Sample Review Questions for Final Exam

**Chapter 1**

11) Which of the following best describes why the Valuation Principle is a key concept in making financial decisions?

A) It shows how to assign monetary value to intangibles such as good health and well-being.

B) It allows fixed assets and liquid assets to be valued correctly.

C) It gives a good indication of the net worth of a person, item, or company and can be used to estimate any changes in that net worth.

D) It shows how to make the costs and benefits of a decision comparable so that we can weigh them properly.

Answer: D

2) Which of the following types of firms does NOT have limited liability?

A) sole proprietorships

B) limited partnerships

C) corporations

D) none of the above

Answer: A

3) Why is it possible for a corporation to enter into contracts, acquire assets, incur obligations, and enjoy protection against the seizure of its property?

A) The number of owners, and hence the spread of risk among these owners, is not limited.

B) Its owners are liable for any obligations it enters into.

C) The state in which a corporation is incorporated provides safeguards against any wrongdoing by the corporation.

D) It is a legally defined, artificial entity that is separate from its owners.

Answer: D

4) What is the major advantage corporations have over other business entities?

A) It is easier for a corporation to raise capital than other forms of businesses.

B) A corporation is treated as a separate legal entity for tax and legal purposes.

C) A corporation's shares can be freely traded among its shareholders.

D) All of the above are advantages that a corporation has over other business forms.

Answer: D

5) You are a shareholder in a corporation which has elected subchapter S tax treatment. The corporation announces a profit of $6 per share, of which it retains $1 for reinvestment and distributes the rest as dividend payments. Given that the personal tax rate is 35%, how much tax must you pay per share?

A) $0

B) $2.10

C) $1.75

D) $2.52

Answer: C

Explanation: C) Tax paid by shareholder of S corporation = 5 × 0.35 = $1.75

6) A C corporation earns $8.30 per share before taxes. The corporate tax rate is 39%, the personal tax rate on dividends is 15%, and the personal tax rate on non-dividend income is 36%. What is the total amount of taxes paid if the company pays a $6.00 dividend?

A) $3.31

B) $4.96

C) $4.14

D) $5.79

Answer: C

Explanation: C) Corporate tax = $8.30 × 39% = $3.24,  

7) What is the process of double taxation for the stockholders in a C corporation?

A) Their shares are taxed when they are both bought and sold.

B) The corporation is taxed on the profits it makes, and the owners are taxed when this profit is distributed to them.

C) The owners of a corporation are taxed when they receive dividend payments and when they make a profit from the sale of shares.

D) The corporation must pay taxes on any profits it makes, and the capital raised by the sale of shares is also subject to taxation.

Answer: B

8) Which of the following is a major duty of a financial manager?

I. To make investment decisions

II. To make financing decisions

III. To manage cash flow from operating activities

A) I only

B) I and II only

C) I and III only

D) all of the above

Answer: D

9. What is the most important duty of a firm's financial officer?

A) to ensure that the firm has enough cash on hand to meet its commitments at any given time

B) to decide how to pay for investments

C) to manage working capital

D) to make investment decisions

Answer: D

10) How do the shareholders of most corporations exercise their control of that corporation?

A) by voting on issues that concern them

B) by electing members of a board of directors

C) by vetting the decisions of the board of directors

D) by providing oversight of the day-to-day running of the corporation

Answer: B

11) Which of the following would be best considered to be an agency conflict problem in the behavior of the following financial managers?

A) Bill chooses to pursue a risky investment for the company's funds because his compensation will substantially rise if it succeeds.

B) Sue instructs her staff to skip safety inspections in one of the company's factories, knowing that it will likely fail the inspection and incur significant costs to fix.

C) James ignores an opportunity for his company to invest in a new drug to fight Alzheimer's disease, judging the drug's chances of succeeding as low.

D) Michael chooses to enhance his firm's reputation at some cost to its shareholders by sponsoring a team of athletes for the Olympics.

Answer: A

**Chapter 2**

1) Which of the following is NOT a financial statement that every public company is required to produce?

A) income statement

B) statement of sources and uses of cash

C) balance sheet

D) statement of stockholders' equity

Answer: B

2) Which of the following best describes why the left and right sides of a balance sheet are equal?

A) In a properly run business, the value of liabilities will not exceed the assets held by the company.

B) By definition, the assets plus the liabilities will be the same as the stockholders' equity.

C) The assets must equal liabilities plus stockholders' equity because stockholders' equity is the difference between the assets and the liabilities.

D) By accounting convention, the assets of a company must be equal to the liabilities of that company.

Answer: C

3) A small company has current assets of $112,000 and current liabilities of $117,000. Which of the following statements about that company is most likely to be true?

A) Since net working capital is negative, the company will not have enough funds to meet its obligations.

B) Since net working capital is high, the company will likely have little difficulty meeting its obligations.

C) Since net working capital is very high, the company will have ample money to invest after it meets its obligations.

D) Since net working capital is nearly zero, the company is well run and will have little difficulty attracting investors.

Answer: A

4) **Balance Sheet**

**Assets Liabilities**

Current Assets Current Liabilities

Cash 46 Accounts payable 39

Accounts receivable 23 Notes payable/short-term debt 5

Inventories 20

Total current assets 89 Total current liabilities 44

Long-Term Assets Long-Term Liabilities

Net property, plant,

and equipment 121 Long-term debt 133

Total long-term assets 121 Total long-term liabilities 133

 **Total Liabilities 177**

 **Stockholders' Equity 33**

**Total Assets 210 Total Liabilities and 210**

 **Stockholders' Equity**

The above diagram shows a balance sheet for a certain company. All quantities shown are in millions of dollars. What is the company's net working capital?

A) $133 million

B) $2 million

C) $89 million

D) $45 million

Answer: D

Explanation: D) Net working capital = total current assets - total current liabilities, , as all quantities are expressed in millions of dollars on the table.

5) **Balance Sheet**

**Assets Liabilities**

Current Assets Current Liabilities

Cash 48 Accounts payable 35

Accounts receivable 25 Notes payable/short-term debt 5

Inventories 16

Total current assets 89 Total current liabilities 40

Long-Term Assets Long-Term Liabilities

Net property, plant,

and equipment 121 Long-term debt 137

Total long-term assets 121 Total long-term liabilities 137

 **Total Liabilities 177**

 **Stockholders' Equity 33**

**Total Assets 210 Total Liabilities and 210**

 **Stockholders' Equity**

The above diagram shows a balance sheet for a certain company. All quantities shown are in millions of dollars. How would the balance sheet change if the company's long-term assets were judged to depreciate at an extra $5 million per year?

A) Net property, plant, and equipment would rise to $126 million, and total assets and stockholders' equity would be adjusted accordingly.

B) Net property, plant, and equipment would fall to $116 million, and total assets and stockholders' equity would be adjusted accordingly.

C) Long-term liabilities would rise to $131 million, and total liabilities and stockholders' equity would be adjusted accordingly.

D) Long-term liabilities would fall to $111 million, and total liabilities and stockholders' equity would be adjusted accordingly.

