**Corporate Finance**

**Tutorial**

**Homework 4:**

**Debt and Taxes**

**Payout Policy**

 Following are 20 questions, each worth five points. For the Multiple Choice questions, select the answer you think is most correct.

**Debt and Taxes: Chapter 15**

1) Which of the following statements is FALSE?

A) In general, the gain to investors from the tax deductibility of interest payments is referred to as the interest tax shield.

B) The interest tax shield is the additional amount that a firm would have paid in taxes if it did not have leverage.

C) Because Corporations pay taxes on their profits after interest payments are deducted, interest expenses reduce the amount of corporate tax firms must pay.

D) As Modigliani and Miller made clear in their original work, capital structure matters in perfect capital markets. Thus, if capital structure does not matter, then it must stem from a market imperfection.

***Use the table for the question(s) below.***

Consider the following income statement for Kroger Inc. (all figures in $ Millions):

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **2006** | **2005** | **2004** |
| Total Sales | 60,553 | 56,434 | 53,791 |
| Cost of goods sold | 45,565 | 42,140 | 39,637 |
| Selling, general & admin expenses | 11,688 | 12,191 | 11,575 |
| Depreciation | 1265 | 1256 | 1209 |
| Operating Income | 2035 | 847 | 1370 |
| Other Income | 0 | 0 | 0 |
| EBIT | 2035 | 847 | 1370 |
| Interest expense | 510 | 557 | 604 |
| Earnings before tax | 1525 | 290 | 766 |
| Taxes (35%) | 534 | 102 | 268 |
| Net Income | 991 | 189 | 498 |

2) The interest rate tax shield for Kroger in 2006 is closest to:

A) $187 million

B) $332 million

C) $534 million

D) $179 million

3) The total amount available to payout to all the investors in Kroger in 2006 is closest to:

A) $990 million

B) $1525 million

C) $1500 million

D) $2035 million

***Use the information for the question(s) below.***

Rosewood Industries has EBIT of $450 million, interest expense of $175 million, and a corporate tax rate of 35%.

4) Rosewood's net income is closest to:

A) $450 million

B) $180 million

C) $290 million

D) $95 million

5) The total of Rosewood's net income and interest payments is closest to:

A) $270 million

B) $355 million

C) $290 million

D) $450 million

6) If Rosewood had no interest expense, its net income would be closest to:

A) $405 million

B) $160 million

C) $450 million

D) $290 million

***Use the information for the question(s) below.***

Fly by Night Aviation (FBNA) expects to have net income next year of $24 million and interest expense of $3 million. FBNA's marginal corporate tax rate is 40%.

7) FBNA's EBIT is closest to:

A) $43 million

B) $40 Million

C) $45 million

D) $60 million

8) IF FBNA increases leverage so that its interest expense rises by $1 million, then the amount its net income will change is closest to:

A) -$400,000

B) -$600,000

C) $400,000

D) $600,000

9) IF FBNA increases leverage so that its interest expense rises by $1 million, then the amount its unlevered EBIT will change is closest to:

A) $0

B) -$400,000

C) $600,000

D) $400,000

10) Assume that investors hold Google stock in retirement accounts that are free from personal taxes. Also assume that Google's current pre-tax WACC is 14%. If Google were to issue sufficient debt at a pre-tax cost of 7% to give them a debt to value ratio of 0.5, then the Google's after-tax WACC would be closest to:

A) 10.4%

B) 12.8%

C) 13.0%

D) 15.0%

E) 16.0%

**Payout Policy: Chapter 17**

***Use the following information to answer the question(s) below.***

Wyatt Oil has assets with a market value of $600 million, $70 million of which are cash. It has debt of $250 million, and 20 million shares outstanding. Assume perfect capital markets.

10) Wyatt Oil's current stock price is closest to:

A) $11.00

B) $12.50

C) $14.00

D) $17.50

11) If Wyatt Oil distributes the $70 million as a dividend, then its stock price after the dividend will be closest to:

A) $12.50

B) $14.00

C) $17.50

D) $26.50

12) If Wyatt Oil distributes the $70 million as a share repurchase, then its stock price after the share repurchase will be closest to:

A) $11.00

B) $12.50

C) $14.00

D) $17.50

13) If Wyatt Oil distributes the $70 million as a share repurchase, then the number of shares outstanding after the repurchase will be closest to:

A) 16.0 million

B) 16.5 million

C) 17.5 million

D) 18.0 million

***Use the information for the question(s) below.***

Omicron Technologies has $50 million in excess cash and no debt. The firm expects to generate additional free cash flows of $40 million per year in subsequent years and will pay out these future free cash flows as regular dividends. Omicrons unlevered cost of capital is 10% and there are 10 million shares outstanding. Omicron's board is meeting to decide whether to pay out its $50 million in excess cash as a special dividend or to use it to repurchase shares of the firm's stock.

14) Omicron's enterprise value is closest to:

A) $500 million

B) $900 million

C) $450 million

D) $400 million

15) Including its cash, Omicron's total market value is closest to:

A) $500 million

B) $900 million

C) $400 million

D) $450 million

16) Assume that you own 2500 shares of Omicron stock and that Omicron uses the entire $50 million to repurchase shares. Suppose you are unhappy with Omicron's decision and would prefer that Omicron used the excess cash to pay a special dividend. The number of shares that you would have to sell in order to receive the same amount of cash as if Omicron paid the special dividend is closest to:

A) 275

B) 310

C) 125

D) 250

***Use the following information to answer the question(s) below.***

|  |  |  |
| --- | --- | --- |
| **Year(s)** | **Capital Gains** | **Dividends** |
| 1987 | 28% | 39% |
| 1988 - 1990 | 28% | 28% |
| 1991 - 1992 | 28% | 31% |
| 1993 - 1996 | 28% | 40% |
| 1997 - 2000 | 20% | 40% |
| 2001 - 2002 | 20% | 39% |
| 2003 - 2009 | 15% | 15% |

17) In which years were dividends tax disadvantaged?

A) 1987 - 2002

B) 1987, 1993 - 2002

C) 1987, 1991 - 2002

D) 1988 - 1990, 2003 - 2009

18) Assume that management makes a surprise announcement that JRN will no longer pay dividends but will use the cash to repurchase stock instead. The price of a share of JRN's stock is now closest to:

A) $20.00

B) $25.00

C) $18.00

D) $24.00

19) Wyatt Oil pays a regular dividend of $2.50 per share. Typically the stock price drops by $2.00 per share when the stock goes ex-dividend. Suppose the capital gains tax rate is 20%, but investors pay different tax rates on dividends. Absent transactions cost, the highest dividend tax rate of an investor who could gain from trading to capture the dividend is closest to:

A) 0%

B) 20%

C) 24%

D) 36%

20 a) Consider the following equation:

*Pcum - Pex = Div* × **

The term *Pcum* is:

A) the personal tax rate for capital gains.

B) the price per share after a dividend is paid.

C) the price per share before a dividend is paid.

D) the personal tax rate for dividend.