## MULTIPLE CHOICE QUESTIONS (40%)

1. **A company had $5 million in sales, $3 million in cost of goods sold, and $1 million in selling and administrative expenses during the last fiscal year. If the company's income tax rate was 25%, what was the company's gross profit margin percentage?**
   a. 20%.
   b. 30%.
   c. 40%.
   d. 50%.

2. **A tennis equipment company produces two lines of tennis shoes, Professional and Amateur. Income statement data for the tennis shoes is shown below.**

| | Professional | Amateur | Total |
|---|---|---|---|
| Sales | $550,000 | $750,000 | $1,300,000 |
| Variable costs | 275,000 | 400,000 | 675,000 |
| Direct fixed costs | 100,000 | 300,000 | 400,000 |
| Allocated fixed costs | 37,500 | 112,500 | 150,000 |
| Operating income | $137,500 | $ (62,500) | $ 75,000 |

   Since the Amateur line shows a loss, the company is considering eliminating this line of tennis shoes. Based on the data provided, should the company drop the Amateur tennis shoe line?
   a. No, operating income will decrease by $50,000.
   b. No, operating income will decrease by $350,000.
   c. Yes, operating income will increase by $25,000.
   d. Yes, operating income will increase by $62,500.

3. **The common stock of a company has a market price of $36. The company has 50,000,000 common shares outstanding and net income of $200,000,000. At the end of the fiscal year, the company declared common dividends of $1 per share. What is the price/earnings ratio of the stock?**
   a. 4.
   b. 9.
   c. 12.
   d. 36.

4. **A company has the following account balances.**

| | |
|---|---|
| Cash | $160,000 |
| Equipment | 50,000 |
| Inventory | 35,000 |
| Accounts receivable | 25,000 |
| Accrued wages | 10,000 |
| Long-term debt | 30,000 |
| Accounts payable | 5,000 |

**What is the company's net working capital?**

a. $180,000.
b. $205,000.
c. $220,000.
d. $225,000.

5. **A company installed a piece of equipment with a 5-year life and no salvage value. The new equipment costs $500,000 and will generate $150,000 in savings each year. Old equipment with a book value of $50,000 and a remaining life of 2 years was sold for $20,000. No changes in working capital are anticipated. The effective income tax rate is 40%. The total initial investment for the new equipment is**
   a. $450,000.
   b. $468,000.
   c. $500,000.
   d. $550,000.

6. **In the last fiscal year, LMO Company had net sales of $7,000,000, a gross profit margin of 40%, and a net profit margin of 10%. What is its cost of goods sold?**
   a. $4,200,000
   b. $6,300,000
   c. $2,800,000
   d. $700,000

7. **Cox Company has sold 1,000 shares of $100 par, 8% preferred stock at an issue price of $92 per share. Stock issue costs were $5 per share. Cox pays taxes at the rate of 40%. What is Cox's cost of preferred stock capital?**
   a. 8.00%
   b. 8.25%
   c. 8.70%
   d. 9.20%

**Read the following and answer questions 8 and 9:**
**Delicious Bite Company is a fast food restaurant chain. You are given the following revenue and cost information.**

| | |
|---|---|
| **Building and equipment** | **490,000$** |
| **Annual revenue** | **520,000$** |
| **Annual cash operating costs** | **380,000$** |

**The building and equipment have a useful life of 20 years. The straight-line method for depreciation is used. The income tax is 40 percent.**

**8. The payback period is:**
a. 3.5 Years
b. 4.24 Years
c. 5.22 Years
d. 7.07 Years

**9. The accounting rate of return is:**
a. 14.14%
b. 19.14%
c. 23.57%
d. 28.57%

**10. Due to mismanagement of its domestic economic policies, country A is experiencing a drastic increase in inflation in relation to its neighbor country B, which happens to be its major trading partner. How will the increased inflation in country A affect the exchange rate between the two countries?**
a. Country A's currency will not change against country B's currency.
b. Country A's currency will depreciate against country B's currency.
c. There is insufficient information to determine the impact on the exchange rate.
d. Country A's currency will appreciate against country B's currency.

**11. Which of the following is the correct definition of risk transfer?**
a. Intentionally taking on more risk as a way to earn higher returns
b. Offloading some portion of risk to another party
c. Ending or eliminating an activity that causes risk
d. Taking steps to reduce the risk of an activity

**12. If Rayco's sales increase by 10%, Rayco's Earnings Before Interest and Tax ( EBIT) increases by 15%. If Rayco's EBIT increases by 10%, Rayco's Earnings per Share (EPS) increases by 12%. Rayco's degree of operating leverage (DOL) and degree of financial leverage (DFL), respectively, are closest to:**
a. 0.67 and 1.20
b. 0.67 and 0.83.
c. 1.50 and 1.20
d. 1.50 and 0.83

**13. Tax authorities and auditors monitor transfer-pricing practices to ensure that the transactions are recorded:**
a. according to generally accepted accounting principles
b. at arm's length
c. at company cost
d. according to IFRS.

**14. Suppose a company has three foreign subsidiaries: Subsidiary A is located in a country with a 40% corporate tax rate, Subsidiary B is located in a country with a 30% corporate tax rate, and Subsidiary C is located in a country with a 35% corporate tax rate. If allowed by relevant laws, how would the company improve its combined after-tax earnings using transfer pricing?**

a. Reduce the price that Subsidiary A charges to Subsidiary B.
b. Changes in transfer pricing policy have no impact on combined after-tax earnings.
c. Increase the price that Subsidiary A charges to Subsidiary B.
d. Reduce the price that Subsidiary B charges to Subsidiary C.