Answer: B

**6. Luther Corporation**

 **Consolidated Balance Sheet**

 **December 31, 2006 and 2005 (in $ millions)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Assets** | **2006** | **2005** | **Liabilities and****Stockholders' Equity** | **2006** | **2005** |
| *Current Assets* |  |  | *Current Liabilities* |  |  |
| Cash |  57.6 |  58.5 | Accounts payable |  86.0 |  73.5 |
| Accounts receivable |  55.2 |  39.6 | Notes payable / short-term debt |  10.5 |  9.6 |
| Inventories |  45.6 |  42.9 | Current maturities of long-term debt |  39.6 |  36.9 |
| Other current assets |  5.6 |  3.0 | Other current liabilities |  6.0 |  12.0 |
|  Total current assets | 164.0 | 144.0 |  Total current liabilities | 142.1 | 132.0 |
|  |  |  |  |  |  |
| *Long-Term Assets* |  |  | *Long-Term Liabilities* |  |  |
|  Land |  66.4 |  62.1 |  Long-term debt | 231.3 | 168.9 |
|  Buildings | 108.3 |  91.5 |  Capital lease obligations |  |  |
|  Equipment | 114.3 |  99.6 |  |  |  |
|  Less accumulated depreciation | (54.4) | (52.5) | Deferred taxes |  22.8 |  22.2 |
| Net property, plant, and equipment | 234.6 | 200.7 | Other long-term liabilities | --- | --- |
| Goodwill |  60.0 | -- |  Total long-term liabilities | 254.1 | 191.1 |
| Other long-term assets |  63.0 |  42.0 | Total liabilities | 396.2 | 323.1 |
|  Total long-term assets | 357.6 | 242.7 | Stockholders' Equity | 125.4 | 63.6 |
|  |  |  |  |  |  |
| **Total Assets** | **521.6** | **386.7** | **Total liabilities and Stockholders' Equity** | **521.6** | **386.7** |

Refer to the balance sheet above. If in 2006 Luther has 10.2 million shares outstanding and these shares are trading at $16 per share, then using the market value of equity, the debt-equity ratio for Luther in 2006 is closest to \_\_\_\_\_\_\_\_.

A) 3.45

B) 1.72

C) 0.86

D) 2.41

Answer: B

Explanation: B) D / E = Total debt / Total equity

7) Company A has current assets of $42 billion and current liabilities of $41 billion. Company B has current assets of $2.7 billion and current liabilities of $1.8 billion. Which of the following statements is correct, based on this information?

A) Company A is less likely than Company B to have sufficient working capital to meet its short-term needs.

B) Company A has greater leverage than Company B.

C) Company A has less leverage than Company B.

D) Company A and Company B have roughly equivalent enterprise values.

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

|  |
| --- |
| **Luther Corporation****Consolidated Balance Sheet****December 31, 2006 and 2005 (in $ millions)** |
| **Assets** | **2006** | **2005** |  | **Liabilities and Stockholders' Equity** | **2006** | **2005** |
| *Current Assets* |  |  |  | *Current Liabilities* |  |  |
| Cash | 63.6 | 58.5 |  | Accounts payable | 87.6 | 73.5 |
| Accounts receivable | 55.5 | 39.6 |  | Notes payable / short-term debt | 10.5 | 9.6 |
| Inventories | 45.9 | 42.9 |  | Current maturities of long-term debt | 39.9 | 36.9 |
| Other current assets | 6.0 | 3.0 |  | Other current liabilities | 6.0 | 12.0 |
|  Total current assets | 171.0 | 144.0 |  |  Total current liabilities | 144.0 | 132.0 |
|  |  |  |  |  |  |  |
| *Long-Term Assets* |  |  |  | *Long-Term Liabilities* |  |  |
|  Land | 66.6 | 62.1 |  |  Long-term debt | 239.7 | 168.9 |
|  Buildings | 109.5 | 91.5 |  |  Capital lease obligations | --- | --- |
|  Equipment | 119.1 | 99.6 |  | Total Debt | 239.7 | 168.9 |
|  Less accumulated depreciation | (56.1) | (52.5) |  | Deferred taxes | 22.8 | 22.2 |
| Net property, plant, and equipment | 239.1 | 200.7 |  | Other long-term liabilities | --- | --- |
| Goodwill | 60.0 | -- |  | Total long-term liabilities | 262.5 | 191.1 |
| Other long-term assets | 63.0 | 42.0 |  | Total liabilities | 406.5 | 323.1 |
|  Total long-term assets | 362.1 | 242.7 |  | Stockholders' Equity | 126.6 | 63.6 |
|  |  |  |  |  |  |  |
| **Total Assets** | **533.1** | **386.7** |  | **Total liabilities and Stockholders' Equity** | **533.1** | **386.7** |

20) Refer to the balance sheet above. If on December 31, 2005 Luther has 8 million shares outstanding trading at $15 per share, then what is Luther's enterprise value?

Answer: Enterprise value = Market value of equity + Debt - Cash

Market value of equity = 8 million × $15 = $120 million

Debt = Notes payable + Current maturities of long-term debt + Long-term debt

Debt = $9.6 + $36.9 + $168.9 = $215.4

Cash = $58.5

So, enterprise value = $120 + 215.4 - 58.5 = $276.90.

**Chapter 3**

1) What is a competitive market?

A) a market in which goods have a different ask price and bid price

B) a market in which a good can be bought and sold at the same price

C) a market in which a good is sold at a lower price than that for which it can be bought

D) a market in which a good is bought for a lower price than that for which it can be sold

Answer: B

2) Whenever a good trades in a competitive market, the \_\_\_\_\_\_\_\_ determines the value of the good.

A) supply

B) price

C) demand

D) cost

Answer: B

3) Which of the following best explains why market prices are useful to a financial manager when performing a cost-benefit analysis?

A) They can be used to determine how much an asset can be sold for.

B) They can be used to convert different services and commodities into equivalent cash values which can be compared.

C) They allow all commodities and services to be assigned a fixed and unchanging value.

D) They can be evaluated to determine whether the market in which the manager exchanges goods and services offers true value.

Answer: B

4) An investment will pay $289,940 at the end of next year for an investment of $190,000 at the start of the year. If the market interest rate is 9% over the same period, should this investment be made?

A) No, because the investment will yield $82,840 less than putting the money in a bank.

B) Yes, because the investment will yield $66,272 more than putting the money in a bank.

C) Yes, because the investment will yield $74,556 more than putting the money in a bank.

D) Yes, because the investment will yield $82,840 more than putting the money in a bank.

Answer: D

Explanation: D) 

5) Which of the following statements is FALSE about valuing cash at different points in time?

A) The process of moving forward along the timeline to determine a cash flow's value in the future is known as compounding.

B) The effect of earning interest on interest is known as compound interest.

C) It is only possible to compare or combine values at the same point in time.

D) A dollar in the future is worth more than a dollar today.

Answer: D

**Chapter 4**

1) Suppose you invest $1000 into a mutual fund that is expected to earn a rate of return of 11%. The amount of money will you have in ten years is closest to which of the following? The amount you will have in 50 years is closest to which of the following?

A) $1420; $110,739

B) $2271; $166,109

C) $2839; $184,565

D) $3123; $221,478

Answer: C

Explanation: C) FV = 1000(1 + 0.11)10 = $2839; 

2) You are borrowing money to buy a car. If you can make payments of $320 per month starting one month from now at an interest rate of 12%, how much will you be able to borrow for the car today if you finance the amount over 4 years?

A) $7291.00

B) $14,582.00

C) $17,012.34

D) $12,151.67

Answer: D

Explanation: D) N = 48

I = 12 /12

PMT = $320

FV = 0

PV = $12,151.67

3) Clarissa wants to fund a growing perpetuity that will pay $10,000 per year to a local museum, starting next year. She wants the annual amount paid to the museum to grow by 5% per year. Given that the interest rate is 9%, how much does she need to fund this perpetuity?

