I. True or False (2% for each question, Total 20%)

1. When a firm has risky debt, its equity can be viewed as an option on the total value of the firm with an exercise price equal to the face value of the debt.
   (A) True
   (B) False
2. Firms generally do not call their convertibles unless their conversion value is greater than their call price.
   (A) True
   (B) False
3. One of the main reasons why foreign firms are interested in buying U.S. companies is to gain entrance to the U.S. market. A decline in the value of the dollar relative to most foreign currencies makes this competitive strategy more feasible.
   (A) True
   (B) False
4. Two firms have the same current ratio, 0.75, and the same amount of sales. However, Firm A has a higher inventory turnover ratio than Firm B. Therefore, we can conclude that the quick ratio of Firm A will be *smaller* than that of Firm B.
   (A) True
   (B) False
5. Diversifiable risk, which is measured by beta, can be lowered by adding more stocks to a portfolio.
   (A) True
   (B) False
6. Risk aversion is a general dislike for risk and a preference for certainty. That is, investors would be willing to give up a risk premium of return in order to obtain a lower return with certainty.
   (A) True
   (B) False
7. Arbitrage Pricing Theory is based on the premise that more than one factor affects stock returns. The factors are (1) market returns, (2) dividend yield, and (3) changes in inflation.
   (A) True
   (B) False
8. A firm should never undertake an investment if accepting the project would cause an increase in the firm's cost of capital.
   (A) True
   (B) False
9. Both CAPM and APT assume that only expected shocks in the systematic factor(s) need to be compensated for investors.
   (A) True
   (B) False
10. In the Fama-French three-factor asset pricing model, the excess market return is a systematic risk factor, while SMB and HML are unsystematic risk factors.
    (A) True
    (B) False

II. Multiple Choice (2% for each question, Total 60%):

1. Flavortech Inc. expects EBIT of $2,000,000 for the current year. The firm's capital structure consists of 40 percent debt and 60 percent equity, and its marginal tax rate is 40 percent. The cost of equity is 14 percent, and the company pays a 10 percent rate on its $5,000,000 of long-term debt. One million shares of common stock are outstanding. For the next year, the firm expects to fund one large positive NPV project costing $1,200,000, and it will fund this project in accordance with its target capital structure. If the firm follows a residual distribution policy (with all distributions in the form of dividends) and has no other projects, what is its expected dividend payout ratio?
   (A) 100%
   (B) 60%
   (C) 40%
   (D) 20%
   (E) 0%
2. Which of the following factors will increase the likelihood that a company will choose to call its outstanding bonds?
   (A) An increase in the yield to maturity on the company's outstanding bonds.
   (B) An increase in the call price of the outstanding bonds.
   (C) A reduction in the flotation costs associated with issuing new bonds.
   (D) Answers (A) and (C) are correct.
   (E) None of the answers above is correct.
3. Which of the following are not ways in which risk management can increase the value of a company?
   (A) Risk management can increase debt capacity.
   (B) Risk management can help a firm maintain its optimal capital budget.
   (C) Risk management can reduce the expected costs of financial distress.
   (D) Risk management can help firms minimize taxes.
   (E) Risk management can allow managers to maximize their bonuses.
4. American Hardware, a national hardware chain, is considering purchasing a smaller chain, Eastern Hardware. American's analysts project that the merger will result in incremental free flows and interest tax savings with a combined present value of $72.52 million, and they have determined that the appropriate discount rate for valuing Eastern is 16 percent. Eastern has 4 million shares outstanding. Eastern's current price is $16.25. What is the maximum price per share that American should offer?
   (A) $16.25
   (B) $16.97
   (C) $17.42
   (D) $18.13
   (E) $19.00
5. Which of the following is true?
   (A) A firm with low anticipated profit will likely take on a high level of debt.
   (B) A successful firm will probably take on zero debt.
   (C) Rational firms raise debt levels when profits are expected to decline.
   (D) Rational investors are likely to infer a higher firm value from a zero debt level.
   (E) Investors will generally view an increase in debt as a positive sign for the firm's value.