**15. Current business segment operations for Whitman, a mass retailer, are presented below:**

| | Merchandise | Automotive | Restaurant | Total |
|---|---|---|---|---|
| Sales | $500,000 | $400,000 | $100,000 | $1,000,000 |
| Variable costs | 300,000 | 200,000 | 70,000 | 570,000 |
| Fixed costs | 100,000 | 100,000 | 50,000 | 250,000 |
| Operating Income (loss) | 100,000 | 100,000 | (20,000) | 180.000 |

Management is contemplating the discontinuance of the Restaurant segment since "it is losing money." If this segment is discontinued, $30,000 of its fixed costs will be eliminated. In addition, Merchandise and Automotive sales will decrease 5% from their current levels. What will Whitman's total contribution margin be if the Restaurant segment is discontinued?

a. $220,000
b. $367,650.
c. $160,000
d. $380,000.

**16. Which of the following correctly defines the relationship between profit margin and asset turnover?**

a. ROA using the DuPont model is calculated by subtracting asset turnover from profit margin.
b. ROA using the DuPont model is calculated by multiplying profit margin times asset turnover.
c. There is no relationship between profit margin and asset turnover.
d. ROA using the DuPont model is calculated by dividing profit margin by asset turnover

**17. Focus Industries invested in a new machine that cost $80,000. The machine is being depreciated over 5 years using straight-line depreciation with no salvage value. The machine is expected to produce incremental cash revenues of $100,000 per year and incremental cash expenses of $30,000 per year. The tax rate is 25%. Calculate Focus Industries' incremental operating cash flows.**

a. $70,000 per year
b. $52,500 per year
c. $40,500 per year
d. $56,500 per year

**18. Using the capital asset pricing model (CAPM), if a Treasury bond rate is 6%, the beta of the firm's stock is 0.8, and the expected rate of return for the market is 9%, then the cost of equity capital is:**

a. 9%.
b. 8.4%.
c. 7.2%.
d. 13.2%.

**19. Two sporting goods stores have similar annual net sales. If one store sells mostly high-quality goods and the other store sells mostly moderate-quality goods, which store likely has the higher gross profit rate? Why?**

a. The store that sells high-quality goods likely has the higher gross profit rate because markup tends to be higher for higher quality goods.
b. The store that sells high-quality goods likely has the higher gross profit rate because stores with higher quality goods usually have a higher inventory turnover rate.
c. The store that sells moderate-quality goods likely has the higher gross profit rate because markup tends to be higher for lower quality goods.
d. The store that sells moderate-quality goods likely has the higher gross profit rate because stores with moderate-quality goods usually have a higher inventory turnover rate.

**20. 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% before-tax |
| 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 (WACC)?

a. 7.14%
b. 9.84%
c. 10.94%
d. 11.90%

## A. Exercises

**Exercise 1 ( 10%)**

Cervine Corporation makes two types of motors for use in various products. Operating data and unit cost information for its products are presented below.

| | Product A | Product B |
|---|---|---|
| Annual unit capacity | 10,000 | 20,000 |
| Annual unit demand | 10,000 | 10,000 |
| Selling price | $100 | $80 |
| Variable manufacturing cost | 53 | 45 |
| Fixed manufacturing cost | 10 | 10 |
| Variable selling and administrative | 10 | 11 |
| Fixed selling and administrative | 5 | 4 |
| Fixed other administrative | 2 | 0 |
| Unit operating profit | $20 | $10 |
| Machine hours per unit | 2.0 | 1.5 |

Cervine has 40,000 productive machine hours available. Calculate the relevant contribution margins, per machine hour for each product (A and B), to be utilized in making a decision on product priorities for the coming year.

**Exercise2 (10%)**

AGC Company is considering an equipment upgrade. AGC uses discounted cash flow (DCF) analysis in evaluating capital investments and has an effective tax rate of 40%. Selected data developed by AGC is:

| | Existing equipment | New equipment |
|---|---|---|
| **Original cost** | $50,000 | $95,000 |
| **Accumulated Depreciation** | 45,000 | --- |
| **Current market value** | 3,000 | 95,000 |
| **Accounts receivable** | 6,000 | 8,000 |
| **Accounts payables** | 2,100 | 2,500 |

Based on this information, what is the initial investment for a DCF analysis of this proposed upgrade?

**Exercise 3 (10%)**

Long Inc. is analyzing a $1 million investment in new equipment to produce a product with a $5 per unit margin. The equipment will last 5 years, be depreciated on a straight-line basis for tax purposes, and have no value at the end of its life. A study of unit sales produced these data:

| Annual Unit Sales | Probability |
|---|---|
| 80,000 | 0.10 |
| 85,000 | 0.20 |
| 90,000 | 0.30 |
| 95,000 | 0.20 |
| 100,000 | 0.10 |
| 110,000 | 0.10 |

If Long utilizes a 12% hurdle rate (minimum rate of return) and is subject to a 40% effective income tax rate, calculate the expected net present value of the project.

**Exercise 4 (10%)**

Phillips & Company produces educational software. Its unit cost structure, based on an anticipated production volume of 150,000 units, is:

| | |
|---|---|
| Sales price | $160 |
| Variable costs | $60 |
| Fixed costs | $55 |

The marketing department has estimated sales for the coming year at 175,000 units, which is within the relevant range of Phillips' cost structure. Calculate Phillips' breakeven volume (in units) and anticipated operating income for the coming year.

**Exercise 5 (20%)**

Light 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:

| Light 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 |

| **Light 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 inventory turnover.
6. Compute the average sale period.
7. Compute the debt-to-equity ratio.

***Good Work!!***