A) $125,000.00

B) $200,000.00

C) $300,000.00

D) $250,000.00

Answer: D

Explanation: D) 

5) Suppose that a young couple has just had their first baby and they wish to insure that enough money will be available to pay for their child's college education. They decide to make deposits into an educational savings account on each of their daughter's birthdays, starting with her first birthday. Assume that the educational savings account will return a constant 9%. The parents deposit $2400 on their daughter's first birthday and plan to increase the size of their deposits by 7% each year. Assuming that the parents have already made the deposit for their daughter's 18th birthday, then the amount available for the daughter's college expenses on her 18th birthday is closest to \_\_\_\_\_\_\_\_.

A) $80,232

B) $160,463

C) $112,324

D) $176,509

Answer: B

Explanation: B) FV of a growing annuity

 $2400 ×   (1 + 0.09)18 = $160,463

6) A bank is negotiating a loan. The loan can either be paid off as a lump sum of $80,000 at the end of four years, or as equal annual payments at the end of each of the next four years. If the interest rate on the loan is 6%, what annual payments should be made so that both forms of payment are equivalent?

A) $14,630

B) $18,287

C) $25,602

D) $29,259

Answer: B

Explanation: B) Calculate PMT with FV = $80,000,  and  which gives 

**Chapter 5**

8) Howard is saving for a holiday. He deposits a fixed amount every month in a bank account with an EAR of 14.7%. If this account pays interest every month then how much should he save from each monthly paycheck in order to have $14,000 in the account in four years' time?

A) $176

B) $308

C) $220

D) $352

Answer: C

Explanation: C) First calculate the APR using an EAR of 14.7% and monthly compounding, which comes to 13.7937%. Then using a periodic rate of 13.7937/12, calculate the payment over 48 months that gives a future value (FV) of $14,000, which is $110.15.

laptop, or lease from the manufacturer for monthly payments of $75 each for four years. The designer can borrow at an interest rate of 14% APR compounded monthly. What is the cost of leasing the laptop over buying it outright?

A) Leasing costs $116 more than buying.

B) Leasing costs $174 more than buying.

C) Leasing costs $145 more than buying.

D) Leasing costs $289 more than buying.

Answer: C

Explanation: C) Using a periodic rate of 14% / 12 per month, calculate the present value (PV) of an annuity of $75 for 48 months; then subtract $2600 to calculate the difference in costs.

15) A bank offers an account with an APR of 5.8% and an EAR of 5.88%. How does the bank compound interest for this account?

A) weekly compounding

B) monthly compounding

C) semiannual compounding

D) annual compounding

Answer: C

Explanation: C) Using an APR = 5.8%, calculate the EAR for the compounding periods given in each choice: 

16) Which of the following statements is FALSE about interest rates?

A) As interest rates may be quoted for different time intervals, it is often necessary to adjust the interest rate to a time period that matches that of cash flows.

B) The effective annual rate indicates the amount of interest that will be earned at the end of one year.

C) The annual percentage rate indicates the amount of simple interest earned in one year.

D) The annual percentage rate indicates the amount of interest including the effect of compounding.

Answer: D

5) Ursula wants to buy a $19,000 used car. She has savings of $2,000 plus an $800 trade-in. She wants her monthly payments to be about $282. Which of the following loans offers monthly payments closest to $282?

A) 7.8% APR for 36 months

B) 7.8% APR for 48 months

C) 7.8% APR for 60 months

D) 7.8% APR for 72 months

Answer: D

Explanation: D) Calculate *N* when PV of ordinary  periodic  and monthly 

10) A home buyer buys a house for $2,155,000. She pays 20% cash, and takes a fixed-rate mortgage for ten years at 7.70% APR. If she makes semi-monthly payments, which of the following is closest to each of her payment?

A) $11,342.47

B) $10,311.34

C) $12,373.61

D) $8249.07

Answer: B

Explanation: B) Calculate bimonthly payment when PV of ordinary 
periodic  and number of 

23) Five years ago you took out a 30-year mortgage with an APR of 6.5% for $200,000. If you were to refinance the mortgage today for 20 years at an APR of 4.25%, how much would your monthly payment change by?

A) The monthly payment will increase by $104.79.

B) The monthly payment will decrease by $104.79

C) The monthly payment will increase by $343.12.

D) The monthly payment will decrease by $343.12.

Answer: B

Explanation: B) Current Mortgage Payment: P/Y = 12, N = 360, I/Y = 6.5, PV = $200,000, Solve for PMT = $1,264.14

Current Mortgage Balance: P/Y = 12, N = 300, I/Y = 6.5, PMT = $1,264.14, Solve for PV = $187,221.9

New Mortgage Payment: P/Y = 12, N = 240, I/Y = 4.25, PV = $187,222.54, Solve for PMT = $1,159.35

Current Payment - New Payment = $1,159.35- $1,264.14 = -$104.79

29) You are purchasing a new home and need to borrow $260,000 from a mortgage lender. The mortgage lender quotes you a rate of 6.80% APR for a 30-year fixed rate mortgage. The mortgage lender also tells you that if you are willing to pay two points, they can offer you a lower rate of 6.50% APR for a 30-year fixed rate mortgage. One point is equal to 1% of the loan value. So if you take the lower rate and pay the points, you will need to borrow an additional $5200 to cover points you are paying the lender.

Assuming you pay the points and borrow from the mortgage lender at 6.50%, then your monthly mortgage payment (with payments made at the end of the month) will be closest to \_\_\_\_\_\_\_\_.

A) $1844

B) $1676

C) $2011

D) $2347

Answer: B

Explanation: B) First we need the monthly interest  or 0.5417%.

Now:

*PV* = 265,200 (2 points)

*I* = 0.5417

*FV* = 0

*N* = 360 (30 years × 12 months)

Compute *PMT* = $1676.24.

**Chapter 6**

 **1**) A corporate bond makes payments of $9.67 every month for ten years with a final payment of $2009.67. Which of the following best describes this bond?

A) a 10-year bond with a face value of $2,000 and a coupon rate of 4.8% with monthly payments

B) a 10-year bond with a face value of $2,000 and a coupon rate of 5.8% with monthly payments

C) a 10-year bond with a face value of $2,009.67 and a coupon rate of 4.8% with monthly payments

D) a 10-year bond with a face value of $2,009.67 and a coupon rate of 5.8% with monthly payments

Answer: B

Explanation: B) $9.67 × 12 / (2,009.67 - 9.67) = 5.802%

 **2**) Which of the following best shows the timeline for cash flows from a five-year bond with a face value of $2,000, a coupon rate of 5.0%, and semiannual payments?

A) 0 1 2 3 4 5

+-----+-----+-----+-----+-----+

 $100 $100 $100 $100 $2100

B) 0 1 2 3 9 10

+-----+-----+-----+--- . . . -----+-----+

 $25 $25 $25 $25 $25

C) 0 1 2 3 9 10

+-----+-----+-----+--- . . . -----+-----+

 $50 $50 $50 $50 $50

D) 0 1 2 3 9 10

+-----+-----+-----+--- . . . -----+-----+

 $50 $50 $50 $50 $2050

Answer: D

3 ) A university issues a bond with a face value of $5000 and a coupon rate of 4.41% that matures on July 15, 2018. The holder of such a bond receives coupon payments of $110.25. How frequently are coupon payments made in this case?

