I. Multiple Choice Questions (Choose the best answer), 60%;

1. Which of the following statements is false?
   a. The slope of the security market line is measured by beta.
   b. A stock that is more highly positively correlated with "the market" than most stocks would not necessarily have a beta coefficient that is greater than 1.0.
   c. Portfolio A has but one security, while Portfolio B has 100 securities. Because of diversification, we would expect Portfolio B to have the lower relevant risk, but it is possible for Portfolio A to be less risky.
   d. A security's beta measures its nondiversifiable (systematic, or market) risk relative to that of an average stock.
   e. A *portfolio* with a beta of minus 2 has the same degree of risk to its holder, relative to the market, as a portfolio with a beta of plus 2. However, the holder of either portfolio could lower his or her risk exposure by buying some "normal" stocks.

2. You are interested in purchasing 100 shares of stock in a small technology firm that trades in the United States. You would most likely purchase the shares in ______.
   a. a secondary market operated as an auction market
   b. a primary market operated as an auction market
   c. a secondary market operated as a dealer market
   d. a primary market operated as a dealer market
   e. a secondary market operated as a money market

3. Which of the following is true if interest rate parity holds between two nations?
   I. The interest rates in both countries are equal.
   II. Significant covered interest arbitrage opportunities exist between the two nation's currencies.
   III. The interest rate differential between the two countries is somewhat equal to the percentage difference between the forward exchange rate and the spot exchange rate.
   a. I only
   b. II only
   c. III only
   d. II and III only
   e. none of the above

4. Which of the following is/are correct regarding agency costs?
   I. Indirect costs occur when managers, acting to minimize the risk of the firm, forego investments shareholders would prefer they take.

II. Indirect costs occur when firm management takes on risky projects that favorably affect the stock price, even though the managers are worried about keeping their jobs

III. Direct costs occur when managers buy assets considered necessary by the firm's owners.

IV. Direct costs occur when shareholders must incur costs to monitor the manager's actions.

a. I only
b. I and IV only
c. IV only
d. I and III only
e. I, II, and IV

5. Which of the following statements is NOT correct?
   a. In calculating the value of a merger or acquisition only incremental cash flows should be considered.
   b. EPS growth cannot occur from an acquisition unless the new firm creates additional sources of value.
   c. Leveraged buyouts often decrease the conflicts of interest between shareholders and managers
   d. Diversification is usually beneficial in a merger because it reduces systematic risk.
   e. A tender offer does not require approval of the target firm board of directors. It appears that the gains reaped by target firms from tender offer takeovers are higher than the gains realized from mergers.

6. Which of the following statements is false?
   a. All else the same, a higher corporate tax rate will decrease the WACC of a firm with some debt in its capital structure
   b. The WACC is the required return on any investments a firm makes that have a level of risk equal to that of present operations.
   c. There is no way to directly observe the return required by the firm's equity investors
   d. The cost of equity is equal to the weighted average cost of capital
   e. A firm that uses its WACC to evaluate projects without regarding the risk class of the project will tend to become riskier over time.

7. Which of the following is false if European put-call parity is violated?
   a. The risk-free asset is mispriced
   b. Market prices are inefficient
   c. An arbitrage trading opportunity exists
   d. Either the call option or put option (or both) are mispriced
   e. You can create a synthetic position in a stock that has different value than the actual

stock price in the stock market

8. Bank A quotes you that $1.00 will buy 8 Mexican pesos or 15 Argentine dollars. At the same time, bank B provides you a quote of 1 Mexican peso to buy 2 Argentine dollars. Thus, there exists a potential for immediate profit via ______.
   a. futures arbitrage
   b. triangle arbitrage
   c. rectangular arbitrage
   d. an interest rate swap
   e. a currency hedge
9. Which of the following statements is false?
   a. An NPV of zero implies that an investment is immaterial to the shareholder
   b. If the NPV of a project is positive, it should be accepted.
   c. The NPV is probably the most popular project analysis technique in practice.
   d. The IRR should not be used for analyzing mutually exclusive investments.
   e. The NPV and IRR rules can at times be inconsistent with one another.
10. According to the efficient market hypothesis, which one of the following is NOT correct?
    a. today's stock price is the best predictor of tomorrow's stock price
    b. the prices on the NYSE are fair, on average.
    c. stock prices reflect all available information
    d. today's stock price incorporates the past history of prices
    e. markets place a premium on the future
11. An American software company has a large portion of its sales in Germany. The company is concerned about future fluctuations of the dollar/Euro exchange rate. Since their sales are fairly predictable, the company's best bet for minimizing exchange rate risk is:
    a. Entering into an interest rate swap.
    b. Entering into a commodity swap.
    c. Cross-hedging with English pounds.
    d. Entering into a currency swap.
    e. Cross-hedging with LIBOR.
12. You think that market interest rates are going to fluctuate, but you don't know whether they will go up or down. One thing you could do to limit your risk exposure in either case would be to_______.
    a. sell Treasury bonds on the open market
    b. buy Treasury bonds on the open market
    c. buy an interest rate collar
    d. sell call options and sell put options on Treasury bonds
    e. buy Treasury bond futures
13. All else the same, which of the following is false regarding stock splits and stock