6. Stock A has a beta of 1.2 and a standard deviation of 20 percent. Stock B has a beta of 0.8 and a standard deviation of 25 percent. Portfolio P is a $200,000 portfolio consisting of $100,000 invested in Stock A and $100,000 invested in Stock B. Which of the following statements is most correct? (Assume that the required return is determined by the Security Market Line.)?
   (A) Stock B has a higher required rate of return than stock A.
   (B) Portfolio P has a standard deviation of 22.5 percent.
   (C) Portfolio P has a beta equal to 1.0.
   (D) Statements (A) and (B) are correct.
   (E) Statements (A) and (C) are correct.
7. The risk-free rate, r_{RF}, is 6 percent and the market risk premium, $(r_M - r_{RF})$, is 5 percent. Assume that required returns are based on the CAPM. Your $1 million portfolio consists of $700,000 invested in a stock that has a beta of 1.2 and $300,000 invested in a stock that has a beta of 0.8. Which of the following statements is most correct?
   (A) The portfolio's required return is less than 11 percent.
   (B) If the risk-free rate remains unchanged but the market risk premium increases by 2 percentage points, the required return on your portfolio will increase by more than 2 percentage points.
   (C) If the market risk premium remains unchanged but expected inflation increases by 2 percentage points, the required return on your portfolio will increase by more than 2 percentage points.
   (D) If the stock market is efficient, your portfolio's expected return should equal the expected return on the market, which is 11 percent.
   (E) None of the above answers is correct.
8. The interest tax shield has no value for a firm when:
   I. the tax rate is equal to zero.
   II. the debt-equity ratio is exactly equal to 1.
   III. the firm is unlevered.
   IV. a firm elects 100% equity as their capital structure.
   (A) I and III only
   (B) II and IV only
   (C) I, III, and IV only
   (D) II, III, and IV only
   (E) I, II, and IV only
9. When shareholders pursue selfish strategies such as taking large risks or paying excessive dividends, these will result in
   (A) no action by debtholders since these are equity holder concerns.
   (B) positive agency costs, as bondholders impose various restrictions and covenants, which will diminish firm value.
   (C) investments of the same risk class that the firm is in.
   (D) undertaking scale enhancing projects.
   (E) lower agency costs, as shareholders have more control over the firm's assets.

10. When firms issue more debt, the tax shield on debt ______, the agency costs on debt (i.e., costs of financial distress) ______, and the agency costs on equity ______.

(A) increases; increases; increases
(B) decreases; decreases; decreases
(C) increases; increases; decreases
(D) decreases; decreases; increases
(E) increases; decreases; decreases

11. The pecking order states how financing should be raised. In order to avoid asymmetric information problems and misinterpretation of whether management is sending a signal on security overvaluation the firm's first rule is to

(A) finance with internally generated funds.
(B) always issue debt then the market won't know when management thinks the security is overvalued.
(C) issue new equity first.
(D) issue debt first.
(E) None of the above.

12. If you ignore taxes and transaction costs, a stock repurchase will:

I. reduce the total assets of a firm.
II. increase the earnings per share.
III. reduce the PE ratio more than an equivalent stock dividend.
IV. reduce the total equity of a firm.

(A) I and III only
(B) II and IV only
(C) I, II, and IV only
(D) I, III, and IV only
(E) I, II, III, and IV

13. When the market risk premium rises, stock prices will ________.

(A) Rise
(B) Fall
(C) Recover
(D) Have excess volatility
(E) No change

14. Which of the following stock price observations would appear to contradict the weak form of the efficient market hypothesis?

(A) Over 25% of mutual funds outperform the market on average
(B) Insiders earn abnormal trading profits
(C) You could have consistently made superior returns by buying stock after a 10% rise in price and selling after a 10% fall
(D) You could have consistently made superior returns by forecasting future earnings performance with your new Crystal Ball forecast methodology
(E) The correlation between the market return one week and the return the following week is zero

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考生注意：
1.依次序作答，只要標明題號，不必抄題。
2.答案必須寫在答案卷上，否則不予計分。
3.限用藍、黑色筆作答；試題須隨卷繳回。

15.The yield to maturity on a bond is

I. above the coupon rate when the bond sells at a discount, and below the coupon rate when the bond sells at a premium
II. the discount rate that will set the present value of the payments equal to the bond price
III. equal to the true compound return on investment only if all interest payments received are reinvested at the yield to maturity

(A) I only
(B) II only
(C) III only
(D) I and II only
(E) I, II and III

16.All other things equal, which of the following has the longest duration?

(A) A 20 year zero coupon bond yielding 10%
(B) A 20 year zero coupon bond yielding 11%
(C) A 20 year bond with a 9% coupon yielding 10%
(D) A 20 year bond with a 10% coupon yielding 10%
(E) A 20 year bond with a 10% coupon yielding 11%

17.Bond portfolio immunization techniques balance ________ and ________ risk.

(A) Price; reinvestment
(B) Price; liquidity
(C) Price; Credit
(D) Credit; liquidity
(E) Credit; reinvestment

18.The duration of a bond normally increases with an increase in ________.

I. term-to-maturity
II. yield-to-maturity
III. coupon rate

(A) I only
(B) I and II only
(C) I and III only
(D) II and III only
(E) I, II and III

19.You write a put option on a stock. The profit at contract maturity of the option position is ________ where X equals the option's strike price, S_T is the stock price at contract expiration and P_0 is the original premium of the put option.

(A) $Max(P_0, X- S_T - P_0)$
(B) $Min(-P_0, X- S_T - P_0)$
(C) $Min(P_0, S_T -X+ P_0)$
(D) $Max(P_0, S_T -X+ P_0)$
(E) $Max(0, S_T -X- P_0)$

20.Which of the following is true?

I. A put option on Snapple Beverage has an exercise price of \$30. The current stock price of Snapple Beverage is \$24.25. The put option is in the money.