A) monthly

B) quarterly

C) semiannually

D) annually

Answer: C

4) A bond certificate includes \_\_\_\_\_\_\_\_.

A) the terms of the bond

B) the individual to whom payments will be made

C) the yield to maturity of the bond

D) the price of the bond

Answer: A

5) Which of the following statements regarding bonds and their terms is FALSE?

A) The bond certificate typically specifies that the coupons will be paid periodically until the maturity date of the bond.

B) The bond certificate indicates the amounts and dates of all payments to be made.

C) The only cash payments the investor will receive from a zero-coupon bond are the interest payments that are paid up until the maturity date.

D) The face value of a bond is repaid at maturity.

Answer: C

6) What is the yield to maturity of a ten-year, $10,000 bond with a 5.4% coupon rate and semiannual coupons if this bond is currently trading for a price of $9207.93?

A) 7.79%

B) 9.08%

C) 6.49%

D) 3.24%

Answer: C

Explanation: C) Using FV = $10,000, periods to maturity = 20,  and  calculate  

7) A $5000 bond with a coupon rate of 5.7% paid semiannually has ten years to maturity and a yield to maturity of 6.4%. If interest rates fall and the yield to maturity decreases by 0.8%, what will happen to the price of the bond?

A) The price of the bond will fall by $293.50.

B) The price of the bond will fall by $352.20.

C) The price of the bond will rise by $410.90.

D) The price of the bond will rise by $293.50.

Answer: D

Explanation: D) Using FV = $5000 periods to maturity = 20,  and discount  calculate 

Using FV = $5000, periods to maturity = 20,  and discount , calculate  



8) Shown above is information from FINRA regarding one of Caterpillar Financial Services' bonds. How much would the holder of such a bond earn each coupon payment for each $100 in face value if coupons are paid annually?

A) $1.38

B) $3.95

C) $4.00

D) $4.36

Answer: C

Explanation: C) $97.05 × 4% = $4.00

9) Which of the following bonds will be most sensitive to a change in interest rates?

A) a ten-year bond with a $2,000 face value whose yield to maturity is 5.8% and coupon rate is 5.8% APR paid semiannually

B) a 15-year bond with a $5,000 face value whose yield to maturity is 7.4% and coupon rate is 6.2% APR paid annually

C) a 20-year bond with a $3,000 face value whose yield to maturity is 6.0% and coupon rate is 5.4% APR paid semiannually

D) a 30-year bond with a $1,000 face value whose yield to maturity is 5.5% and coupon rate is 6.4% APR paid annually

Answer: D- remember, the longer the maturity of a bond the more sensitive is the price of the bond to the interest rate change.

10) Which of the following bonds will be most sensitive to a change in interest rates if all bonds have the same initial yield to maturity?

A) a ten-year bond with a $1,000 face value whose coupon rate is 5.8% APR paid semiannually

B) a ten-year bond with a $1,000 face value whose coupon rate is 7.4% APR paid semiannually

C) a 20-year bond with a $1,000 face value whose coupon rate is 5.8% APR paid semiannually

D) a 20-year bond with a $1,000 face value whose coupon rate is 7.4% APR paid semiannually

Answer: C-

Remember- the higher the coupon rate the less sensitive is the price of the bond to the interest rate change.

**Chapter 7**

1) You placed an order to purchase stock where you specified the maximum price you were willing to pay. This type of order is known as a \_\_\_\_\_\_\_\_.

A) maximum order

B) limit order

C) floor order

D) market order

Answer: B

2) Owen Inc. has a current stock price of $15.00 and is expected to pay a $0.80 dividend in one year. If Owen's equity cost of capital is 12%, what price would its stock be expected to sell for immediately after it pays the dividend?

A) $11.20

B) $12.80

C) $16.80

D) $16.00

Answer: D

Explanation: D) (1 + 0.12) × $15.00 = $16.80;

$16.80 - $0.80 = $16.00

**P1 = P0 \*(1+R)- D1**

3) Coolibah Holdings is expected to pay dividends of $1.20 every six months for the next three years. If the current price of Coolibah stock is $22.60, and Coolibah's equity cost of capital is 18%, what price would you expect Coolibah's stock to sell for at the end of three years?

A) $28.87

B) $31.76

C) $33.20

D) $34.64

Answer: A

Explanation: A) Using a financial calculator, ,   

calculate 

4) Valorous Corporation will pay a dividend of $1.75 per share at this year's end and a dividend of $2.35 per share at the end of next year. It is expected that the price of Valorous' stock will be $41 per share after two years. If Valorous has an equity cost of capital of 9%, what is the maximum price that a prudent investor would be willing to pay for a share of Valorous stock today?

A) $32.38

B) $36.19

C) $38.09

D) $39.99

Answer: C

Explanation: C) Using a financial calculator,   

calculate NPV at  equals $38.09.

5) Which of the following statements is FALSE of the dividend-discount model?

A) We cannot use the dividend-discount model to value the stock of a firm with rapid or changing growth.

B) As firms mature, their growth slows to rates more typical of established companies.

C) The dividend-discount model values the stock based on a forecast of the future dividends paid to shareholders.

D) The simplest forecast for the firm's future dividends states that they will grow at a constant rate, i.e., forever.

Answer: A

Explanation: A) A multistage dividend-discount model can be used to value the stock of a firm with rapid or changing growth.

6) You expect KT industries (KTI) will have earnings per share of $5 this year and expect that they will pay out $1.25 of these earnings to shareholders in the form of a dividend. KTI's return on new investments is 13% and their equity cost of capital is 15%. The expected growth rate for KTI's dividends is closest to \_\_\_\_\_\_\_\_.

A) 11.3%

B) 9.8%

C) 5.9%

D) 3.9%

Answer: B

Explanation: B) *g* = Retention rate × Return on new investment

 = ($5 - $1.25) / $5 × 0.13 = 0.0975 or 9.8%

7) You expect that Bean Enterprises will have earnings per share of $2 for the coming year. Bean plans to retain all of its earnings for the next three years. For the subsequent two years, the firm plans on retaining 50% of its earnings. It will then retain only 25% of its earnings from that point forward. Retained earnings will be invested in projects with an expected return of 20% per year. If Bean's equity cost of capital is 10%, then the price of a share of Bean's stock is closest to \_\_\_\_\_\_\_\_.

A) $24.82

B) $16.54

C) $41.36

D) $66.18

Answer: C

Explanation: C)





Each *g* is calculated as the 20% return on the projects × the retention ratio.

8) Sunnyfax Publishing pays out all its earnings and has a share price of $37. In order to expand, Sunnyfax Publishing decides to cut its dividend from $3.00 to $2.00 per share and reinvest the retained funds. Once the funds are reinvested, they are expected to grow at a rate of 13%. If the reinvestment does not affect Sunnyfax's equity cost of capital, what is the expected share price as a consequence of this decision?

A) $36.67

B) $41.90

C) $52.38

D) $62.86

Answer: C

Explanation: C) Cost of capital = $3/$37 = 0.08108108;

*g* = 0.33 × 0.13 = 0.0429;

P0 = $2 / (0.08108108 - 0.0429) = $52.38

9) Sultan Services has 1.2 million shares outstanding. It expects earnings at the end of the year of $6.0 million. Sultan pays out 60% of its earnings in total: 40% paid out as dividends and 20% used to repurchase shares. If Sultan's earnings are expected to grow by 5% per year, these payout rates do not change, and Sultan's equity cost of capital is 10%, what is Sultan's share price?