dividends? (All of the statements refer to book, and not market, values.)

I. Total owners' equity will not change with either a stock split or a stock dividend.

II. Earnings per share will likely decrease only with the stock dividend.

III. The additional paid-in capital account will only be affected with a stock dividend

IV. A reverse stock split would increase the par value equity account

a. II only

b. I and II only

c. I and III only

d. I and IV only

e. II and IV only

14. Stock A has a beta coefficient of 0.8, and stock B has a beta coefficient of 1.3. Which of the following statements is false regarding these two stocks?

a. Stock A is less risky from the market's perspective than a typical stock, and stock B is more risky than a typical stock.

b. Stock B, if purchased, will increase the market risk of a portfolio more than stock A would (if purchased).

c. Stock A necessarily must have a lower standard deviation of returns than stock B.

d. Stock B must have a higher expected return than stock A if markets are efficient.

e. Stock A has the same reward to risk ratio as stock B.

15. In a bear market you could _____ in order to make money.

I. Buy a call option on the stock.

II. Sell a call option on the stock.

III. Buy a put option on the stock.

IV. Sell a put option on the stock.

V. Short sell the stock.

a. I and IV only

b. II and III only

c. I only

d. IV only

e. II, III, and V only

16. A increase in which of the following, all else the same, leads to an increase in call option values?

I. Exercise price

II. Stock price

III. Time to expiration

IV. Volatility

a. I and III only

b. II and IV only

c. I, II, and III only

d. I, II and IV only

e. II, III, and IV only

17. Which of the following is false about calculating expected portfolio returns and variances?

a. The portfolio variance is a weighted average of the variances of the individual assets in the portfolio.

b. Portfolio return can be calculated using the expected return and portfolio weight for each asset.

c. The portfolio return is needed to calculate the portfolio variance.

d. The portfolio return and variance are dependent on the possible states of nature.

e. You need to calculate the weight of each asset relative to the total portfolio to calculate the portfolio return and the portfolio variance.

18. Which of the following statements is false?

a. A callable bond is essentially a straight bond with a call option granted to the issuer.

b. A convertible bond always sells for less than its straight bond value when the bond is rated as a junk quality credit by Moody's and Standard & Poors.

c. Call options do not affect the number of shares outstanding while warrants (when exercised) increase the number of shares outstanding.

d. The equity is a call option with strike price equal to the face value of debt outstanding.

e. Option contracts are a zero sum game.

19. Which of the following investors would likely prefer a firm with a low dividend payout rate?

I. A corporate investor

II. A tax-exempt investor

III. An investor who does not need current income

IV. An investor in a relatively high personal income tax bracket

a. III only

b. I and II only

c. II and IV only

d. III and IV only

f. I, II, III and IV

20. Which of the following is false regarding the market portfolio?

a. The market risk premium determines the slope of the security market line.

b. It has a beta equal to one.

c. .It has the same reward to risk ratio as every individual asset in the market.

d. It consists of all the listed stocks on all the stock exchanges

e. It plots on the security market line

II. Short essay questions. 40%

1. Suppose the government decides that investors should not profit when stock prices go down so it outlaws short selling. However, the government has not figured out options, so there are no restrictions on option trading. Explain how to accomplish the equivalent of a short sale by using options. （10%）

2. a. What is the term structure of interest rates? What determines its shape?
   b. Please discuss the difference between the term structure and the yield curve.
   c. What are the six components that make up a bond's yield? （15%）

3. a. What are the most commonly used capital budgeting procedures? （5%）
   b. If NPV is conceptually the best procedure for capital budgeting, why do you think multiple measures are used in practice? （10%）