II. A call option on Brocklehurst Corp. has an exercise price of \$30. The current stock price of Brocklehurst Corp. is \$32. The call option is out of the money.

III.Long call and long put simultaneously is a strategy to make a profit if the stock price stays stable.

(A) I only
(B) II only
(C) III only
(D) I and II only
(E) I, II and III

21.According to the put-call parity theorem, the payoffs associated with ownership of a call option can be replicated by ________________.

(A) Shorting the underlying stock, borrowing the present value of the exercise price, and writing a put on the same underlying stock and with the same exercise price
(B) Buying the underlying stock, borrowing the present value of the exercise price, and buying a put on the same underlying stock and with the same exercise price
(C) Buying the underlying stock, borrowing the present value of the exercise price, and writing a put on the same underlying stock and with the same exercise price
(D) Shorting the underlying stock, lending the present value of the exercise price and buying a put on the same underlying stock and with the same exercise price
(E) Shorting the underlying stock, lending the present value of the exercise price and writing a put on the same underlying stock and with the same exercise price

22.If you expect a stock market downturn, one potential defensive strategy would be to

(A) Buy stock index futures
(B) Sell stock index futures
(C) Buy stock index call options
(D) Write stock index put options
(E) Sell foreign exchange futures

23.An investor can design a risky portfolio based on two stocks, A and B. The standard deviation of return on stock A is 24% while the standard deviation on stock B is 14%. The correlation coefficient between the return on A and B is 0.35. The expected return on stock A is 25% while on stock B it is 11%. The proportion of the minimum variance portfolio that would be invested in stock B is __________.

(A) 45%
(B) 67%
(C) 75%
(D) 85%
(E) 92%

24.A firm has a market value equal to its book value. Currently, the firm has excess cash of $600 and other assets of $5,400. Equity is worth $6,000. The firm has 500 shares of stock outstanding and net income of $900. What will the new earnings per share be if the firm uses its excess cash to complete a stock repurchase?

(A) $1.20
(B) $1.50
(C) $1.80
(D) $2.00
(E) $2.40

25.A $25 investment produces $27.50 at the end of the year with no risk. Which of the following is not true?

I. NPV is positive if the interest rate is less than 10%.
II. NPV is negative if the interest rate is less than 10%.
III. NPV is zero if the interest rate is equal to 10%.

(A) I only
(B) II only
(C) III only
(D) I and III only
(E) II and III only

26.Firm A is planning on merging with Firm B. Firm A will pay Firm B's stockholders the current value of their stock in shares of Firm A. Firm A currently has 2,300 shares of stock outstanding at a market price of $20 a share. Firm B has 1,800 shares outstanding at a price of $15 a share. What is the value per share of the merged firm?

(A) $19.00
(B) $19.18
(C) $19.44
(D) $20.00
(E) $20.33

27.Firm A is being acquired by Firm B for $24,000 worth of Firm B stock. The incremental value of the acquisition is $3,500. Firm A has 1,500 shares of stock outstanding at a price of $15 a share. Firm B has 1,200 shares of stock outstanding at a price of $30 a share. What is the value per share of Firm B after the acquisition?

(A) $17.50
(B) $24.00
(C) $30.00
(D) $31.00
(E) $35.00

28.Jennifer's Boutique has 2,100 shares outstanding at a market price per share of $26. Sally's has 3,000 shares outstanding at a market price of $41 a share. Neither firm has any debt. Sally's is acquiring Jennifer's for $58,000 in cash. What is the merger premium per share?

(A) $1.43
(B) $1.62
(C) $1.81
(D) $2.04
(E) $2.07

29. Which of the following are the factors for the Fama-French model?
   (A) The excess market return, a size factor, and a book-to-market factor.
   (B) The excess market return, a debt factor, and a book-to-market factor.
   (C) The excess market return, a size factor, and a debt.
   (D) A debt factor, a size factor, and a book-to-market factor.
   (E) The excess market return, an industrial production factor, and a book-to-market factor.

30. Which of the following statements is most correct?
   (A) When dealing with *independent* projects, discounted payback (using a payback requirement of 3 or less years), NPV, IRR, and modified IRR always lead to the same accept/reject decisions for a given project.
   (B) When dealing with *mutually exclusive* projects, the NPV and modified IRR methods always rank projects the same, but those rankings can conflict with rankings produced by the discounted payback and the regular IRR methods.
   (C) Multiple rates of return are possible with the regular IRR method but not with the modified IRR method, and this fact is one reason given by the textbook for favoring MIRR (or modified IRR) over IRR.
   (D) Statements (A), (B), and (C) are false.
   (E) Statements (A) and (C) are true.

III. Essays (Total 20%):

1. Explain why it is that in an efficient market, investments have an expected NPV of zero. **(6%)**
2. Please define "internal corporate governance" & "external corporate governance"? **(6%) Who or which mechanisms** provide the functions of international corporate governance and external corporate governance respectively? **(8%)**