A) $12.00

B) $24.00

C) $36.00

D) $60.00

Answer: D

Explanation: D) 

10) Which of the following models directly values all of the firm's equity, rather than a single share?

I. Dividend-discount model

II. Total payout model

III. Discounted cash flow model

A) I only

B) II only

C) III only

D) II and III

Answer: B

**Chapter 8**

1) Tanner is choosing between two investment options. He can invest $500 now and get (guaranteed) $550 in one year, or invest $500 now and get (guaranteed) $531.40 back later today. The risk-free rate is 3.5%. Which investment should Tanner prefer?

A) $531.40 later today, since $1 today is worth more than $1 in one year.

B) $550 in one year, since it is $50 more than he invested rather than $31.40 more than he invested.

C) Neither - both investments have a negative NPV.

D) Tanner should be indifferent between the two investments, since both are equivalent to the same amount of cash today.

Answer: D

Explanation: D) The NPVs are equal, so that each is the same as $31.40 today.

2) A security firm is offered $80,000 in one year for providing CCTV coverage of a property. The cost of providing this coverage to the security firm is $74,000, payable now, and the interest rate is 8.5%. Should the firm take the contract?

A) Yes, since net present value (NPV) is positive.

B) It does not matter whether the contract is taken or not, since NPV = 0.

C) Yes, since net present value (NPV) is negative.

D) No, since net present value (NPV) is negative.

Answer: D

3) A delivery service is buying 600 tires for its fleet of vehicles. One supplier offers to supply the tires for $80 per tire, payable in one year. Another supplier will supply the tires for $20,000 down today, then $45 per tire, payable in one year. What is the difference in PV between the first and the second offer, assuming interest rates are 8.1%?

A) -$860

B) -$229

C) -$574

D) $860

Answer: C

Explanation: C) -$80 × 600 = $48,000;

PV1 = 48,000 / (1 + 0.081) = $44,403.3302;

-$45 × 600 = $27,000;

PV2 = -20,000 + $27,000 / (1 + 0.081) = $44,976.8733;

PV1 - PV2 = $44,403.3302 - $44,976.8733 = -$574

4) Peter has a business opportunity that requires him to invest $10,000 today, and receive $12,000 in one year. He can either use $10,000 that he already has for this investment or borrow the money from his bank at an interest rate of 10%. However, the $10,000 he has right now is needed for urgent repairs to his home, repairs that will cost at least $15,000 if he delays them for a year. What is the best alternative for Peter out of the following choices?

A) No, since the net present value (NPV) of the investment, should he take it, is less than the net present value (NPV) of the home repairs if he delays them for one year.

B) Yes, since he can borrow the $10,000 from a bank, repair his home, invest $10,000 in the business opportunity, which, since it has a NPV > 0 will mean he will still come out ahead after repaying the loan.

C) Yes, since the net present value (NPV) of the investment is greater than zero he can invest the $10,000 in the business opportunity, and then next year use this money plus the benefit from this money to make the necessary home repairs.

D) Yes, since the net present value (NPV) of the investment, should he take it, is greater than the net present value (NPV) of the home repairs if he delays them for one year.

Answer: B

5) The owners of a chain of fast-food restaurants spend $25 million installing donut makers in all their restaurants. This is expected to increase cash flows by $11 million per year for the next five years. If the discount rate is 5.3%, were the owners correct in making the decision to install donut makers?

A) No, as it has a net present value (NPV) of -$4.45 million.

B) No, as it has a net present value (NPV) of -$2.22 million.

C) Yes, as it has a net present value (NPV) of $13.34 million.

D) Yes, as it has a net present value (NPV) of $22.23 million.

Answer: D

Explanation: D) Using financial calculator, enter   

calculate NPV for 

6) Which of the following situations can lead to IRR giving a different decision than NPV?

A) delayed investment

B) multiple IRRs

C) differences in project scale

D) All of the above can lead to IRR giving a different decision than NPV.

Answer: D

7) Which of the following statements is FALSE?

A) The payback investment rule is based on the notion that an opportunity that pays back its initial investments quickly is a good idea.

B) An internal rate of return (IRR) will always exist for an investment opportunity.

C) A net present value (NPV) will always exist for an investment opportunity.

D) In general, there can be as many internal rates of return (IRRs) as the number of times the project's cash flows change sign over time.

Answer: B

8) An investor has the opportunity to invest in four new retail stores. The amount that can be invested in each store, along with the expected cash flow at the end of the first year, the growth rate of the concern, and the cost of capital is shown for each case. It is assumed each investment will operate in perpetuity after the initial investment. Which investment should the investor choose?

A) Initial investment: $100,000; Cash flow in year 1: $12,000; Growth Rate: 1.25%; Cost of Capital: 9.1%

B) Initial investment: $90,000; Cash flow in year 1: $10,000; Growth Rate: 1.50%; Cost of Capital: 9.3%

C) Initial investment: $80,000; Cash flow in year 1: $8,000; Growth Rate: 1.75%; Cost of Capital: 8.0%

D) Initial investment: $60,000; Cash flow in year 1: $6,000; Growth Rate: 2.50%; Cost of Capital: 7.2%

Answer: D

Explanation: D) NPV project D= -60,000 + 6,000 / (0.072 - 0.025) = $67,660

NPV project A = -100,000 + 12,000 / (0.091 - 0.0125) = $52,866

NPV project B = -90,000 + 10,000 / (0.093 - 0.015) = $38,205

NPV project C = -80,000 + 8,000 / (0.08 - 0.0175) = $48,000

9) A janitorial services firm is considering two brands of industrial vacuum cleaners to equip their staff. Option A will cost $1,500, require servicing of $200 per year, and it will last five years. Option B will cost $1,000, require servicing of $100 per year, and it will last three years. If the cost of capital is 8%, which is the better option, given that the firm has an ongoing requirement for vacuum cleaners?

A) Option A, since it has a lower equivalent annual annuity.

B) Option B, since it has a lower equivalent annual annuity.

C) Option A, since it has a greater equivalent annual annuity.

D) Option B, since it has a greater equivalent annual annuity.

Answer: D

Explanation: D) Using a financial calculator,

NPV(A) = -$2,298.54 equivalent annual annuity (A) = -$575.68

NPV(B) = -$1257.71 equivalent annual annuity (B) = -$488.03

10)  **Initial Investment Cash flow**

**Project A** $35 million $14 million per year for four years

**Project B** $21 million $7 million per year for five years

**Project C** $14 million $7 million per year for four years

**Project D** $21 million $10.5 million per year for three years

An investor has a budget of $35 million. He can invest in the projects shown above. If the cost of capital is 8%, what investment or investments should he make?

A) Project A

B) Project B

C) Project B and Project C

D) Project C and Project D

Answer: C

Explanation: C)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Project | Initial Investment | NPV | NPV/Initial Inv | Rank | Decision |
| A | 35 | 11.3698 | 0.3249 | 3 |  |
| B | 21 |  6.9490 | 0.3309 | 2 | select |
| C | 14 |  9.1849 | 0.6561 | 1 | select |
| D | 21 |  6.0595 | 0.2885 | 4 |  |

Select B and C.

**Chapter 9**

1) The ultimate goal of the capital budgeting process is to \_\_\_\_\_\_\_\_.

A) determine how the consequences of making a particular decision affects the firm's revenues and costs

B) list the projects and investments that a company plans to undertake in the future

C) forecast the consequences of a list of future projects for the firm

D) determine the effect of the decision to accept or reject a project on the firm's cash flows

Answer: D

2) Which of the following best describes why the predicted incremental earnings arising from a given decision are not sufficient in and of themselves to determine whether that decision is worthwhile?

