freight and insurance on shipment	20 per unit
Insurance on inventory	15 per unit
Unloading	140 per order
Cost of placing orders	10 per order
Cost of capital	25%

What are the total carrying costs of inventory for an entertainment center?

a. $105.
b. $115.
c. $120.
d. $420.

16. Using the CAPM formula, calculate the required rate of return on a stock, assuming:
Rf = 7% (the risk-free rate on a US Treasury security)
β = 0.75 (the beta coefficient for the company)
Km = 13% (the estimated return on the market portfolio)

a. 13%
b. 11.5%
c. 9.5%
d. 9%

17. A firm is constructing a risk analysis to quantify the exposure of its data center to various types of threats. Which one of the following situations would represent the highest annual loss exposure after adjustment for insurance proceeds?

a. Frequency of occurrence: 100 years, Loss Amount: $400,000, Insurance coverage: 50%.
b. Frequency of occurrence: 8 years, Loss Amount: $75,000, Insurance coverage: 80%.
c. Frequency of occurrence: 20 years, Loss Amount: $200,000, Insurance coverage: 80%.
d. Frequency of occurrence: 1 year, Loss Amount: $15,000, Insurance coverage: 85%.

18. Brady Corporation has 6,000 shares of 5%, cumulative, $100 par value preferred stock outstanding and 200,000 shares of common stock outstanding. Brady's Board of Directors last declared dividends for the year ended May 31, Year 1, and there were no dividends in arrears. For the year ended May 31, Year 3, Brady had net income of $1,750,000. The Board of Directors is declaring a dividend for common shareholders equivalent to 20% of net income. The total amount of dividends to be paid by Brady at May 31, Year 3, is:

a. $60,000.
b. $410,000
c. $380,000
d. $350,000

19. Ace Manufacturing plans to produce two products, Product C and Product F, during the next year, with the following characteristics.

	Product C	**Product F**
Selling price per unit	**10$**	**15$**
Variable cost per unit	**8$**	**10$**
Expected sales (units)	**20,000**	**5,000**

Total projected fixed costs for the company are $30,000. Assume that the product mix would be the same at the breakeven point as at the expected level of sales of both products. What is the projected number of units (rounded) of Product C to be sold at the breakeven point?

a. 2,308 units.
b. 9,231 units.
c. 15,000 units.
d. 11,538 units.

20. In evaluating capital projects, the decisions reached from using the net present value (NPV) method and the internal rate of return (IRR) method may disagree if:

a. The projects are independent.
b. The cash flows pattern is unconventional.
c. the projects are mutually exclusive.
d. the projects are mutually exclusive or the cash flows are unconventional.

B. Exercises (Show your calculations)

Exercise # 1 (20%)

Ro Company, a manufacturer of quality handmade pipes, has experienced a steady growth in its sales for the past five years. Increased competition, however, has led the president, Mr. Ro, to believe that an aggressive advertising campaign will be necessary next year to maintain the company's present growth. To prepare for next year's advertising campaign, the company's accountant presents the following data for the current year, 19A:

Variable costs (per pipe):		
Direct labor	$	8.00
Direct materials		3.25
Variable overhead		2.50
Total variable costs	**$**	**13.75**
Fixed costs:		
Manufacturing	$	25,000
Selling		40,000
Administrative		70,000
Total fixed costs	$	135,000
Sales price per pipe	$	25
Expected sales, 19A (20,000 pipes)	$	500,000
Income tax rate		40%

Mr. Ro has set the 19B sales target at a level of $550,000, or 22,000 pipes. Determine the following:

(a) The projected after-tax net income for 19A;

(b) the break-even sales in units for 19A;

(c) the after-tax net income for 19B if an additional fixed selling expense of $11,250 is spent for advertising in 19B in order to attain the 19B sales target;

(d) the break-even sales in dollars for 19B if the additional $11,250 is spent for advertising;

(e) the sales in dollars required to equal19A's after-tax net income, if the additional $11,250 is spent for advertising in 19B; and

(f) the maximum amount that can be spent on advertising at a sales level of 22,000 pipes, if an after-tax net income of $60,000 is desired.

Exercise # 2 (15%)

The JS Company is considering buying a machine at a cost of $800,000, which has the following cash flow pattern. No residual value is expected. Depreciation is by straight-line.
Assume that the income tax rate is 40%, and the after-tax cost of capital (minimum required rate of return) is 10%. Should the company buy the machine? Use the NPV method.

Year	Cash Inflow,	Cash Outflow,
1	$800,000	$550,000
2	$790,000	$590,000
3	$920,000	$600,000
4	$870,000	$610,000
5	$650,000	$390,000

Exercise # 3 (10%)

On January 1, 19D, the River Company's beginning inventory was $400,000. During 19D, River purchased $1,900,000 of additional inventory. On December 31, 19D, River's ending inventory was $500,000.

1. What is the inventory turnover and the age of inventory for 19D?
2. If the inventory turnover in 19C was 3.3and the age of the inventory was 110.6 days, evaluate the results for 19D.

Exercise # 4 (18%)

Sonic Corporation is the leading retailer and roaster of specialty coffee in Lebanon, selling freshly brewed coffee, pastries, and coffee beans. Data from the company's financial statements are as follows:

Sonic Corporation Comparative Balance Sheet (dollars in millions)	This Year	Last Year
Assets		
Current assets:		
Cash	$ 281	$ 313
Marketable securities	$ 157	$ 141
Accounts receivable	$ 288	$ 224
Inventories	$ 692	$ 636
Other current assets	$ 278	$ 216
Total current assets	$1,696	$1,530
Property and equipment, net	$2,890	$2,288

Other assets	$ 758	$ 611
Total assets	$5,344	$4,429

Liabilities and Stockholders' Equity (dollars in millions)	**This Year**	**Last Year**
Current liabilities:		
Accounts payable	$ 391	$ 341
Short-term bank loans	$ 710	$ 700
Accrued payables	$ 757	$ 662
Other current liabilities	$ 298	$ 233
Total current liabilities	$2,156	$1,936
Long term liabilities	$ 904	$ 265
Total liabilities	$3,060	$2,201
Stockholders' equity:		
Preferred stock	$ 0	$ 0
Common stock and additional paid-in capital	$ 40	$ 40
Retained earning	$2,244	$2,188
Total stockholder equity	$2,284	$2,228
Total liabilities and stockholders' equity	$5,344	$4,429

Sonic Corporation Income Statement (dollars in millions)	**This Year**
Sales	$9,411
Cost of goods sold	$3,999
Gross margin	$5,412
Selling and administrative expenses:	
Store operating expenses	$3,216
Other operating expenses	$ 294
Depreciation and amortization	$ 467
General and administrative expenses	$ 489
Total selling and administrative expenses	$4,466
Net operating income	$ 946
Plus interest and other income	$ 110
Interest expenses	$ 0
Net income before taxes	$1,056
Income taxes (about 36%)	$ 384
Net income	$ 672

Required:

1. Compute the return on total assets.
2. Compute the return on common stockholders' equity.
3. Compute the current ratio.
4. Compute the acid-test ratio.
5. Compute the average sale period.
6. Compute the debt-to-equity ratio.

Exercise # 5 (7%)

An accountant for Stability Inc. must calculate the weighted average cost of capital (WACC) of the corporation using the following information.

	Amount	Interest rate
Accounts payable	$35,000,000	0
Long-term debt	$10,000,000	8% after tax
Common stock	$10,000,000	18%
Retained earnings	$5,000,000	15%

What is the WACC of Stability?

Good Work!!