A) They do not tell how the decision affects the firm's reported profits from an accounting perspective.

B) They are not easily predicted from historical financial statements of a firm and its competitors.

C) These earnings are not actual cash flows.

D) They do not show how the firm's earnings are expected to change as the result of a particular decision.

Answer: C

3) Cameron Industries is purchasing a new chemical vapor depositor in order to make silicon chips. It will cost $6 million to buy the machine and $10,000 to have it delivered and installed. Building a clean room in the plant for the machine will cost an additional $3 million. The machine is expected to have a working life of six years. Which of these activities will be reported as an operating expense?

A) the delivery and install cost only

B) the cost of the depositor only

C) the redesign of the plant only

D) the delivery and install cost and the cost of the depositor

Answer: C

4) Vernon-Nelson Chemicals is planning to release a new brand of insecticide, Bee-Safe, that will kill many insect pests but not harm useful pollinators. Buying new equipment to manufacture the product will cost $15 million, and there will be an additional $2 million cost to reconfigure existing plant. The equipment is expected to have a lifetime of nine years and will be depreciated by the straight-line method over its lifetime. The firm expects that they should be able to sell 1,500,000 gallons per year at a price of $53 per gallon. It will take $36 per gallon to manufacture and support the product. If Vernon-Nelson's marginal tax rate is 40%, what are the incremental earnings after tax in year 3 of this project?

A) $25.5 million

B) $14.3 million

C) $23.8 million

D) $9.5 million

Answer: B

Explanation: B) 1.5 million × ($53 - $36) = $25.5 million; 

 

5)



Cromwell Industries is considering a new project which will have costs, revenues, etc. as shown by the data above. If the cost of capital is 8.0%, what is the net present value (NPV) of this project?

A) -$56,662

B) -$59,810

C) $62,958

D) $69,254

Answer: C

6) A company planning to market a new model of motor scooter analyzes the effect of changes in the selling price of the motor scooter, the number of units that will be sold, the cost of making the motor scooter, the effect on Net Working Capital, and the cost of capital for the project. They predict that the break-even point for sales price for the motor scooter is $2,480. What does this mean?

A) If the motor scooter is sold for $2,480, then the project will make a profit.

B) If the motor scooter is sold for $2,480, then the net present value (NPV) for the product will be zero.

C) The predicted selling price of the motor scooter is $2,480.

D) The maximum that the motor scooter can sell for and still make the project have a positive net present value (NPV) is $2,480.

Answer: B

7) A manufacturer of peripheral devices for PCs decides to try and capture some of the PC gaming market by creating gaming versions of its traditional peripheral devices. It decides to start with a gaming version of its standard keyboard, increasing the number of macro keys, adding a small LCD screen to display game data, and giving the user the ability to backlight keys in different colors. If this device is a success, the manufacturer plans to release gaming versions of its trackballs and other peripherals. What option is the manufacturer gaining by the release of the new keyboard?

A) option to delay

B) option to expand

C) option to abandon

D) option to switch

Answer: B

**Study these four options.**

**Chapter 10**

1) **Year 1 2 3 4 5**

**Free Cash Flow** $22 million $26 million $29 million $30 million $32 million

General Industries is expected to generate the above free cash flows over the next five years, after which free cash flows are expected to grow at a rate of 5% per year. If the weighted average cost of capital is 9% and General Industries has cash of $15 million, debt of $45 million, and 80 million shares outstanding, what is General Industries' expected current share price?

A) $7.78

B) $8.17

C) $9.34

D) $11.67

Answer: A

Explanation: A) *FCF*6 = $32 million × (1 + 0.05) = $33.6 million; V5 = $33.6 million / (0.09 - 0.05)
= $840 million; using a financial calculator, *V*0 = 652.45;

*P*0 = $(652.45 + 15 - 45) million / 80 million = $7.78

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

**FCF Forecast ($ million)**

**Year 0 1 2 3 4**

**Sales** 240 270 290 310 325.5

***Growth versus Prior Yea****r 12.5% 7.4% 6.9% 5.0%*

**EBIT (10% of Sales)** 27.00 29.00 31.00 32.55

**Less: Income Tax (37%)** (9.99) 10.73 11.47 12.44

**Less Increase in NWC (12% of Change in Sales** 3.6 2.4 2.4 1.86

**Free Cash Flow** 13.41 15.87 17.13 18.65

Banco Industries expect sales to grow at a rapid rate over the next three years, but settle to an industry growth rate of 5% in year 4. The spreadsheet above shows a simplified pro forma for Banco Industries. If Banco industries has a weighted average cost of capital of 11%, $50 million in cash, $80 million in debt, and 18 million shares outstanding, which of the following is the best estimate of Banco's stock price at the start of year 1?

A) $6.52

B) $11.74

C) $13.04

D) $23.48

Answer: C

Explanation: C) *FCF*5 = $18.65 million × (1 + 0.05) = $19.5825 million;

*V*4 = $19.5825 million / (0.11 - 0.05) = $326.38 million;

using a financial calculator, *V*0 = $264.7655 million;

*P*0 = ($264.7655 million + 50 - 80) / 18 million = $13.04

3) Which of the following statements is FALSE?

A) The more cash a firm uses to repurchase shares, the less it has available to pay dividends.

B) Free cash flow measures the cash generated by a firm after payments to debt or equity holders are considered.

C) We estimate a firm's current enterprise value by computing the present value (PV) of the firm's free cash flow.

D) We can interpret the enterprise value of a firm as the net cost of acquiring the firm's equity, taking its cash, and paying off all debts.

Answer: B

Explanation: B) FCF is cash generated by a firm before payments to debt and equity holders.

4) Which of the following statements concerning the valuation of firms using the method of Comparables is FALSE?

A) If two different firms generate identical cash flows, the Law of One Price will imply that both firms have the same value.

B) Comparables adjust for scale differences when valuing similar firms.

C) Valuation multiples take into account differences in the risk and future growth between the firms being compared.

D) Two firms that sell very similar products or offer very similar services will have different values if they are of different sizes.

Answer: C

5) Which of the following is the best statement of the efficient market’s hypothesis?

A) Investors with information that a stock had a positive net present value (NPV) will buy it, while investors with information that a stock had a negative net present value (NPV) will sell it.

B) Investor's decisions are dependent on complete current information of a firm's cash flows and accurate predictions of future cash flows.

C) Competition between investors works to make the net present value (NPV) of all trading opportunities zero.

D) A share's price is the aggregate of the information of many investors.

Answer: C

6) Aerelon Airways, a commercial airline, suffers a major crash. As a result, passengers are considered to be less likely to choose Aerelon as their carrier, and it is expected free cash flows will fall by $15million per year for five years. If Aerelon has 55 million shares outstanding, an equity cost of capital of 10%, and no debt, by how much would Aerelon's shares be expected to fall in price as a result of this accident?

A) $0.93

B) $1.03

C) $1.14

D) $1.34

Answer: B

Explanation: B) 

per share fall = $56.86 million / 55 million = $1.03

**Chapter 11**

1) Rational investors \_\_\_\_\_\_\_\_ fluctuations in the value of their investments.

A) are averse to

B) prefer

C) are indifferent to

D) are in favor of

Answer: A

2) Investors demand a higher return for investments that have larger fluctuations in values because \_\_\_\_\_\_\_\_.

A) they do not like risk

B) they are risk seeking

C) they invest for the long term

D) they prefer fluctuations

Answer: A

3) Ford Motor Company had realized returns of 15%, 30%, -15%, and -30% over four quarters. What is the quarterly standard deviation of returns for Ford?

A) 24.65%

B) 32.86%

C) 27.39%

D) 30.12%

Answer: C

Explanation: C) Average return = (15% + 30% + -15% + -30%) / 4 = 0%;



4) The standard deviation of returns of \_\_\_\_\_\_\_\_.

I. small stocks is higher than that of large stocks

II. large stocks is lower than that of corporate bonds

III. corporate bonds is higher than that of Treasury bills

Which statement is true?

A) I and III

B) I, II, and III

C) I and II

D) I only

Answer: A

5) Which of the following statements is FALSE?

A) The geometric average return is a better description of the long-run historical performance of an investment.

B) The geometric average return will always be above the arithmetic average return, and the difference grows with the volatility of the annual returns.

C) The compounded geometric average return is most often used for comparative purposes.

D) We should use the arithmetic average return when we are trying to estimate an investment's expected return over a future horizon based on its past performance.

Answer: B

Explanation: B) The geometric average return will always be below the arithmetic average return, and the difference grows with the volatility of the annual returns.

6) If a stock pays dividends at the end of each quarter, with realized returns of R1, R2, R3, and R4 each quarter, then the annual realized return is calculated as \_\_\_\_\_\_\_\_.

A) *R*annual = (1 + *R*1) (1 + *R*2) (1 + *R*3)( 1 + *R*4) - 1

B) *R*annual = *R*1 + *R*2 + *R*3 + *R*4

C) *R*annual = (1 + *R*1) (1 + *R*2)( 1 + *R*3)( 1 + *R*4)

D) *R*annual = 

Answer: A

7) While \_\_\_\_\_\_\_\_ seems to be a reasonable measure of risk when evaluating a large portfolio, the \_\_\_\_\_\_\_\_ of an individual security does not explain the size of its average return.

A) volatility, volatility

B) the mean return, standard deviation

C) mode, volatility

D) mode, mean return

Answer: A

8) A portfolio of stocks can achieve diversification benefits if the stocks that comprise the portfolio are \_\_\_\_\_\_\_\_.

A) not perfectly positively correlated

B) perfectly correlated

C) susceptible to common risks only

D) both B and C

Answer: A

9) Which of the following is NOT a diversifiable risk?

A) the risk that oil prices rise, increasing production costs

B) the risk that the CEO is killed in a plane crash

C) the risk of a key employee being hired away by a competitor

D) the risk of a product liability lawsuit

Answer: A

10) Consider an economy with two types of firms, S and I. S firms always move together, but I firms move independently of each other. For both types of firms there is a 40% probability that the firm will have a 20% return and a 60% probability that the firm will have a -30% return.

The standard deviation for the return on an individual firm is closest to \_\_\_\_\_\_\_\_.

A) 24.49%

B) -10.00%

C) 12.25%

D) 9.80%

Answer: A

Explanation: A) expected return = 0.4(20%) + 0.6(-30%) = -10.00%

standard deviation =  = 0.24494897

**Chapter 12**

1) Suppose you invest in 110 shares of Merck (MRK) at $40 per share and 120 shares of Yahoo (YHOO)at $25 per share. If the price of Merck increases to $45 and the price of Yahoo decreases to $22 per share, what is the return on your portfolio?

A) 7.70%

B) 4.11%

C) 2.57%

D) 3.47%

Answer: C

2) Suppose you invest $20,000 by purchasing 200 shares of Abbott Labs (ABT) at $50 per share, 200 shares of Lowes (LOW) at $30 per share, and 100 shares of Ball Corporation (BLL) at $40 per share. Suppose over the next year Ball has a return of 12.3%, Lowes has a return of 23%, and Abbott Labs has a return of -10%. The value of your portfolio over the year is \_\_\_\_\_\_\_\_.

A) $21,916

B) $19,828

C) $20,872

D) $22,959

Answer: C

Explanation: C)

|  |  |  |  |
| --- | --- | --- | --- |
| **Stock** | **Weight** | **Return** | ***W × R*** |
| ABT | 0.5 | -0.1 | -0.05 |
| LOW | 0.3 | 0.23 | 0.069 |
| BLL | 0.2 | 0.123 | 0.0246 |
|  |  | *Rp* =  | 0.0436 |

3) A portfolio has 45% of its value in IBM shares and the rest in Microsoft (MSFT). The volatility of IBM and MSFT are 33% and 35%, respectively, and the correlation between IBM and MSFT is 0. What is the standard deviation of the portfolio?

A) 19.45%

B) 27.96%

C) 34.04%

D) 24.31%

Answer: D

Explanation: D) Use the formula for variance of a portfolio:

Take the square root of variance to get standard deviation.

(0.45)2 × (0.33)2 + (0.55)2 × (0.35)2 + 2 × 0.33 × 0.35 × 0.45 × 0.55 × 0 = 0.0591085;

square root of 0.0591085 to get 

4) Consider the following expected returns, volatilities, and correlations:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Stock** | **Expected****Return** | **Standard****Deviation** | **Correlation with****Duke Energy** | **Correlation with****Microsoft** | **Correlation with****Wal-Mart** |
| Duke Energy | 14% | 6% |  1.0 | -1.0 | 0.0 |
| Microsoft | 44% | 24% | -1.0 |  1.0 | 0.7 |
| Wal-Mart | 23% | 14% |  0.0 |  0.7 | 1.0 |

The volatility of a portfolio that is equally invested in Duke Energy and Microsoft is closest to \_\_\_\_\_\_\_\_.

A) 8.1%

B) 9.0%

C) 10.8%

D) 5.4%

Answer: B

Explanation: B) 

 = 0.0081

*stdev* =  = 0.09

4) Your estimate of the market risk premium is 9%. The risk-free rate of return is 3.8% and General Motors has a beta of 1.4. According to the Capital Asset Pricing Model (CAPM), what is its expected return?

A) 14.8%

B) 15.6%

C) 16.4%

D) 17.2%

Answer: C

Explanation: C) Using the equation for the CAPM, expected return = 3.8%+ (1.4 × 9%) = 16.4%

8) A portfolio comprises Coke (beta of 1.6) and Wal-Mart (beta of 0.6). The amount invested in Coke is $10,000 and in Wal-Mart is $20,000. What is the beta of the portfolio?

A) 0.93

B) 0.84

C) 1.03

D) 0.98

Answer: A

Explanation: A) Compute portfolio weights of Coke and Wal-Mart. Multiply weight of each stock by its beta; 

16) The Capital Asset Pricing Model asserts that the expected return \_\_\_\_\_\_\_\_.

A) is equal to the risk-free rate plus a risk premium for unsystematic risk

B) is equal to the risk-free rate plus a risk premium for systematic risk

C) is equal to the risk premium plus a risk-free rate for systematic risk

D) is equal to the risk premium plus a risk-free rate for unsystematic risk

Answer: B

18) Suppose you have $10,000 in cash and you decide to borrow another $10,000 at a(n) 6% interest rate to invest in the stock market. You invest the entire $20,000 in an exchange-traded fund (ETF) with a 11% expected return and a 20% volatility. The expected return on your investment is closest to \_\_\_\_\_\_\_\_.

A) 7%

B) 8%

C) 4%

D) 9.1%

Answer: A

Explanation: A) *E*[*Rxp*] = *rf* + *x*(*E*[*Rp*] - *rf*) = 6% + 20%(11% - 6%) = 7%

21) Which of the following statements is FALSE?

A) The risk premium of a security is equal to the market risk premium divided by the amount of market risk present in the security's returns measured by its beta with the market.

B) The beta of a portfolio is the weighted average beta of the securities in the portfolio.

C) There is a linear relationship between a stock's beta and its expected return.

D) A security with a negative beta has a negative correlation with the market, which means that this security tends to perform well when the rest of the market is doing poorly.

Answer: A

Explanation: A) The risk premium of a security is equal to the market risk premium (the amount by which the market's expected return exceeds the risk-free rate) multiplied by the amount of market risk present in the security's returns measured by its beta with the market.

**Chapter 13**

1) SIROM Scientific Solutions has $5 million of outstanding equity and $5 million of bank debt. The bank debt costs 4% per year. The estimated equity beta is 2. If the market risk premium is 8% and the risk-free rate is 4%, compute the weighted average cost of capital if the firm's tax rate is 35%.

A) 11.87%

B) 12.43%

C) 11.30%

D) 13.00%

Answer: C

Explanation: C) Cost of debt = rate on bank debt

Cost of equity = Risk-free rate + Beta × Market risk premium



Weight of debt = 1- Weight of equity.



Cost of equity = 0.04 + 2 × 0.08 = 0.2 or 20%

Weight of equity = 5/(5 + 5) = 0.5 or 50%

Weight of debt = 1 - 0.5 = 0.5 or 50%



2) Assume Time Warner shares have a market capitalization of $40 billion. The company is expected to pay a dividend of $0.25 per share and each share trades for $40. The growth rate in dividends is expected to be 7% per year. Also, Time Warner has $20 billion of debt that trades with a yield to maturity of 9%. If the firm's tax rate is 40%, what is the WACC?

A) 5.85%

B) 6.54%

C) 6.88%

D) 7.57%

Answer: C

Explanation: C) Cost of equity is the next period dividend divided by the price plus the growth rate in dividends. Cost of debt is the yield to maturity times one minus the tax rate. WACC is the weight of debt times cost of debt plus weight of equity times cost of equity.

Cost of equity = ($0.25 / $40) + 0.07 = 0.07625 or 7.63%;

Cost of debt = 0.09 × (1 - 0.4) = 0.054 or 5.4%;

WACC = ($40 billion × 0.07625) / $60 billion + ($20 billion × 0.054) / $60 billion = 0.0688 or 6.88%

3) Assume the market value of Fords' equity, preferred stock and debt are $6 billion, $3 billion, and $13 billion, respectively. Ford has a beta of 1.7, the market risk premium is 8%, and the risk-free rate of interest is 3%. Ford's preferred stock pays a dividend of $2.50 each year and trades at a price of $30 per share. Ford's debt trades with a yield to maturity of 9.5%. What is Ford's weighted average cost of capital if its tax rate is 35%?

A) 9.78%

B) 10.24%

C) 9.31%

D) 11.18%

Answer: C

Explanation: C) Cost of equity is the next period dividend divided by the price plus the growth rate in dividends. Cost of debt is the yield to maturity times one minus the tax rate. WACC is the weight of debt times cost of debt plus weight of equity times cost of equity.

Cost of equity = 0.03 + 1.7 × 0.08 = 0.166;

Cost of debt = 0.095 × (1 - 0.35) = 0.06175;

Cost of preferred stock = $2.50 / $30 = 0.08333333;

WACC = $6 billion × 0.166 / $22 billion + $3 billion × 0.08333333 / $22 billion + $13 billion × 0.06175 / 22 = 0.09313 or 9.31%

4) Assume JUP has debt with a book value of $20 million, trading at 120% of par value. The bonds have a yield to maturity of 7%. The firm's book value of equity is $16 million, and it has 2 million shares trading at $19 per share. The firm's cost of equity is 12%. What is JUP's WACC if the firm's marginal tax rate is 35%?

A) 10.03%

B) 9.12%

C) 9.57%

D) 7.29%

Answer: B

Explanation: B) Market value debt = $20 million × 120% = $24 million

Market value equity = 2 million × $19 = $38 million

Total market value = $62 million

*D*% = $24 / $62 = 38.7096774%

*E*% = $38 / $62 = 61.2903226%



5) Assume General Motors has a weighted average cost of capital of 9%. GM is considering investing in a new plant that will save the company $20 million over each of the first two years, and then $10 million each year thereafter. If the investment is $100 million, what is the net present value (NPV) of the project?

A) $25.8 million

B) $31.6 million

C) $28.7 million

D) $27.3 million

Answer: C

Explanation: C) Compute the present value of future cash flows using the WACC, and subtract the investment cost.

 million

NPV = -$100 million + $20 million / (1.09) + ($20 million + 111.111111 million) / (1.09)2 = $28.7 million

6) When we use the WACC to assess a project, we assume that the \_\_\_\_\_\_\_\_ ratio does not change.

A) reward to systematic risk

B) risk to reward

C) debt to equity

D) volatility to systematic risk

Answer: C

7) When we compute the cost of equity capital for a project we assume that the \_\_\_\_\_\_\_\_ of the project is equivalent to the average market risk of the firm's investments.

A) diversifiable risk

B) market risk

C) unsystematic risk

D) volatility

Answer: B

8) A firm is considering investing in a new project with an upfront cost of $400 million. The project will generate an incremental free cash flow of $50 million in the first year and this cash flow is expected to grow at an annual rate of 3% forever. If the firm's WACC is 12%, what is the value of this project?

A) $155.6 million

B) $555.6 million

C) $583.3 million

D) $183.3 million

Answer: A

Explanation: A) Value of the project = *FCF*0 + *FCF*1/(*rwacc* - *g*) = -$400 million + $50 million /(0.12 - 0.03) = $155.6 million

9) Different divisions with differing lines of business use different costs of capital because their cost of \_\_\_\_\_\_\_\_ could be different.

A) debt

B) equity

C) capital

D) assets

Answer: C

10) Verano Inc. has two business divisions—a software product line and a waste water clean-up product line. The software business has a cost of equity capital of 10% and the waste water clean-up business has a cost of equity capital of 7%. Verano has 50% of its revenue from software and the rest from the waste water business. Verano is considering a purchase of another company in the waste water business using equity financing. What is the appropriate cost of capital to evaluate the business?

A) 10.0%

B) 7.0%

C) 8.5%

D) 9.0%

Answer: B

Explanation: B) Cost of capital = Cost of capital for the related division

Cost of capital = 7%

11) Assume Ford Motors expects a new hybrid-engine project to produce incremental cash flows of $50 million each year, and expects these to grow at 4% each year. The upfront project costs are $420 million and Ford's weighted average cost of capital is 9%. If the issuance costs for external finances are $20 million, what is the net present value (NPV) of the project?

A) $504 million

B) $560 million

C) $588 million

D) $616 million

Answer: B

Explanation: B) Compute present value of the cash flows at WACC and subtract investment costs as well as issuance costs.



Cash outflows = $420 million + $20 million = $440 million;

NPV = $1000 million - $440 million = $560 million

12) Which of the following statements is FALSE?

A) Issuance costs increase the WACC.

B) External equity is less expensive than retained earnings.

C) A project that can be financed with internal funds will be less costly than the same project if it were financed with external funds.

D) Issuance costs should be treated as cash outflows in NPV analysis.

Answer: B